

January 13, 2020

Mark Wengierski Project Manager Sweetland Wind Farm, LLC 4865 Sterling Drive, Suite 200 Boulder, Colorado 80301

Re: Sweetland Wind Project Wetland Delineation Report

Dear Mr. Wengierski:

Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) was retained by Sweetland Wind Farm, LLC (Client) to provide wetland delineation services for the proposed Sweetland Wind Project (Project) in Hand County, South Dakota (Figure A-1, Appendix A). The following sections provide information on the proposed Project and summarize the completed wetland delineation.

INTRODUCTION

The Client plans to construct an approximately new 200-megawatt wind farm and associated overhead transmission line and substation in Hand County, South Dakota. The proposed Project would include construction of up to 71 wind turbines, permanent access roads, operations and maintenance facility, up to 3 meteorological towers, electrical power underground collection lines and communication system, a maximum 7-mile 230-kV overhead transmission line, substation, switchyard, and temporary construction areas, such as crane paths, pull sites, laydown yard, and a batch plant. The Project is located approximately 10 miles southeast of Miller, South Dakota.

The Project has the potential to impact wetlands or other water bodies that may be under the jurisdiction of the U.S. Army Corps of Engineers (USACE) as designated by Section 404 of the Clean Water Act. Burns & McDonnell conducted a wetland delineation for the Project to evaluate the presence of wetlands and other water bodies, including streams, drainages, and ponds. The delineation was conducted based on setback buffers applied to the proposed Project layout (Survey Area). Specifically, a 250-foot buffer (500-foot diameter) was applied to each turbine center-point, a 200-foot buffer was applied to each facility footprint, a 100-foot buffer (200-feet wide) was applied to the gen-tie transmission line, a 25-foot buffer (50-feet wide) was applied to the access roads, a 18-foot buffer (36-feet wide) was applied to the crane paths, and a 15-foot buffer (30-feet wide) was applied to the underground collection lines. The Survey Area included in the wetland delineation totaled approximately 862 acres.

METHODS

The following discussions summarize the methods used for the review of existing data and the wetland delineation.



Existing Data Review

Burns & McDonnell reviewed available background information for the proposed Project prior to conducting a site visit. This available background information included the 1981 U.S. Geological Survey (USGS) 7.5-minute topographic maps (Vayland Northwest, Vayland, Vayland Southeast, and Wessington Southwest, ND quadrangles), U.S. Fish & Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps, U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) 2018 Soil Survey Geographic (SSURGO) digital data for Hand County, South Dakota, and 2015 National Agriculture Imagery Program (NAIP) aerial photography. Maps generated from this data are included as Figures A-2 and A-3 in Appendix A. Local climate data for this region was also reviewed to evaluate precipitation conditions.

Wetland presence based only on NWI maps cannot be assumed to be an accurate assessment of potentially occurring jurisdictional wetlands. Wetland identification criteria differ between the USFWS and the USACE. As a result, wetlands shown on an NWI map may not be under the jurisdiction of the USACE, and all USACE-jurisdictional wetlands are not always included on NWI maps. Therefore, a field visit was conducted to identify any wetlands or other water bodies that may be present.

Wetland Delineation Field Survey

A field wetland delineation was completed in June and October 2018, with an additional field delineation in September 2019. These wetland delineations were done in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region – Version 2.0 (Regional Supplement). Sample plots were established at multiple locations, and Wetland Determination Data Forms from the Regional Supplement were completed to characterize the Survey Area (Appendix B). Vegetation, soil conditions, and hydrologic indicators were recorded at each of these sample plots. Locations of sample plots and other identified features were recorded using a sub-meter accurate global positioning system (GPS) unit. Natural color photographs depicting wetlands, streams, and sample plots were taken onsite and are included in Appendix C. Additional photographs were taken during the delineation effort to document onsite conditions where sample plots were not analyzed. Several of these photograph locations that depict representative features, such as open upland pasturelands, swales, and croplands, are indicated on Figure A-4. Additional photographs not depicted on Figure A-4 or provided in Appendix C can be provided upon request.

Based on lack of access and restrictive weather conditions, approximately 15% of the Survey Area was delineated via offsite wetland determination methods, using the background information previously listed. Specifically, wetlands were identified using NWI maps and hydric soil data in conjunction with topography and aerial imagery review to identify locations that



exhibited wetland signatures such as wetland vegetation or saturated soils. Streams for these areas were identified using NHD data in conjunction with topography and aerial imagery review. It is recommended that the entire Survey Area be field verified as feasible prior to submitting this report for regulatory review and the start of construction.

RESULTS

The following sections describe the results of the existing data review and the completed wetland delineation.

Existing Data Review

The 2015 NAIP aerial photography indicates that the Survey Area consists largely of rangeland, pastureland, and cropland (Figure A-2.1 through Figure A-2.25).

The 2018 USDA NRCS SSURGO digital data indicate that portions of 25 soil map units are located in the Survey Area. (Figure A-2). Of the 25 soil map units, one map unit is rated hydric, one map unit is rated predominantly hydric, and one map unit is rated partially hydric on local and national hydric soil lists.

The existing USGS topographic maps were reviewed to familiarize Burns & McDonnell wetland personnel with the topography and potential locations of wetlands and other water bodies (Figure A-3). The USGS topographic maps depicts the Survey Area as having large areas of rolling hills and gently sloping to flat topography. Wind turbines for the proposed Project are generally sited on hilltops and ridges, and access roads and underground collection systems connect strings of turbines. Two named streams, Silver Creek and East Pearl Creek, are located within the Survey Area.

The NWI data indicate 69 palustrine emergent (PEM) wetlands and 10 palustrine aquatic bed (PAB) wetlands are located within the Survey Area (Figures A-3).

Wetland Delineation Field Survey

As previously stated, wetland scientists with Burns & McDonnell conducted wetland delineations of the Survey Area in June and October 2018 and September 2019. The second person of each team, a GPS specialist with Burns & McDonnell, recorded the location and extent of features identified within the Survey Area. The land cover and delineated wetlands from the field survey efforts are discussed in detail below.

Vegetation

The Survey Area was largely composed of rangeland and cropland. Typical vegetation in the upland portions of the Survey Area included Kentucky bluegrass (*Poa pratensis*), smooth brome (*Bromus inermis*), and field brome (*Bromus arvensis*).



Soils

Typical upland soils ranged from black (10YR 2/1) to very dark grayish brown (10YR 3/2) and ranged in texture from clay loam to silt loam. Redoximorphic features were typically present in wetland soils, but they were less common in upland soils.

Hydrology

Hydrology in the Survey Area has been highly altered to support agricultural practices within croplands. Upland swales are common throughout cropland to aid in draining surface water. Subsurface tiling may be present in many of the croplands, but indicators of such (flagging, inlets, vents, etc.) were not widely observed. Streams have been channelized throughout much of the Survey Area to facilitate farming and ranching practices. The primary source of hydrology for wetlands was precipitation and areas of shallow groundwater. Indicators of hydrology within the wetlands included surface water, high water table, saturation, algal mat or crust, hydrogen sulfide odor, oxidized rhizospheres on living roots, surface soil cracks, drainage patterns, saturation visible on aerial imagery, a concave geomorphic position, and a positive FAC neutral test. Precipitation for the months prior to the field delineations was determined using the Wetland Climate Tables (WETS) analysis. Average precipitation for the Project was obtained from the Miller, SD WETS weather station and used for the WETS analysis. Precipitation levels are provided in Table 1.

Table 1: Precipitation for Three Months Prior to Field Wetland Delineation

Timeframe	Actual Precipitation (inches)	Longterm Average Precipitation (inches)	Actual Relative to Average
June 2018	6.76	3.16	Wetter than normal
October 2018	2.46	1.70	Wetter than normal
September 2019	4.58	1.79	Wetter than normal

Source: Miller, SD Wetland Climate Tables (WETS)

Delineation Areas

During the wetland delineation efforts, 25 wetlands and 25 streams were identified within the Survey Area. The wetlands and streams are generally described below, and their locations are shown on Figure A-4 in Appendix A. Table 2 provides the types and size of each wetland, and Table 3 provides the type and length of each stream delineated. Sample plots were located in the wetlands and adjacent uplands. Data forms and photographs for these sample plots are included in Appendix B and Appendix C, respectively.



Wetlands

A total of 25 wetlands, comprised of one wetland type: PEM and encompassing a total of 4.2 acres, were identified (Photograph Log, Appendix C). Dominant vegetation in the PEM wetlands included reed canary grass (*Phalaris arundinacea*), fox-tail barley (*Hordeum jubatum*), common spike-rush (*Eleocharis palustris*), flat-stem spike-rush (*E. compressa*), blunt spike-rush (*E.* obtusa), sedge (Carex sp.), common fox sedge (C. vulpinoidea), river club-rush (Schoenoplectus fluviatilis), rough cocklebur (Xanthium strumarium), rush (Juncus sp.), American water-plantain (Alisma subcordatum), northern water-plantain (A. triviale), curly dock (Rumex crispus), spotted lady's-thumb (Persicaria maculosa), broadleaf cattail (Typha latifolia), field meadow-foxtail (Alopecurus pratensis), large barnyard grass (Echinochloa crus-galli), late goldenrod (Solidago gigantea), and freshwater cord grass (Spartina pectinata). Wetland hydrology was indicated by surface water, high water table, saturation, algal mat or crust, hydrogen sulfide odor, oxidized rhizospheres on living roots, surface soil cracks, drainage patterns, saturation visible on aerial imagery, a concave geomorphic position, and a positive FAC neutral test. Soils ranged from gray (10YR 6/1) to black (10YR 2/1) in color and clay loam, silty clay loam, or silt loam in texture, with redoximorphic concentrations. Hydric soil was mainly indicated by hydrogen sulfide, 1cm muck, loamy mucky mineral, depleted matrix, redox dark surface, and depleted dark surface.

Table 2: Delineated Wetlands within the Survey Area

Wetland Number ^{a, b}	Wetland Type ^c	Acreage in Survey Area	Figure A-4 Page Number
W-005	PEM	0.19	A-4.21
W-501	PEM	0.09	A-4.2
W-507	PEM	0.10	A-4.4
W-508	PEM	0.16	A-4.4
W-510	PEM	0.03	A-4.4
W-518	PEM	0.04	A-4.9
W-520	PEM	0.03	A-4.14
W-524	PEM	0.12	A-4.11
W-526	PEM	1.87	A-4.11
W-537	PEM	0.10	A-4.11
W-548	PEM	0.05	A-4.7
W-550	PEM	0.01	A-4.7
W-554	PEM	0.15	A-4.18



Wetland Number ^{a, b}	Wetland Type ^c	Acreage in Survey Area	Figure A-4 Page Number
W-558	PEM	0.02	A-4.13
W-566	PEM	0.33	A-4.20
W-579	PEM	0.01	A-4.23
W-580	PEM	0.05	A-4.19
W-584	PEM	0.03	A-4.19
W-591d	PEM	0.22	A-4.10
W-614d	PEM	0.02	A-4.17
W-630d	PEM	0.05	A-4.8
W-710	PEM	0.04	A-4.10
W-712	PEM	0.39	A-4.11
W-713	PEM	0.04	A-4.11
W-901	PEM	0.05	A-4.23
	Total:	4.19	

- (a) W = wetland
- (b) The letter "d" following a wetland number indicates this wetland was identified using offsite wetland determination methods.
- (c) Symbols for wetland type: PEM = palustrine emergent

Streams

A total of 25 streams, consisting of two stream types (intermittent and ephemeral) and equaling 5,386 linear feet, were identified (Photographs, Appendix C). The different stream types are summarized below.

A total of three intermittent streams, extending for a total of 883 linear feet, were identified. Intermittent streams were characterized by the presence of a limited volume of flow at the time of the site visit. This is a likely indicator that the stream is partially fed by groundwater, but it may not flow during dry periods. Intermittent streams ranged from approximately 1.5 to 5 feet wide and approximately 0.5 to 1.0-foot deep from the ordinary high-water mark (OHWM). These streams primarily flowed through agricultural fields and pasture where common riparian vegetation included species such as smooth brome, field brome, fox-tail barley, and rough cocklebur.

A total of 22 ephemeral streams, extending for a total of 4,503 feet, were identified. Ephemeral streams were characterized by a defined bed and bank, but they had limited or no flow during the



site visit, indicating that these streams largely carry water only during and after precipitation events. Ephemeral streams ranged from approximately 1.5 to 8 feet wide and from 0.5 foot to 3.5 feet deep from the OHWM. These streams flowed through agricultural fields and pasture where common riparian vegetation included species such as smooth brome, red-root (*Amaranthus retroflexus*), yellow bristle grass (*Setaria pumila*), tall false rye grass (*Schedonorus arundinaceus*), clammy ground cherry (*Physalis heterophylla*), rough cocklebur, agricultural soybean (*Glycine max*).

Table 3: Delineated Streams within the Survey Area

Stream Number ^a	Flow Classification	Length of Stream in Survey Area (feet)	Figure A-4 Page Number
S-002	Ephemeral	304	A-4.23
S-003	Intermittent	34	A-4.21
S-004	Intermittent	471	A-4.21
S-502	Ephemeral	317	A-4.5
S-504	Ephemeral	543	A-4.4
S-508	Ephemeral	36	A-4.15
S-510	Ephemeral	206	A-4.11
S-513	Ephemeral	77	A-4.6
S-514	Ephemeral	227	A-4.17
S-516	Ephemeral	361	A-4.7
S-517	Ephemeral	8	A-4.7
S-518	Ephemeral	221	A-4.6
S-519	Ephemeral	76	A-4.3
S-521	Ephemeral	212	A-4.13
S-522	Ephemeral	235	A-4.13
S-523	Intermittent	378	A-4.13
S-526	Ephemeral	529	A-4.20
S-701	Ephemeral	83	A-4.1
S-702	Ephemeral	314	A-4.11
S-703	Ephemeral	36	A-4.8
S-704	Ephemeral	488	A-4.12



Stream Number ^a	Flow Classification	Length of Stream in Survey Area (feet)	Figure A-4 Page Number
S-705	Ephemeral	42	A-4.12
S-707	Ephemeral	33	A-4.8
S-708	Ephemeral	32	A-4.4
S-901	Ephemeral	123	A-4.23
	Total	5,386	

⁽a) S = stream



SUMMARY

Burns & McDonnell conducted a wetland delineation of the Survey Area to identify wetlands and other water bodies. A total of 25 wetlands and 25 stream channels were identified. The wetlands and streams identified for this report are subject to federal regulation under the jurisdiction of USACE. Accordingly, Burns & McDonnell recommend this report be submitted to USACE for final jurisdictional review and concurrence. Following the identification of the final Project components, Burns & McDonnell recommends the Client obtain the necessary permits or regulatory authorization prior to initiating land disturbing Project activities.

Sincerely,

Tyler Beemer, PWS

Senior Environmental Scientist

Attachments:

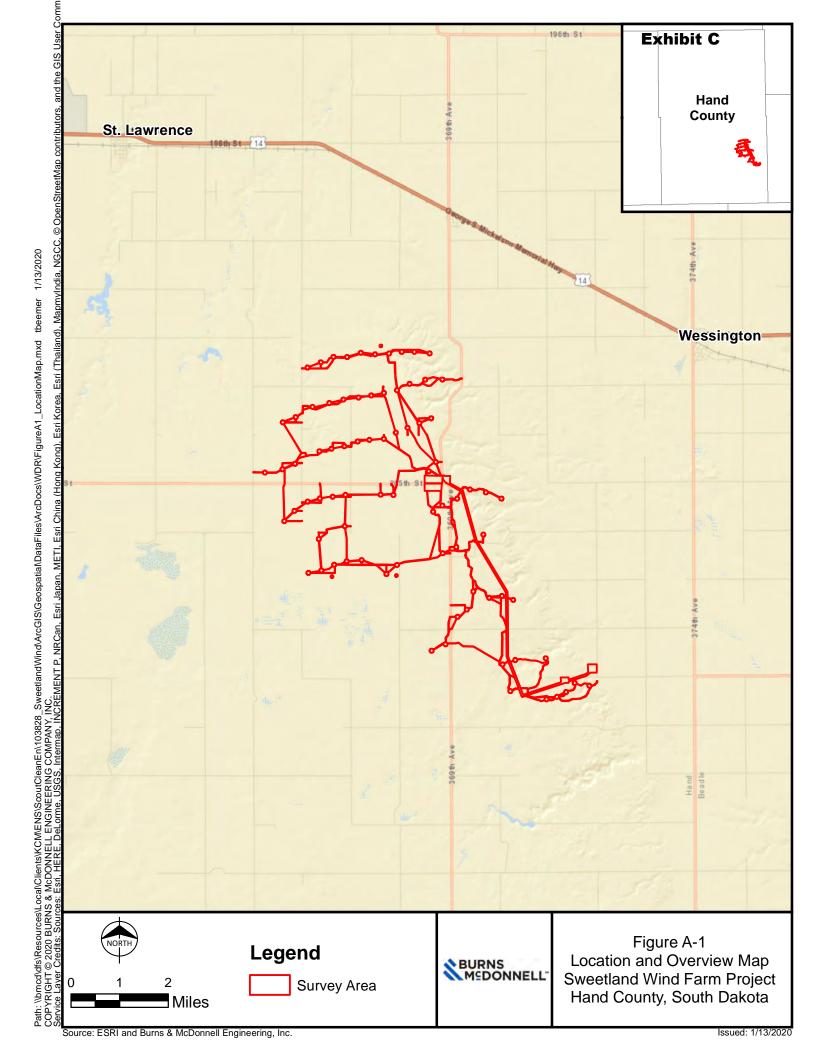
Appendix A - Figures

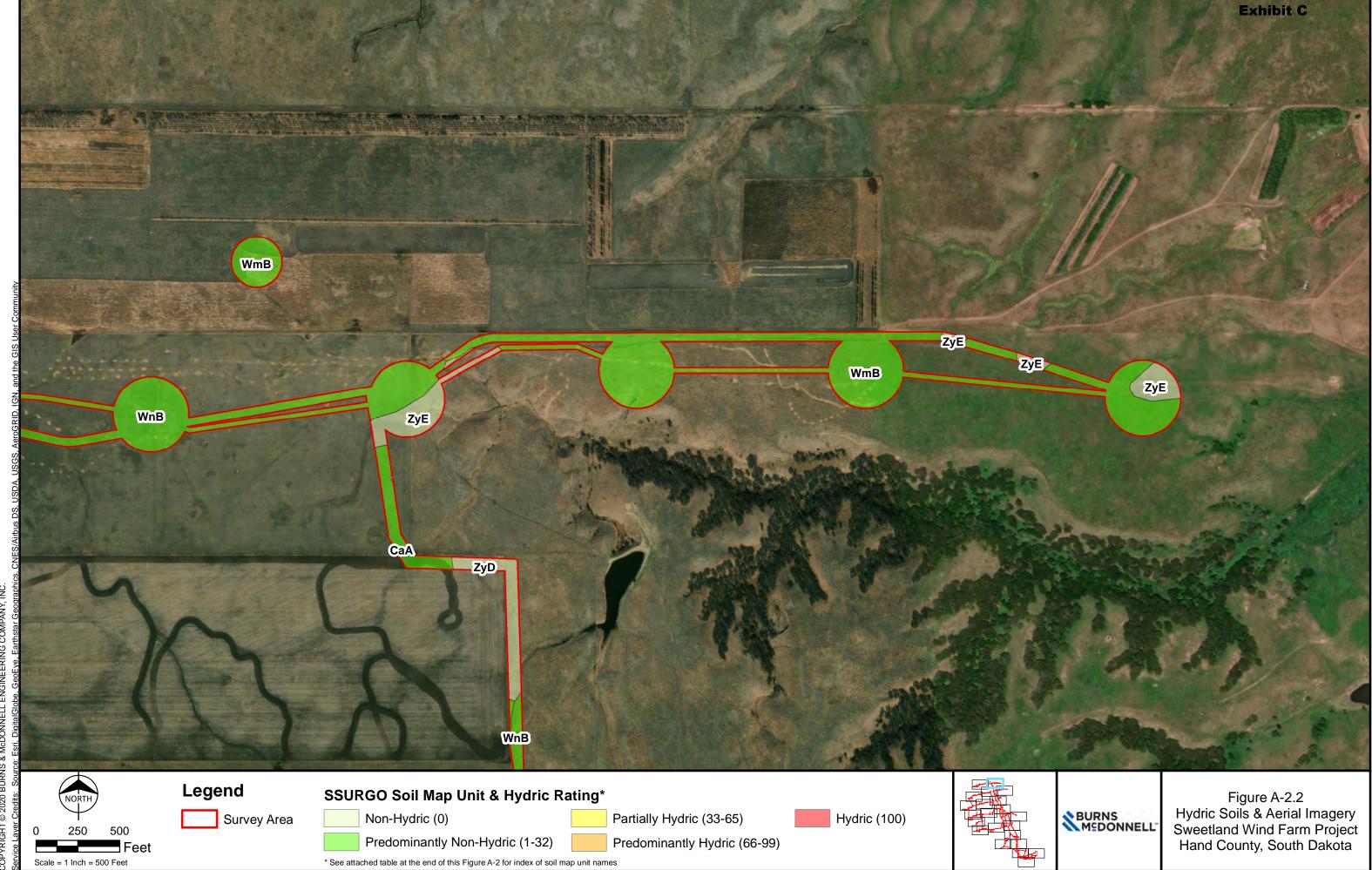
Appendix B - Routine Wetland Determination Data Forms, Great Plains Region

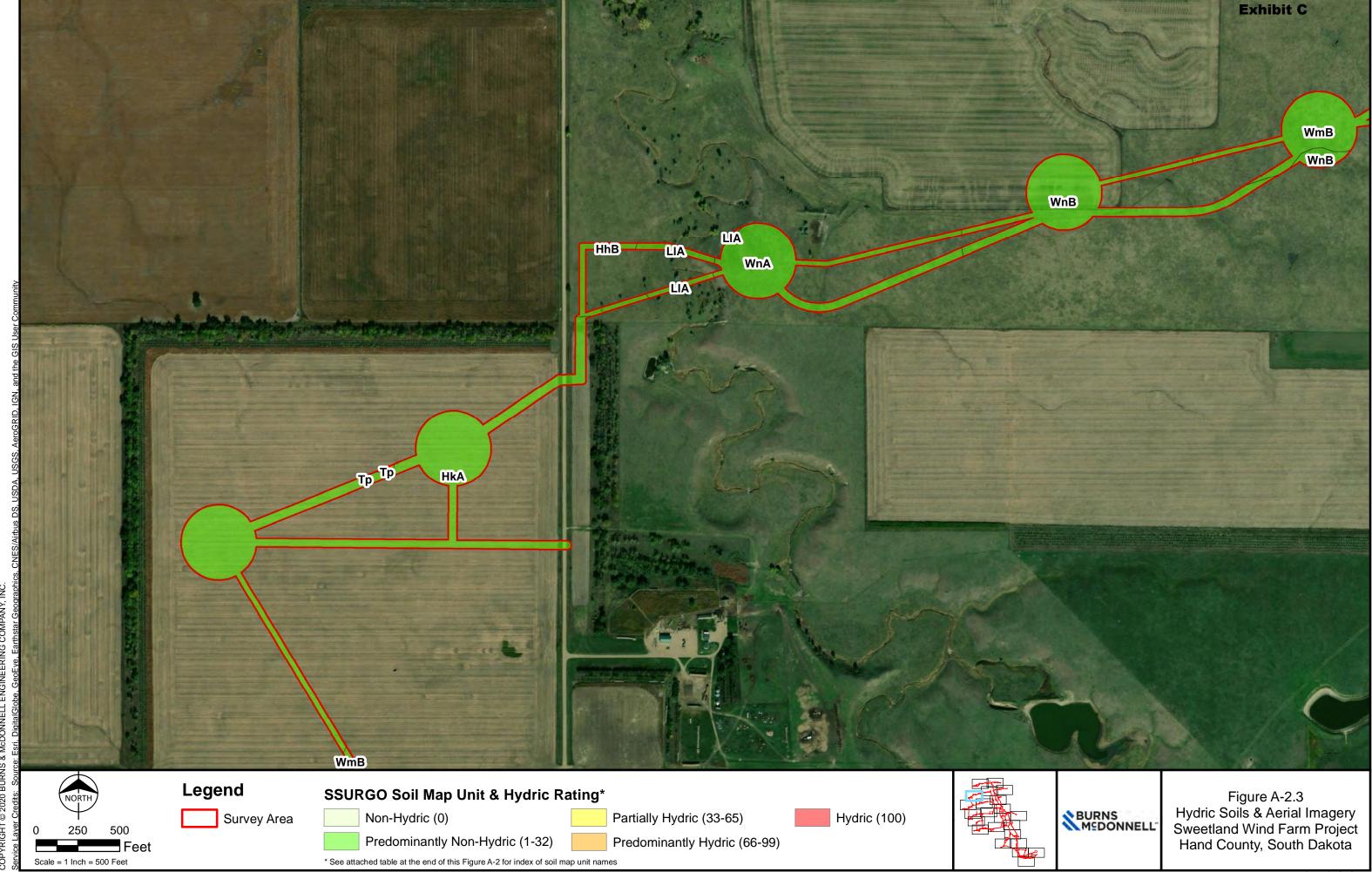
Appendix C - Photograph Log

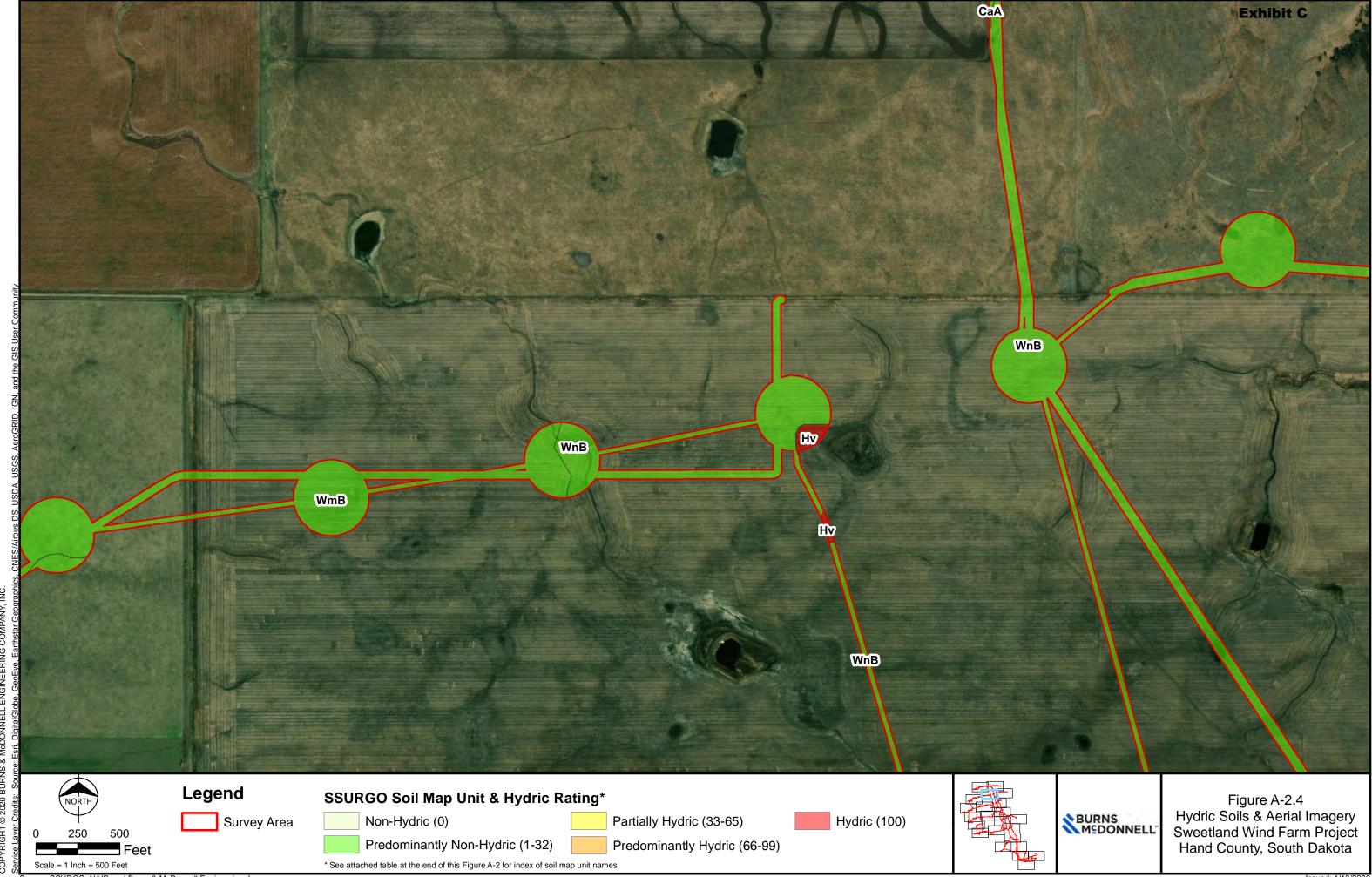
cc: Paul Callahan, Burns & McDonnell Carrie Barton, Burns & McDonnell

APPENDIX A -FIGURES

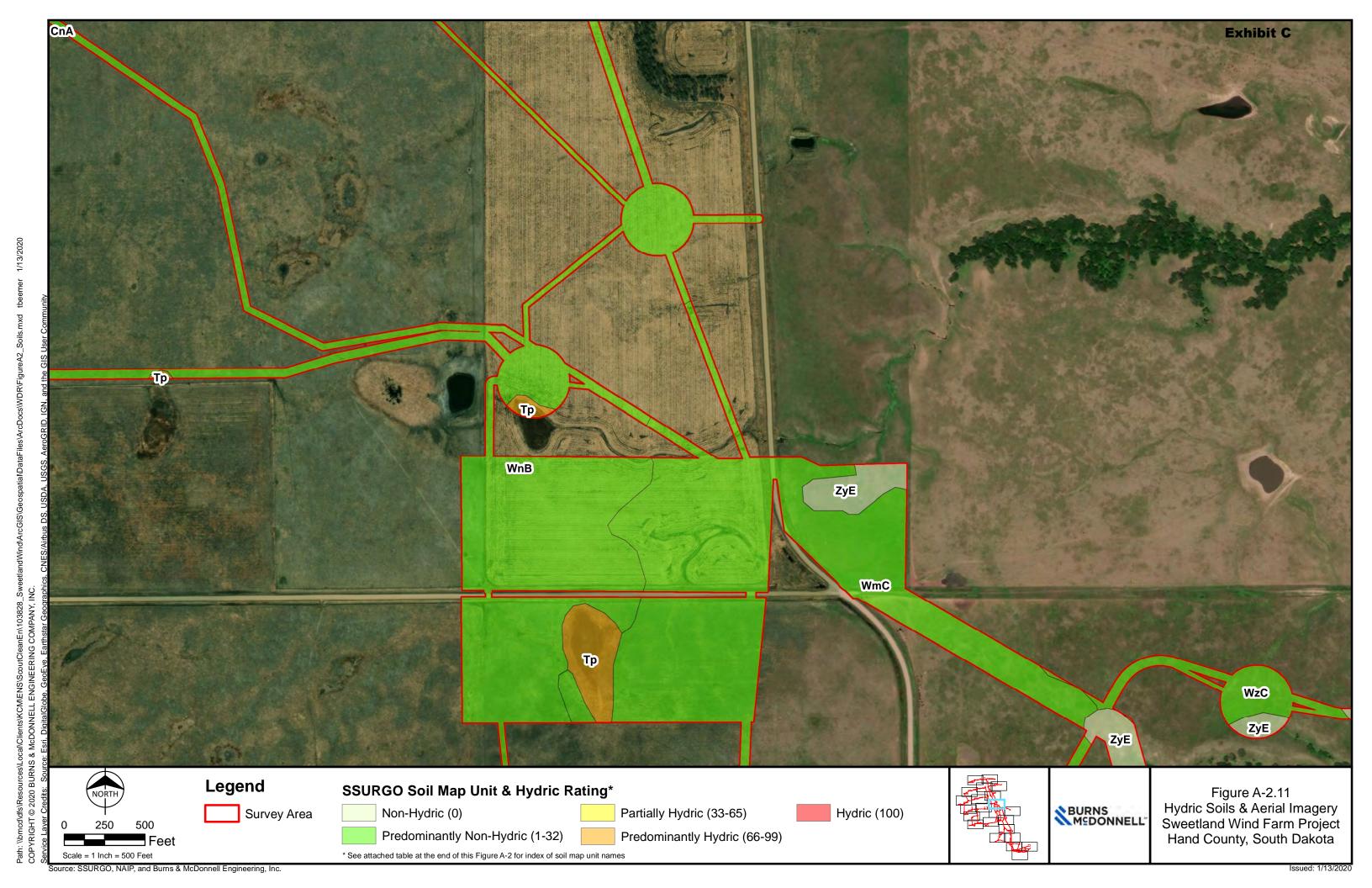


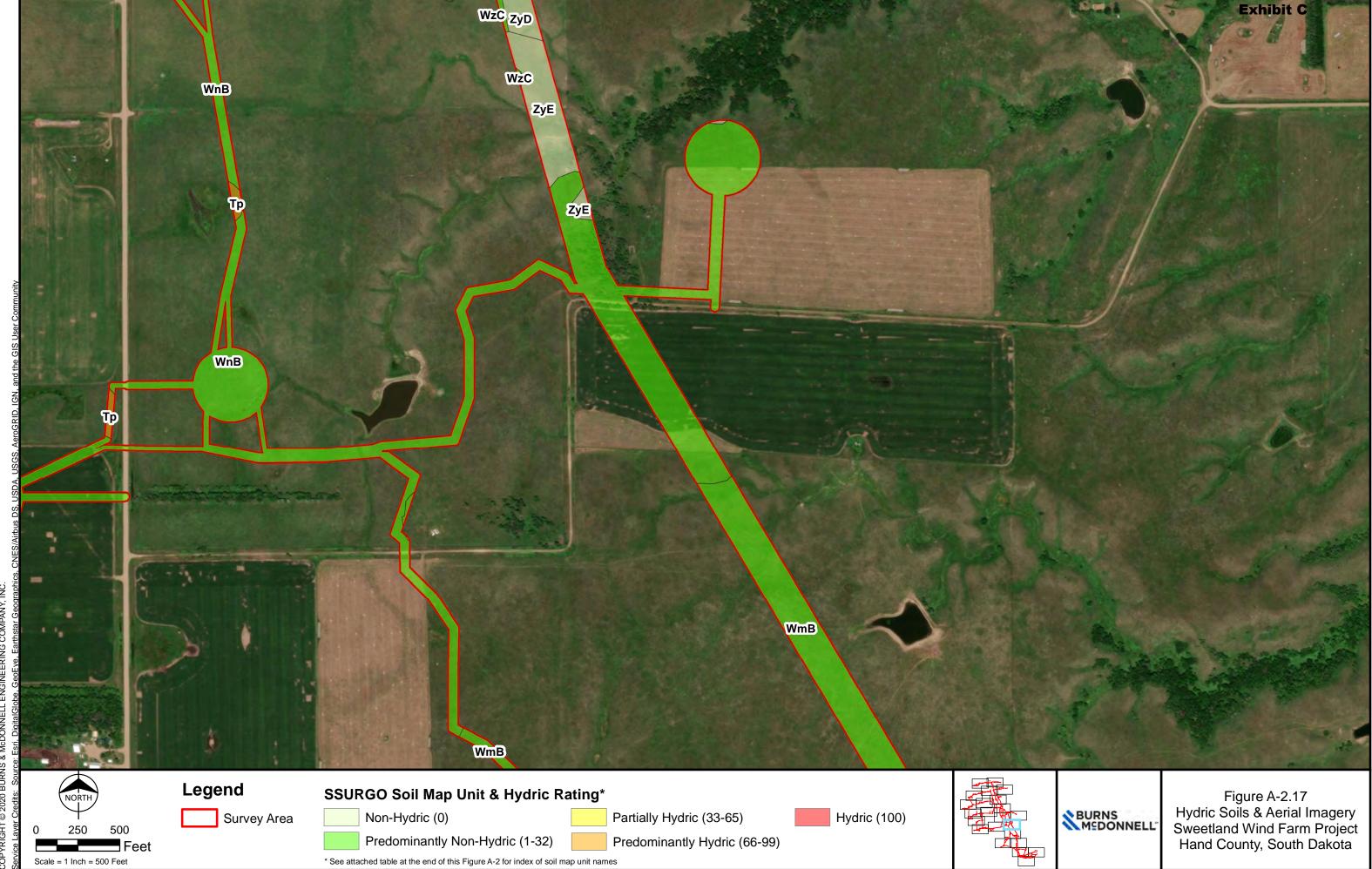


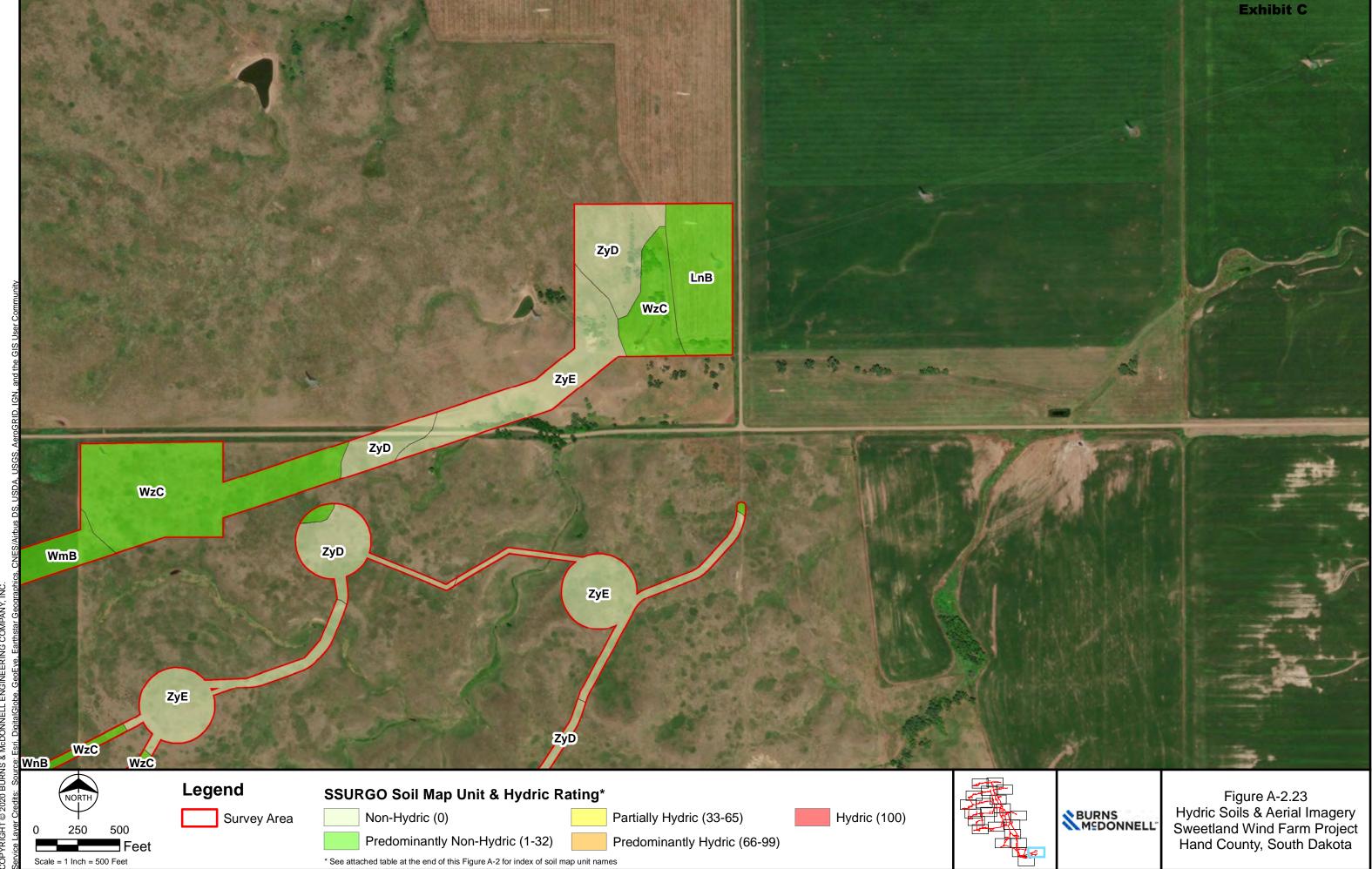












Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BcA	Prosper-Stickney loams, nearly level	5	1.7	0.2%
CaA	Dudley silt loam, nearly level	5	1.7	0.2%
CnA	Cavo-Glenham loams, nearly level	6	4.8	0.6%
HdA	Durrstein-Bon complex, nearly level	62	0.0	0.0%
HhB	Houdek loam, 2 to 6 percent slopes	4	0.9	0.1%
HkA	Houdek-Prosper loams, 0 to 2 percent slopes	3	25.5	3.0%
HkB	Houdek-Prosper loams, 1 to 6 percent slopes	3	3.7	0.4%
HIA	Houdek-Dudley complex, 0 to 2 percent slopes	5	0.6	0.1%
Hv	Hoven silt loam, 0 to 1 percent slopes	100	5.2	0.6%
LIA	Bon loam, channeled, 0 to 2 percent slopes, frequently flooded	9	0.7	0.1%
LnB	Lane loam, gently sloping	1	7.5	0.9%
So	Oahe-Delmont loams, 2 to 6 percent slopes	0	9.4	1.1%
Тр	Tetonka silt loam, 0 to 1 percent slopes	95	14.0	1.6%
W	Water	0	0.3	0.0%
WmB	Glenham loam, undulating	1	107.7	12.5%
WmC	Glenham loam, rolling	1	63.2	7.3%
WnA	Glenham-Prosper loams, 0 to 2 percent slopes	6	49.2	5.7%
WnB	Glenham-Propser loams, 1 to 6 percent slopes	6	322.6	37.4%
WpA	Glenham-Cavo loams, nearly level	10	9.2	1.1%
WpB	Glenham-Cavo loams, undulating	10	47.6	5.5%

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Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
WxC	Glenham-Java loams, rolling	1	2.4	0.3%
WzC	Glenham-Java loams, rolling	1	84.6	9.8%
ZxE	Betts-Java loams, steep	0	3.1	0.4%
ZyD	Java-Glenham loams, hilly	0	30.6	3.6%
ZyE	Betts-Java loams, steep	0	65.7	7.6%
Totals for Area of Interest		861.7	100.0%	

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.



Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

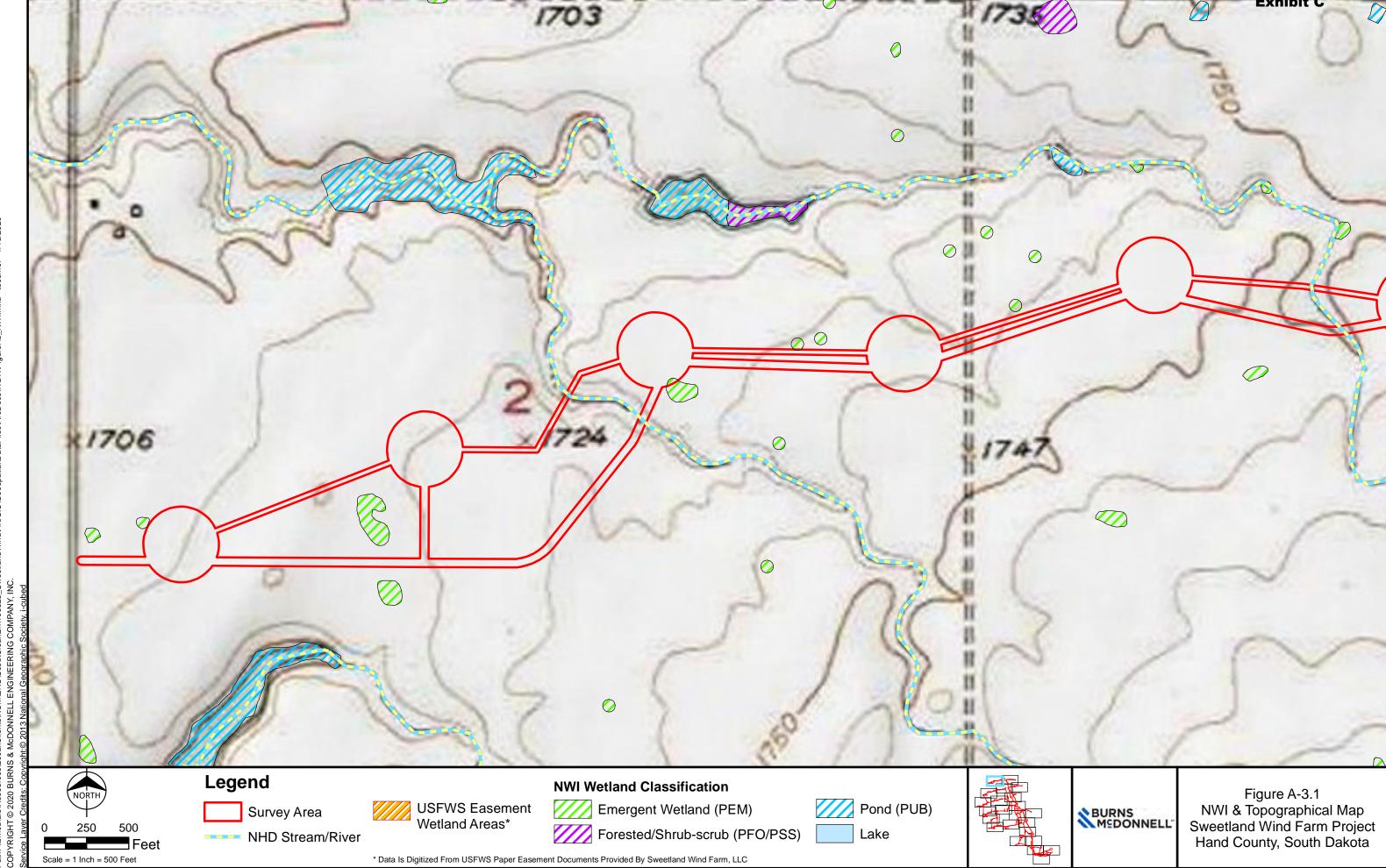
Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

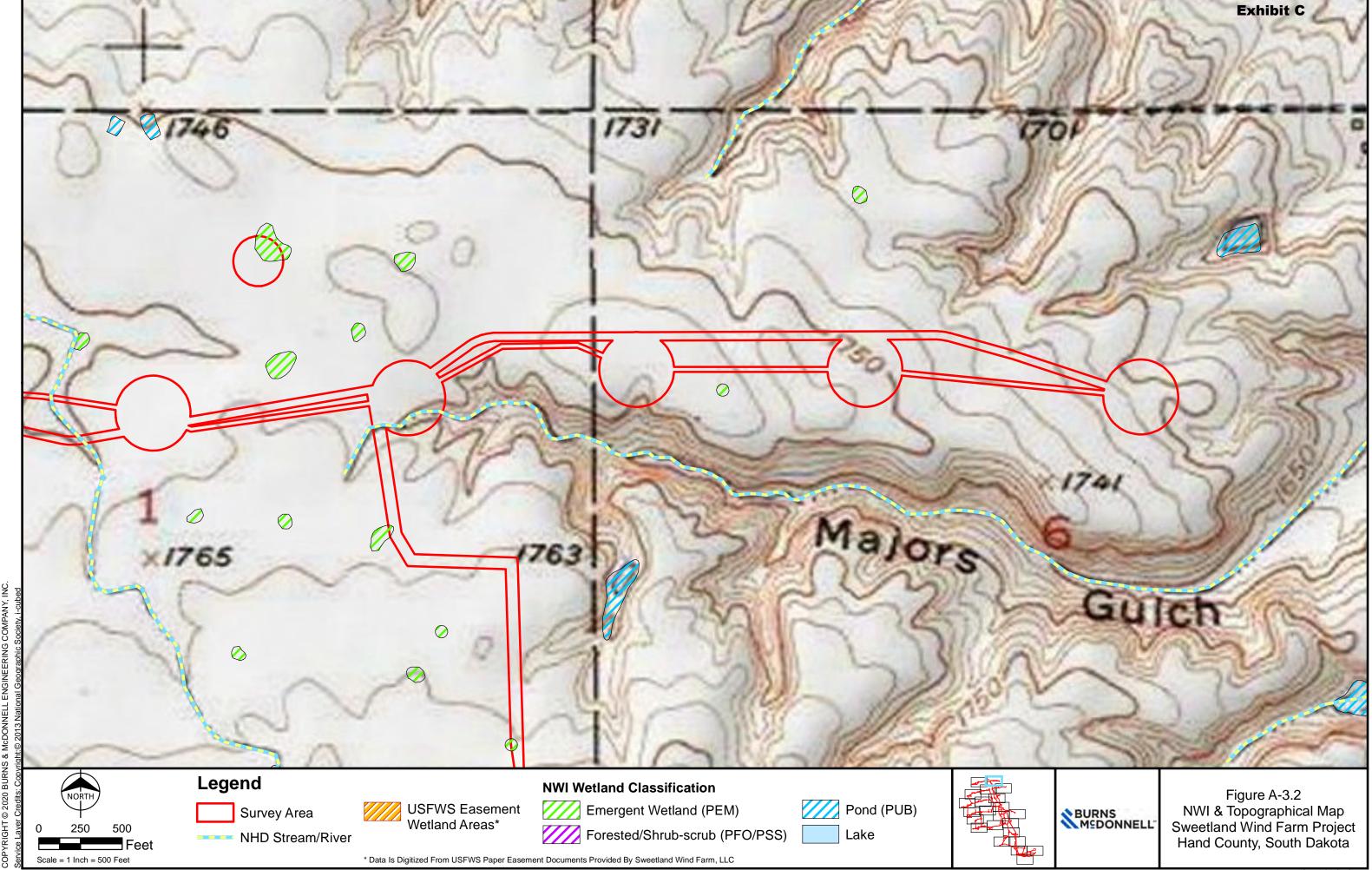
Rating Options

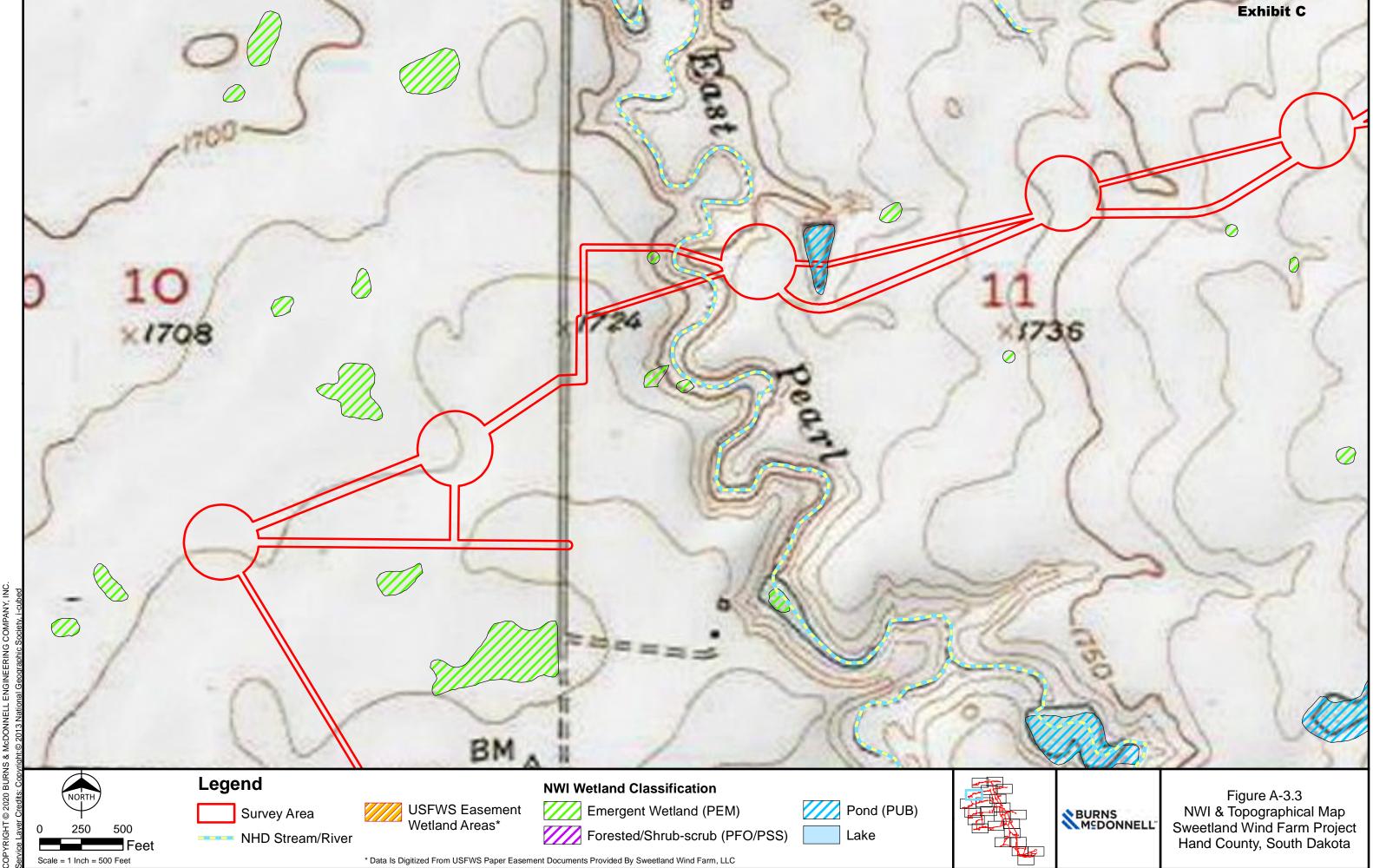
Aggregation Method: Percent Present

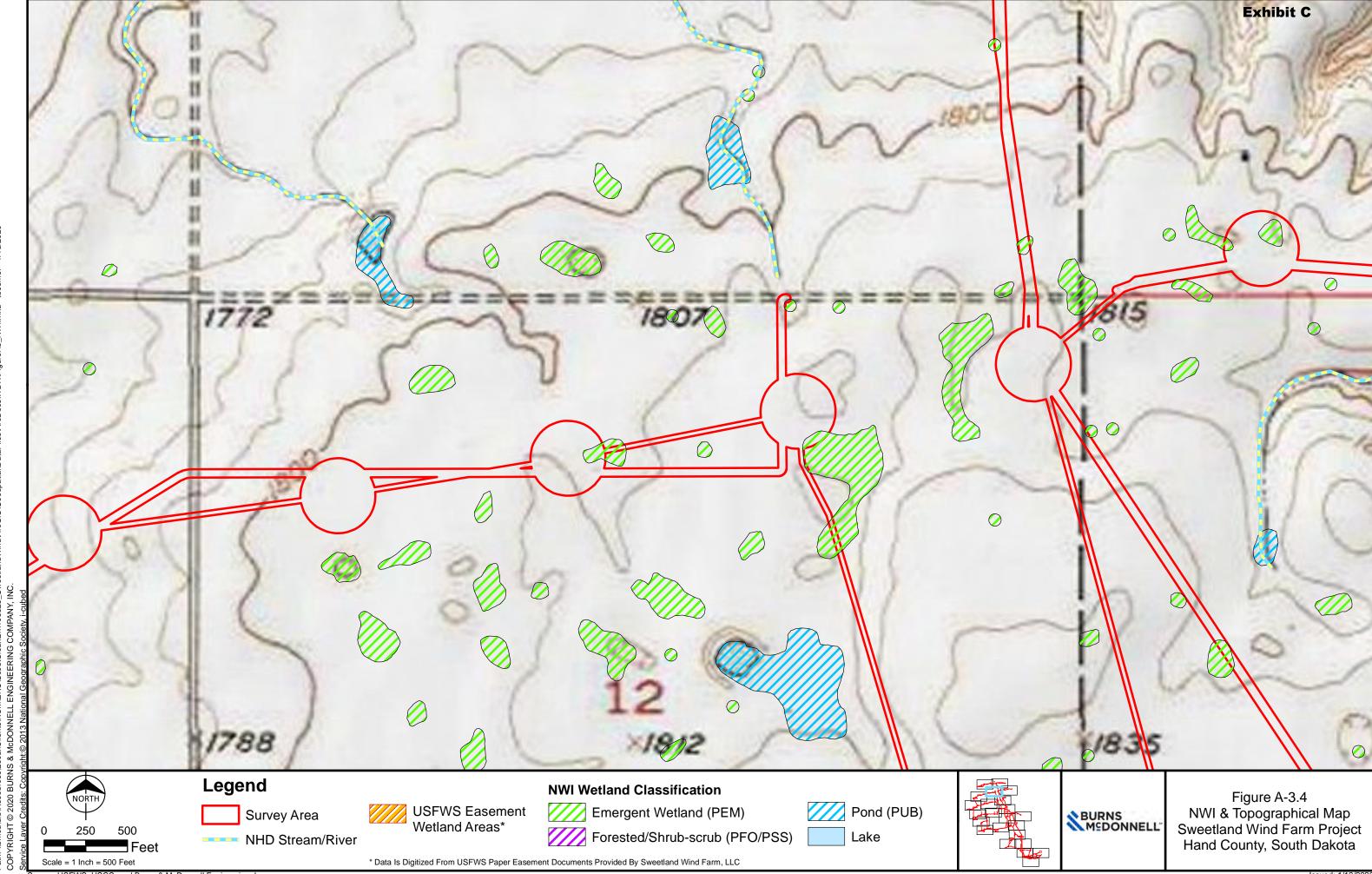
Component Percent Cutoff: None Specified

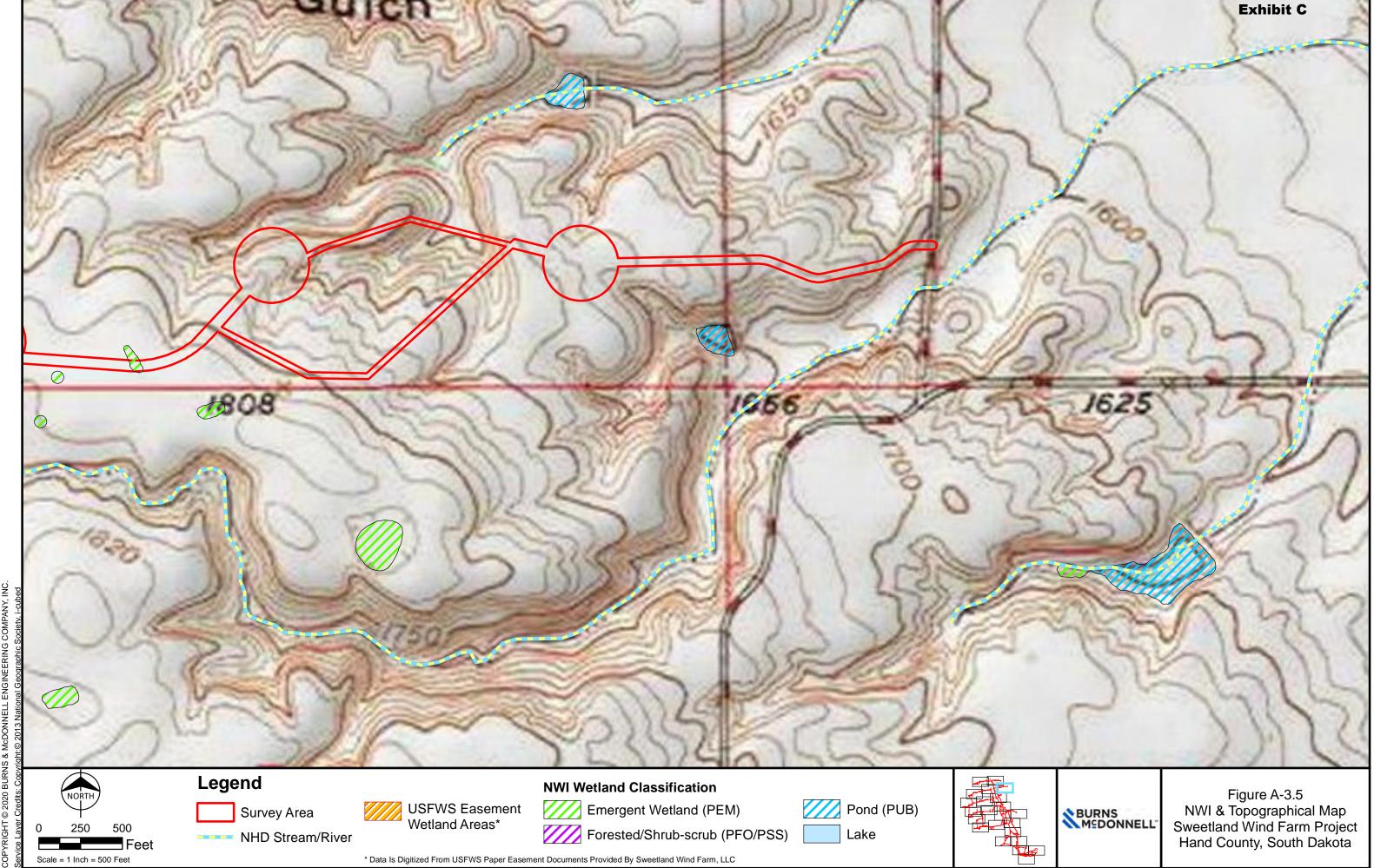
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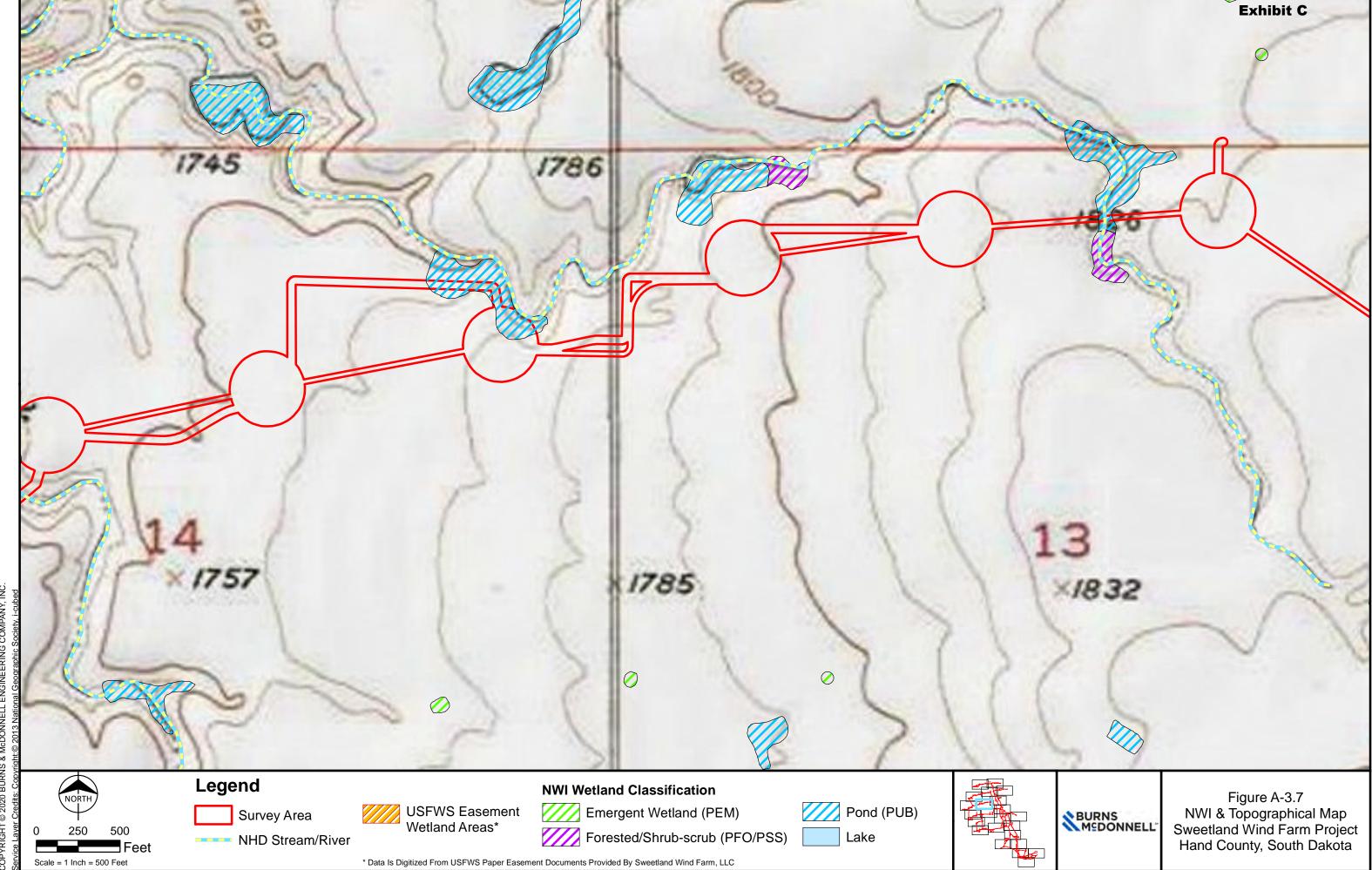


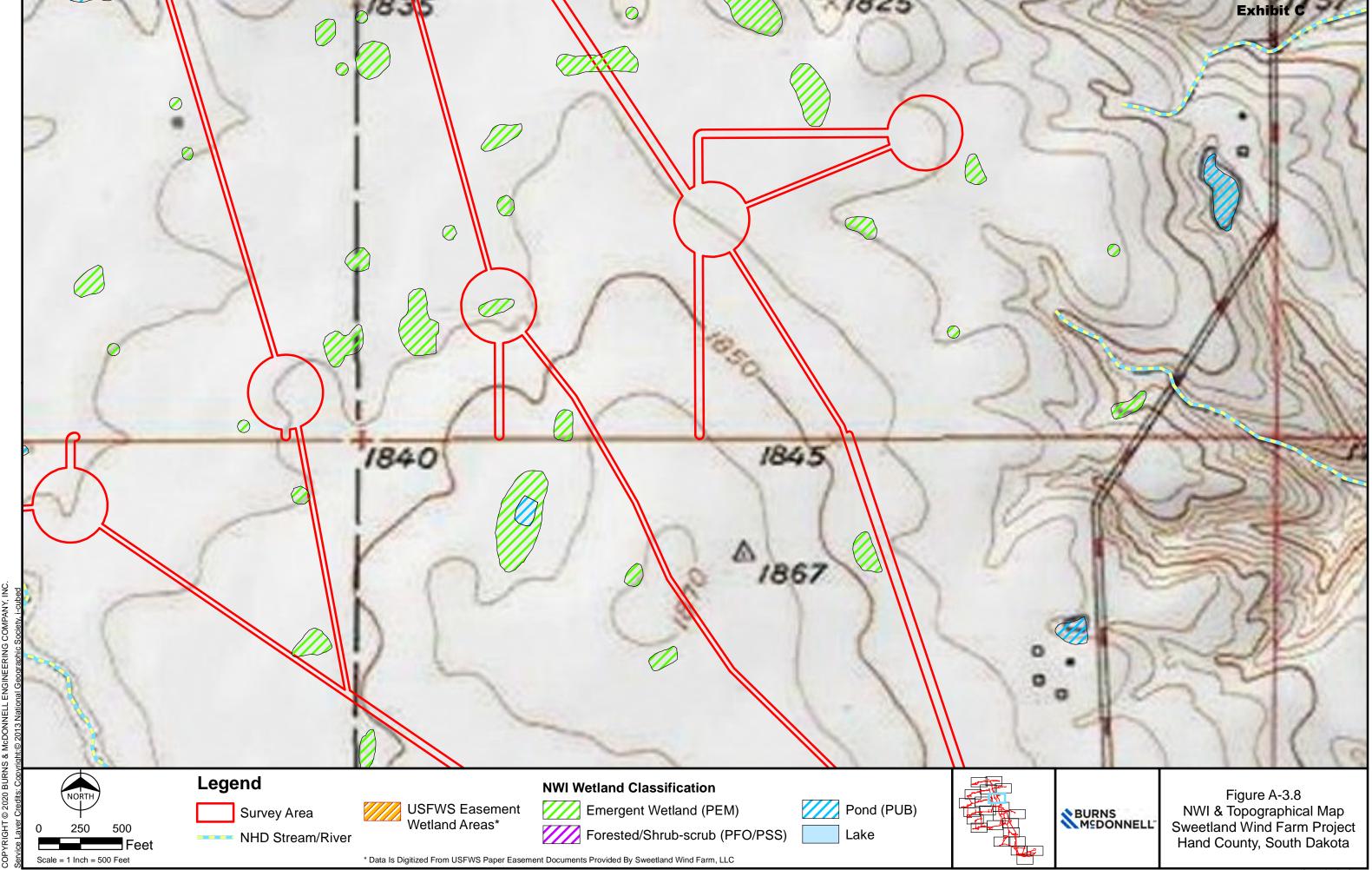


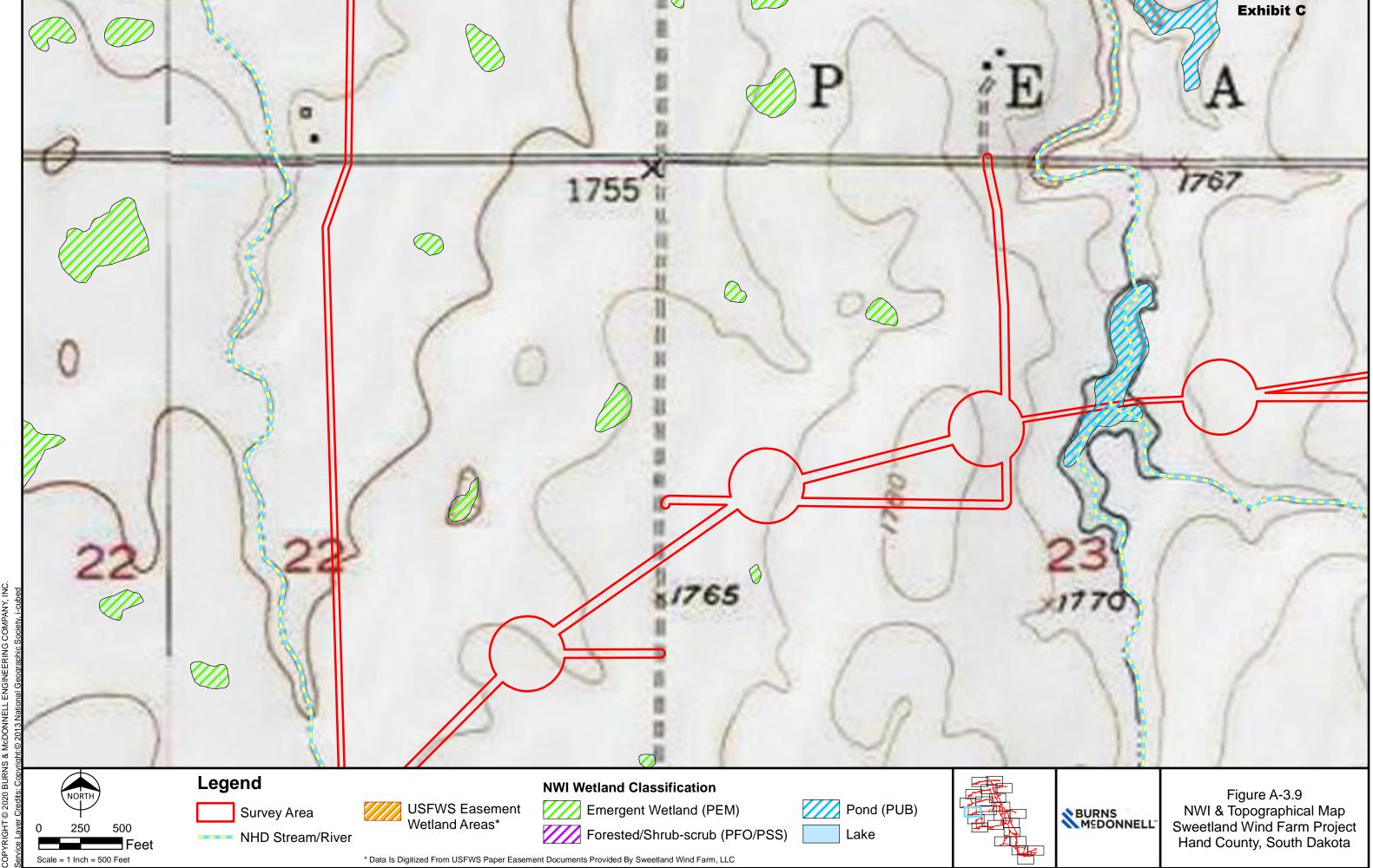


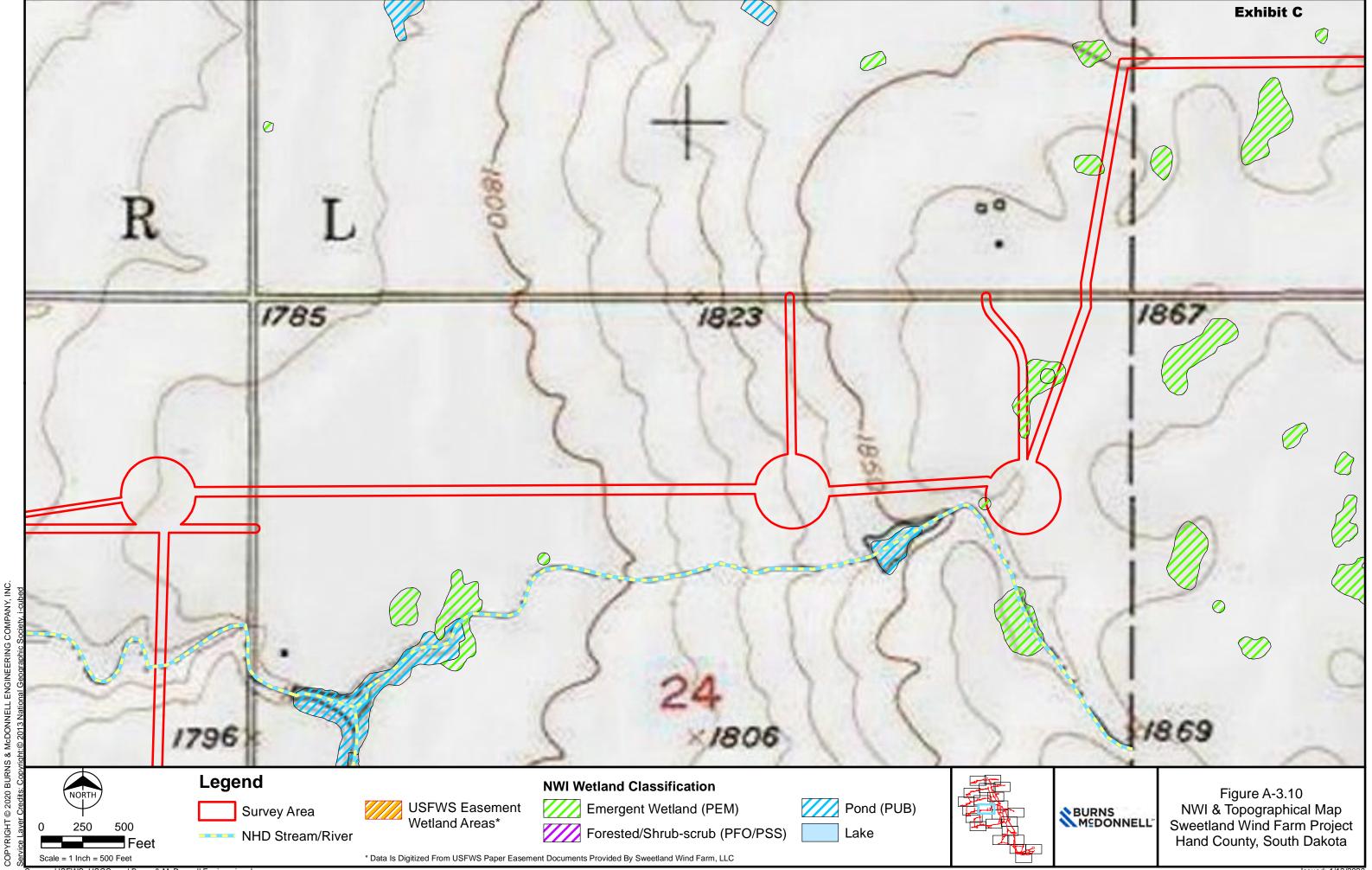


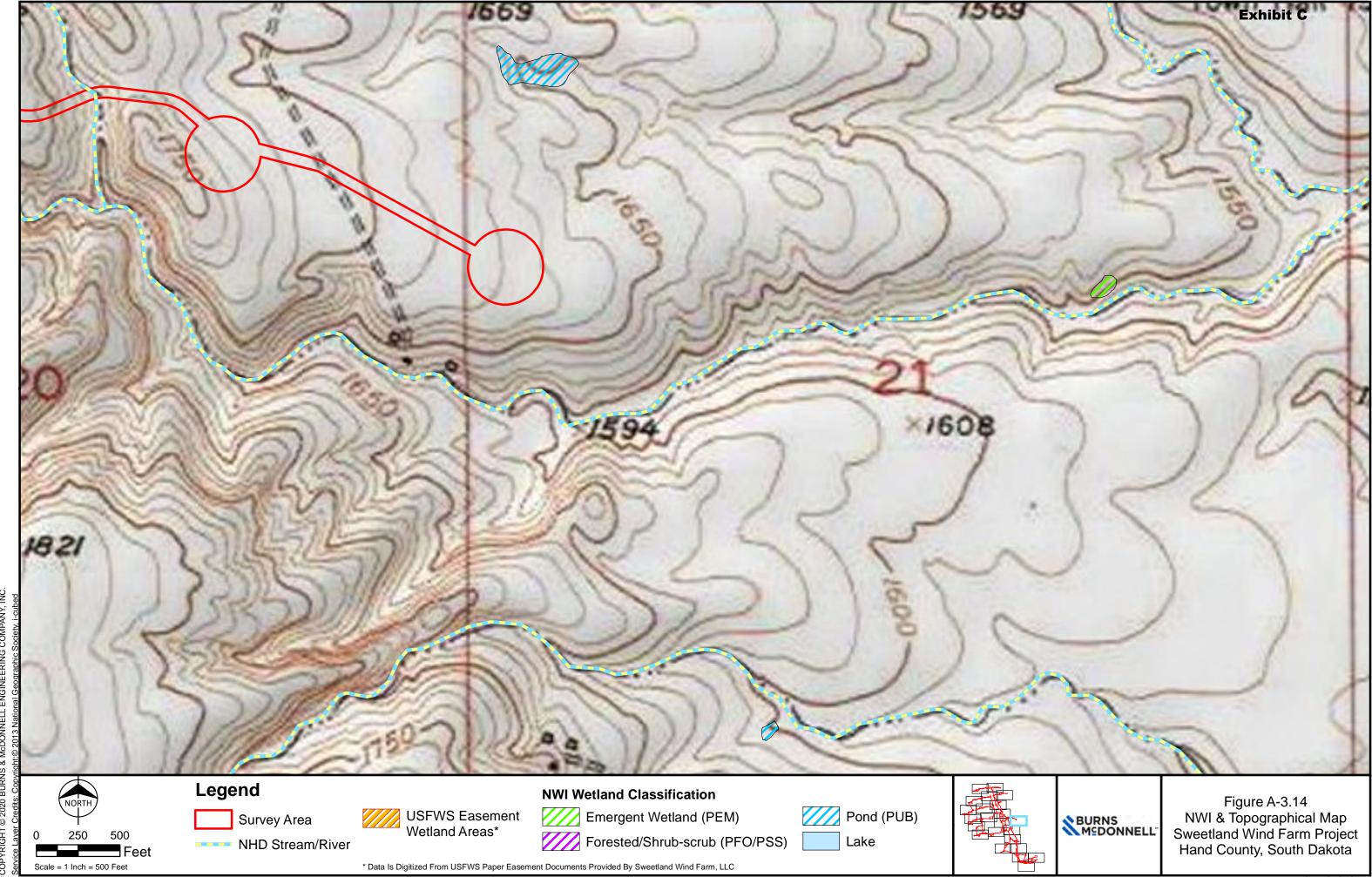


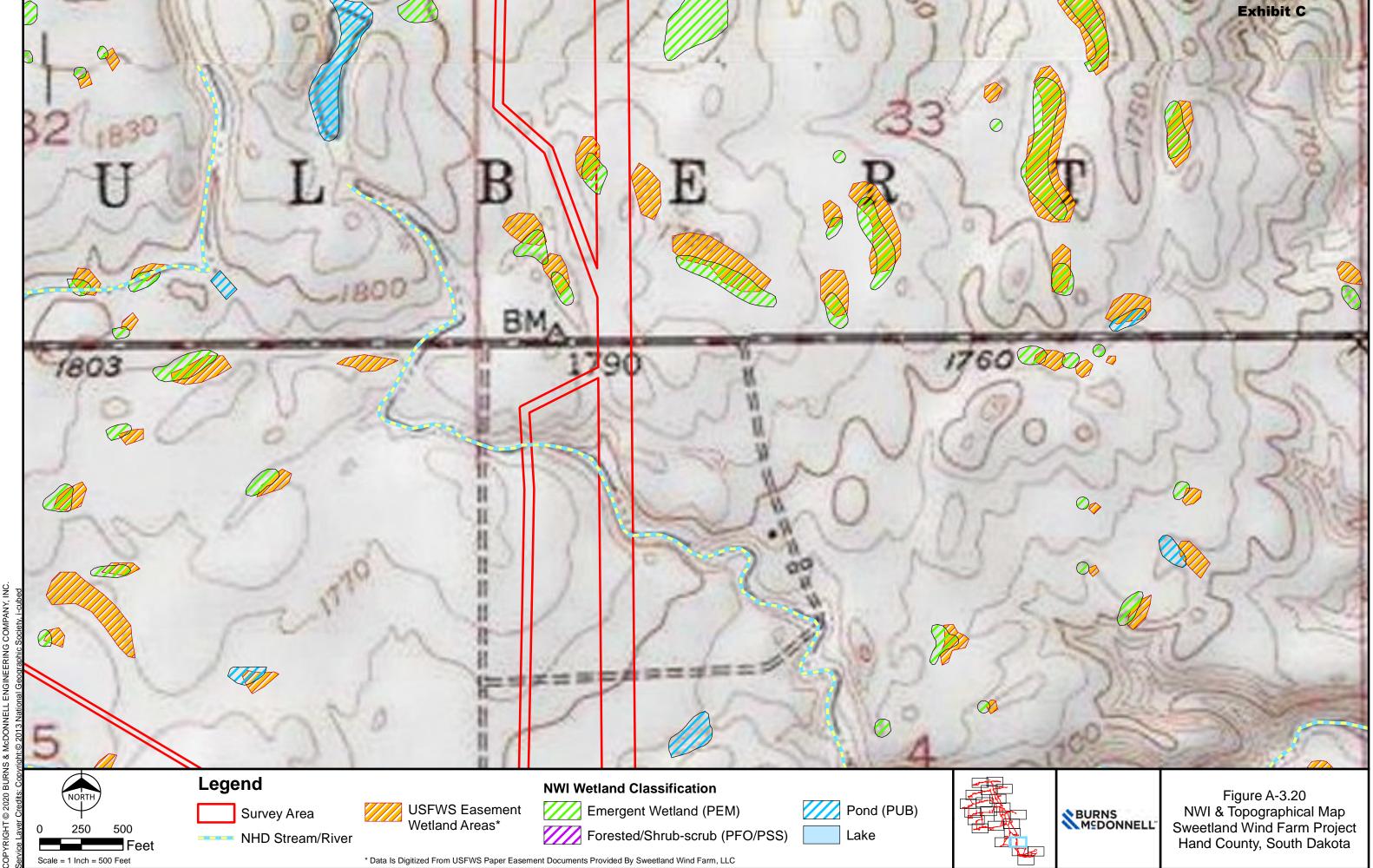


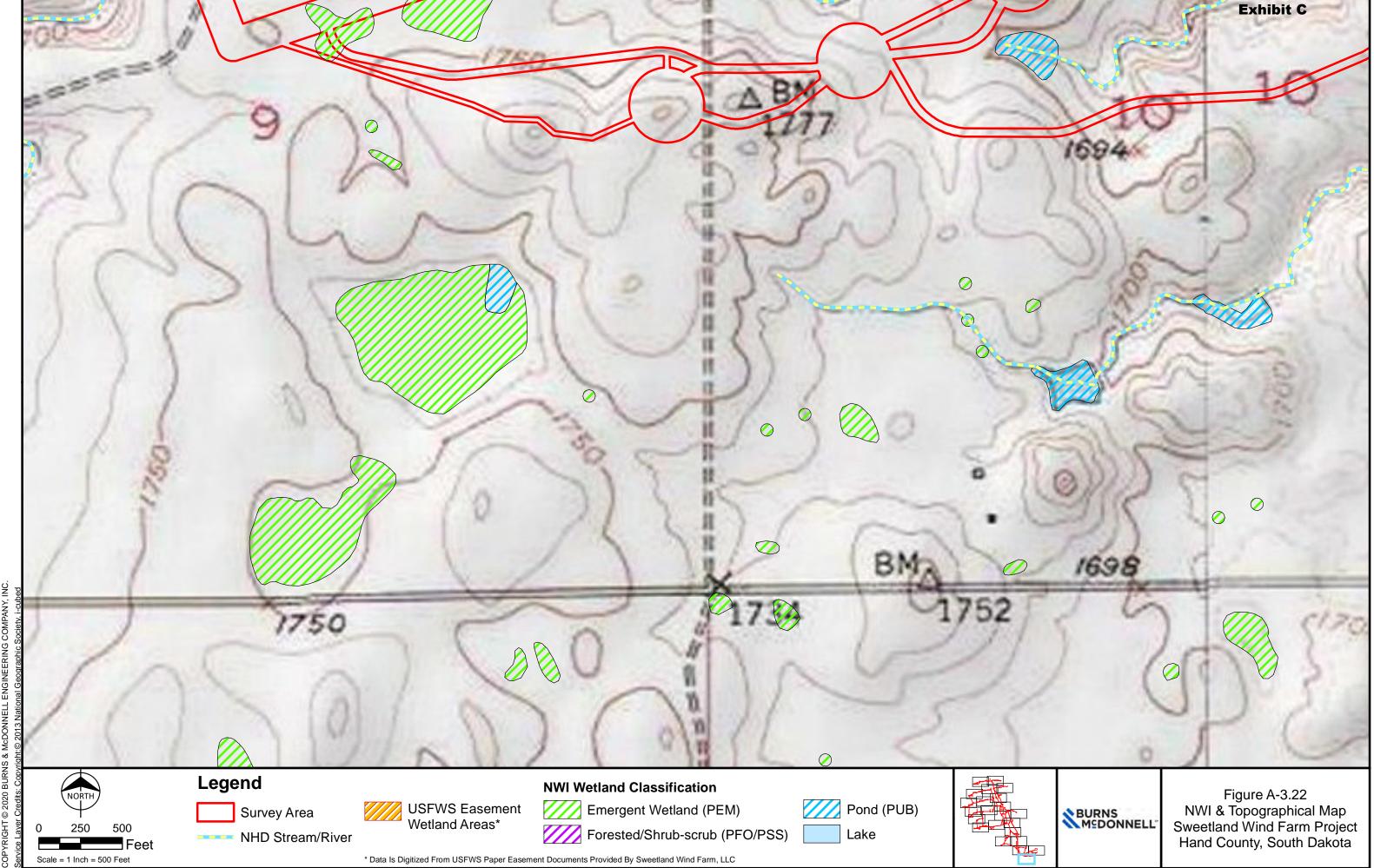


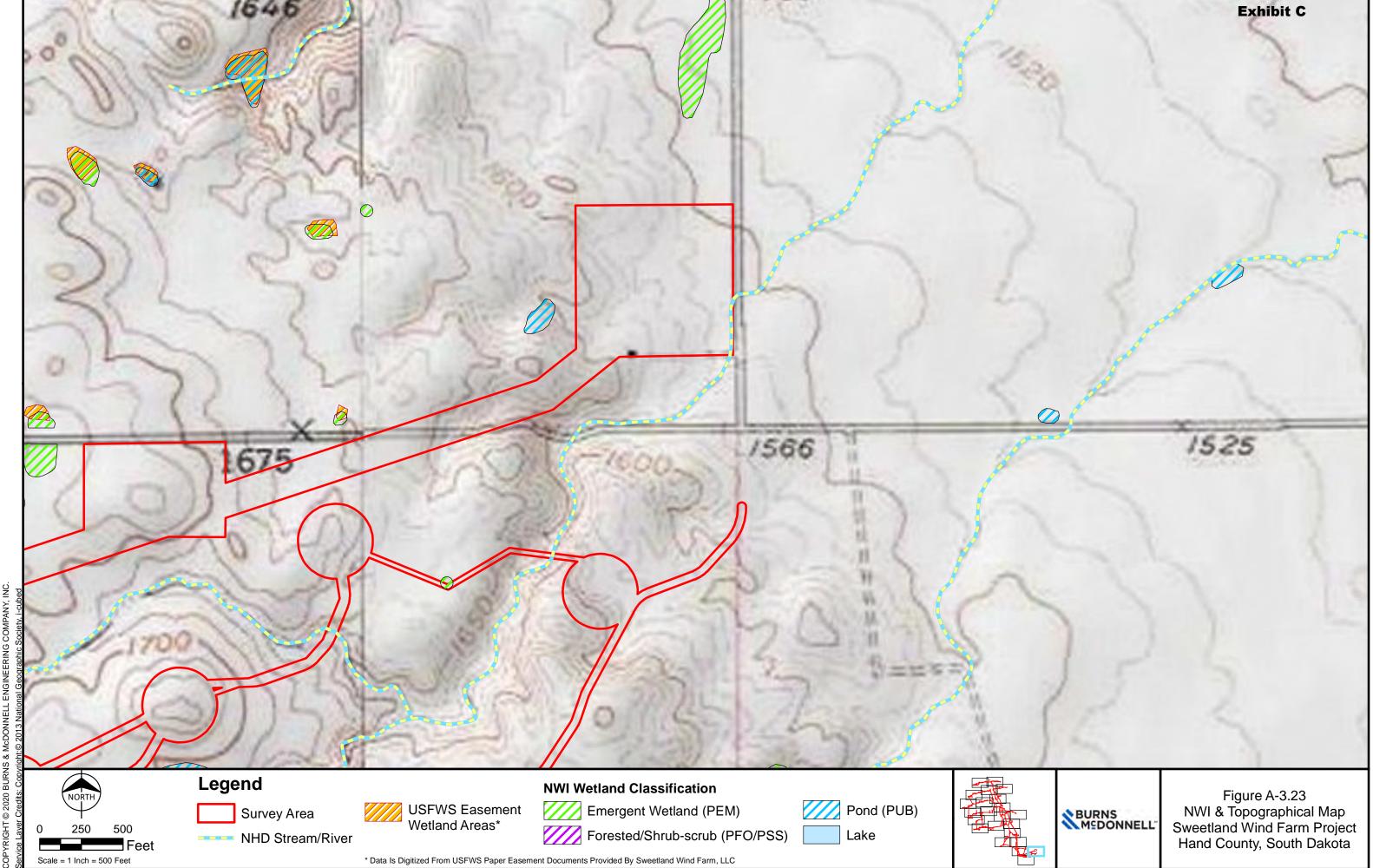


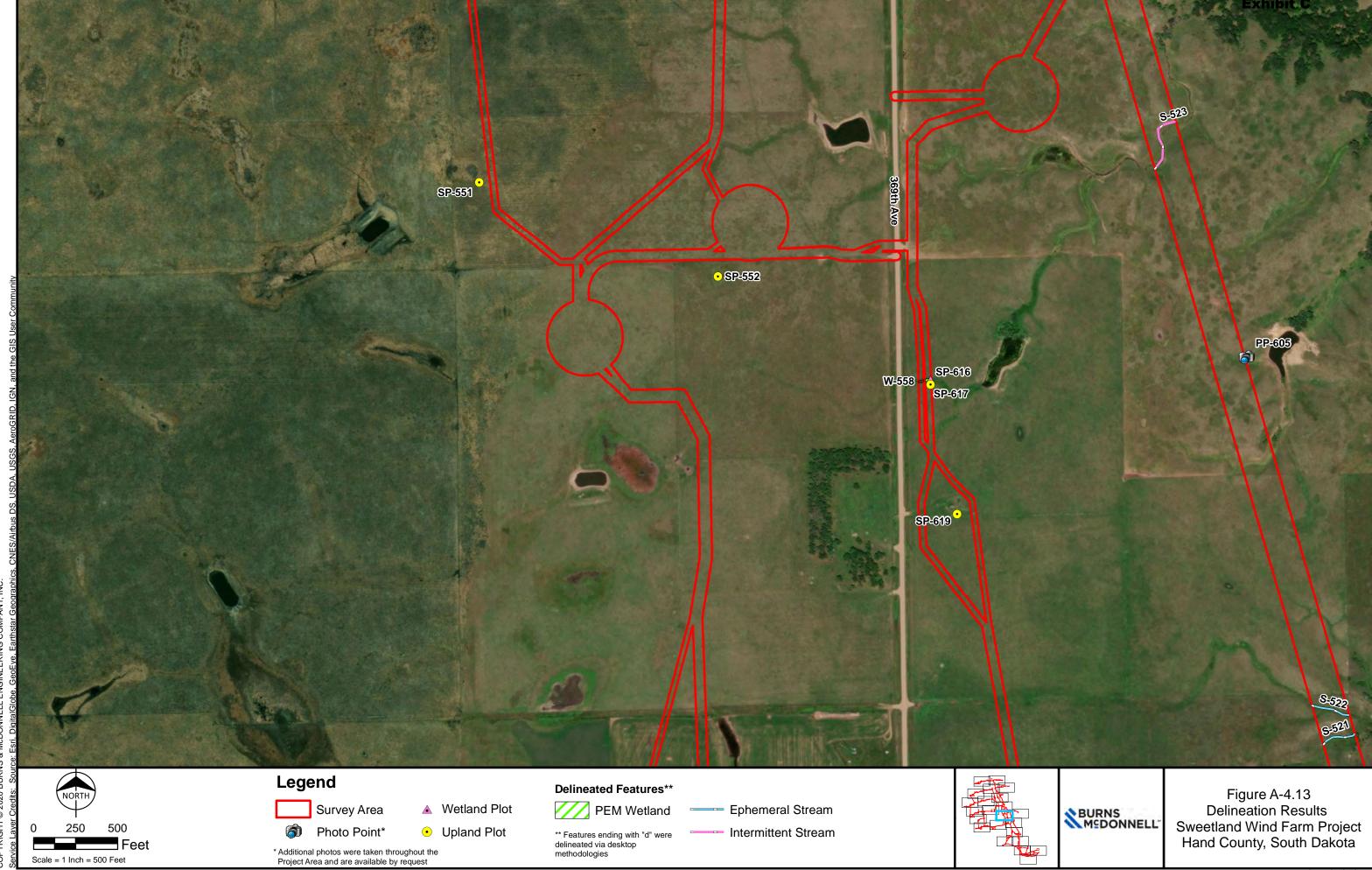


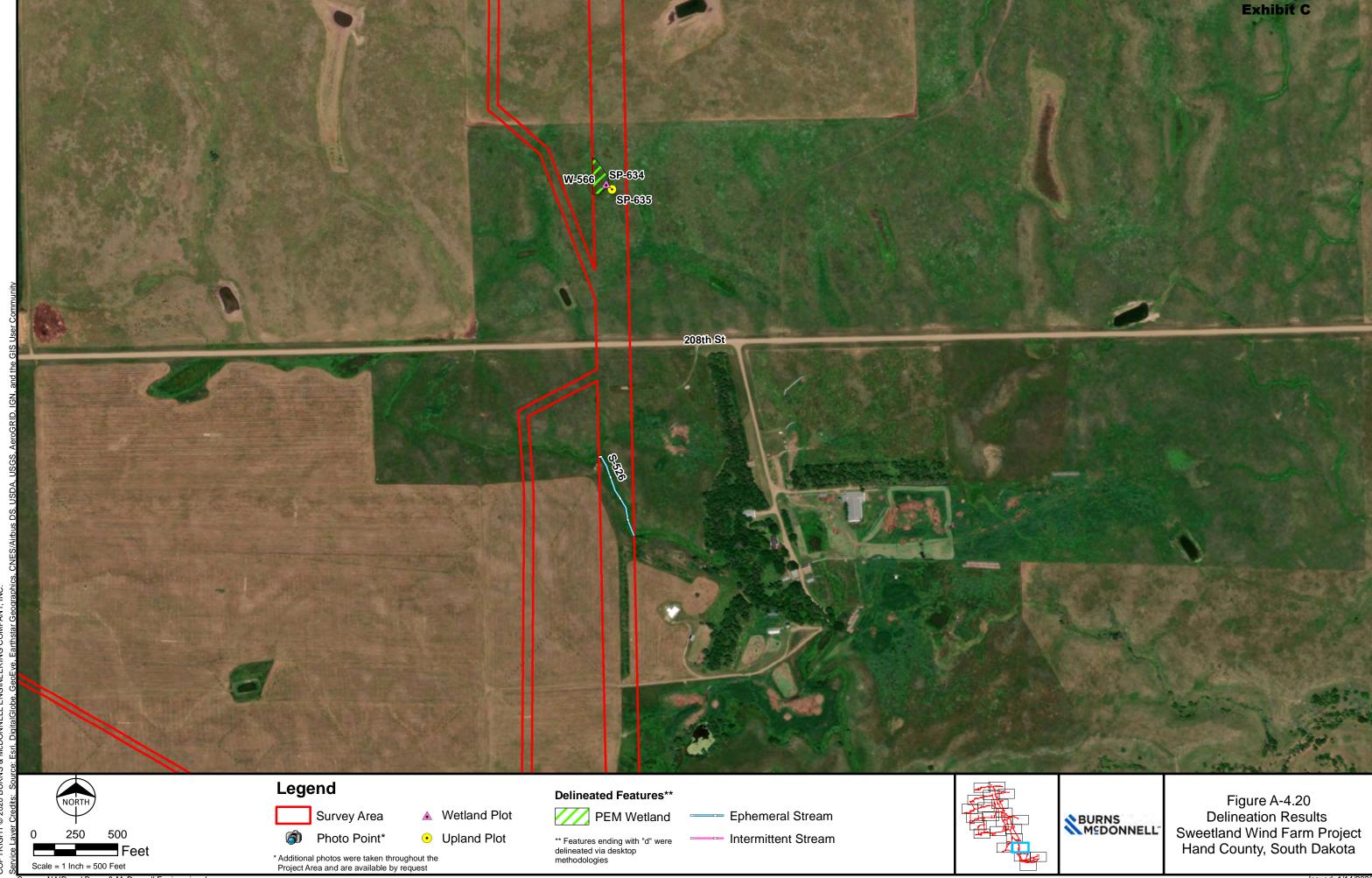












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APPENDIX B - ROUTINE WETLAND DETERMINATION DATA FORMS, GREAT PLAINS REGION

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Project	City/County: Hand County Sampling Date: 6/25/2018
Applicant/Owner: Sweetland Wind Farm, LLC	State: SD Sampling Point: SP-008
	Section, Township, Range: S3, T110N, R66W
Landform (hillslope, terrace, etc.) toeslope	Local relief (concave, convex, none): none Slope (%): 5 %
	Region Lat: 44.355968 Long: -98.756745 Datum: NAD83
· · · · · · · · · · · · · · · · · · ·	NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this ti	
year?	inte of 2 163 100 (it to, explain in Remarks)
Vegetation Soil Hydrolo	Pgy Are "Normal Circumstances" present? ☐ Yes ☐ No
Significantly Disturbed?	(If needed, explain any answers in Remarks)
Naturally Problematic?	
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locations, transects, important features, etc.
Yes No Hydrophytic Vegetation Present? □ □ Hydric Soil Present? □ □ Wetland Hydrology Present? □ □	Remarks: Upland confirmation plot adjacent to PEM W-004.
Is the Sampled Area within a Wetland?	
<u> </u>	
VEGETATION – Use scientific names of plants	
Total Otractions (Plat alice 200)	Absolute Dominant Indicator Dominance Test Worksheet:
Tree Stratum (Plot size: <u>30'</u>) 1	% Cover Species? Status Number of Dominant Species that
2.	are OBL, FACW, or FAC
3.	%
4.	Total Number of Dominant Species Across All Strata: 1 (B
	0 % = Total Cover
Sapling/Shrub Stratum (Plot size: 15')	Percent of Dominant Species that are OBL, FACW, or FAC: 0% (A.
1	<u>%</u>
2	i i tevalence muez vvoiksneet.
3	Tatal O/ Carran afr Marking Labor
4	
5	% OBL species % x1 = 0 0 % = Total Cover FACW species % x2 = 0
Heat Otesture (Districted 51)	FAC species% x 3 =
Herb Stratum (Plot size: <u>5'</u>)	FACU species% x 4 =0
Bromus inermis Persicaria sp. *	0FL species
3. Bromus arvensis	
4. Medicago lupulina	2 % N FACU Prevalence Index = B/A =
5.	% Hydrophytic Vegetation Indicators:
6	<u></u>
7.	
8	
9	
10.	97 % = Total Cover
Woody Vine Stratum (Plot size: <u>30'</u>)	☐ Problematic Hydrophytic Vegetation¹ (explain
1	% 1 Indicators of hydric soil and wetland hydrology
2	must be present, unless disturbed or problemation of the control o
Bare Ground in Herb Stratum 20 %	Hydrophytic Vegetation Present? ☐ Yes ☒ N
	a species could not be identified past genus. Most of the species in this region have
an indicator of FAC or wetter, therefore, an indicator of FAC	

SOIL Sampling Point: SP-008

(inches) 0-12				INCOUNT CO	atures			
0-12	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
	5YR 2.5/1	80	5YR 4/6	20	C	M	silty clay loam	
								
								
Type: C=Cond	centration, D=Dep	oletion, RI	M=Reduced Matrix,	CS=Cove	red or Coate	d Sand Grains	² Location: PL=Pore	E Lining, M=Matrix
lydric Soil Ind	licators: (Applic	able to a	II LRRs, unless otl	herwise n	oted.)		Indicators for Problem	atic Hydric Soils ³ :
Histosol (A1))		☐ Sandy 0	Gleyed Ma	trix (S4)		1 cm Muck (A9) (LRI	R I, J)
_ ☐ Histic Epiped	,		☐ Sandy F	•	. ,		☐ Coast Prairie Redox	
Black Histic			☐ Stripped				☐ Dark Surface (S7) (L	
_] Hydrogen Sι	` '		Loamy I				☐ High Plains Depress	,
	yers (A5) (LRR F)	Loamy				(LRR H outside of	
	A9) (LRR F, G, H		☐ Deplete	-			☐ Reduced Vertic (F18	3)
	low Dark Surface	•	⊠ Redox [☐ Red Parent Material	(TF2)
☐ Thick Dark S		` '	☐ Deplete		` '		☐ Very Shallow Dark S	urface (TF 12)
☐ Sandy Muck	, ,		☐ Redox [Other (Explain in Re	marks)
-	y Peat or Peat (S	S2) (LRR			ssions (F16)		³ Indicators of hydrophyti	ic vegetation and
	Peat or Peat (S3			72 & 73 c	, ,		wetland hydrology must	
_ ,	`	, ,					disturbed or problemation	
Restrictive Lav	er (if present):						Hydric Soil Present?	
-			Depth (inches):	12			⊠ Yes □ No	
Com	pact soil	_		12				
YDROLOGY								
	ology Indicators:	:						
Vetland Hydro	•		ed; check all that ap	oply)			Secondary Indicators (2	2 or more required)
Vetland Hydro	ors (minimum of c		ed; check all that ap ☐ Salt Crust				Secondary Indicators (2	
Vetland Hydro Primary Indicato ☐ Surface Wat	ors (minimum of corer (A1)			(B11)	s (B13)		☐ Surface Soil Cracks	(B6)
Vetland Hydro Primary Indicato ☐ Surface Wat ☐ High Water	ors (minimum of core (A1) Table (A2)		Salt Crust	(B11) vertebrates	` '		☐ Surface Soil Cracks☐ Sparsely Vegetated	(B6) Concave Surface (B8
Vetland Hydro Primary Indicato ☐ Surface Wat	ors (minimum of or er (A1) Table (A2) A3)		☐ Salt Crust (☐ Aquatic Inv	(B11) vertebrates Sulfide Od	or (C1)		☐ Surface Soil Cracks	(B6) Concave Surface (B8 B10)
Vetland Hydro Primary Indicate Surface Wat High Water Saturation (A	cer (A1) Table (A2) A3) S (B1)		☐ Salt Crust (☐ Aquatic Inv	(B11) vertebrates Sulfide Od n Water Ta	or (C1) able (C2)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I	(B6) Concave Surface (B8 B10)
Vetland Hydro Primary Indicate Surface Wat High Water Saturation (A Water Marks	per (Minimum of construction (M2) Table (A2) A3) S (B1) Eposits (B2)		☐ Salt Crust (☐ Aquatic Inv ☐ Hydrogen S☐ Dry-Seaso)☐ Oxidized R	(B11) vertebrates Sulfide Od n Water Ta	or (C1) able (C2)	Roots (C3)	☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (I ☐ Oxidized Rhizosphe	(B6) Concave Surface (B8B10) res on Living Roots (0
Vetland Hydro Primary Indicate Surface Wat High Water Saturation (A Water Marks Sediment De	cer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3)		☐ Salt Crust (☐ Aquatic Inv ☐ Hydrogen S☐ Dry-Seaso) ☐ Oxidized R ☐ (where r	(B11) vertebrates Sulfide Od n Water Ta hizosphere not tilled) of Reduced	or (C1) able (C2) es on Living d Iron (C4)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or	(B6) Concave Surface (B8B10) res on Living Roots (C8B) A Aerial Imagery (C9)
Vetland Hydro Primary Indicate Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit	cer (A1) Table (A2) A3) s (B1) eposits (B2) rs (B3) Crust (B4)		☐ Salt Crust (☐ Aquatic Inv ☐ Hydrogen S☐ Dry-Seaso) ☐ Oxidized R ☐ (where r ☐ Presence C☐ Thin Muck	(B11) vertebrates Sulfide Od n Water Ta hizosphere not tilled) of Reduced Surface (C	or (C1) able (C2) es on Living d Iron (C4) C7)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C	(B6) Concave Surface (B8B10) res on Living Roots (C8B) A Aerial Imagery (C9)
Vetland Hydro Primary Indicate Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or	cer (A1) Table (A2) A3) s (B1) eposits (B2) rs (B3) Crust (B4)	one requir	Salt Crust (Aquatic Inv Hydrogen S Dry-Seaso Oxidized R (where r) Presence C Thin Muck	(B11) vertebrates Sulfide Od n Water Ta hizosphere not tilled) of Reduced Surface (C	or (C1) able (C2) es on Living d Iron (C4) C7)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or	(B6) Concave Surface (B8B10) eres on Living Roots (6BB) A Aerial Imagery (C9) n (D2)
Vetland Hydro Primary Indicate Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits	cer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5)	one requir	Salt Crust (Aquatic Inv Hydrogen S Dry-Seaso Oxidized R (where r) Presence C Thin Muck	(B11) vertebrates Sulfide Od n Water Ta hizosphere not tilled) of Reduced Surface (C	or (C1) able (C2) es on Living d Iron (C4) C7)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position	(B6) Concave Surface (B8 B10) Ares on Living Roots (C8) A Aerial Imagery (C9) In (D2)
Vetland Hydro Primary Indicate Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits	cer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) //sible on Aerial Ir	one requir	Salt Crust Aquatic Inv Hydrogen S Dry-Seaso Oxidized R (where n Presence c Thin Muck Other (Exp	(B11) vertebrates Sulfide Od n Water Ta hizosphere not tilled) of Reduced Surface (C lain in Rer	or (C1) able (C2) es on Living d Iron (C4) C7) narks) cribe Record	led Data (strea	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8 B10) Irres on Living Roots (C8) A Aerial Imagery (C9) In (D2) D5) Ocks (D7) (LRR F)
Vetland Hydro Primary Indicate Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Water-Staine	cer (A1) Table (A2) A3) s (B1) eposits (B2) ss (B3) Crust (B4) s (B5) //isible on Aerial Ined Leaves (B9)	magery (B	Salt Crust Aquatic Inv Hydrogen S Dry-Seaso Oxidized R (where r Presence C Thin Muck Other (Exp	(B11) vertebrates Sulfide Od n Water Ta hizosphere not tilled) of Reduced Surface (C lain in Rer	or (C1) able (C2) es on Living d Iron (C4) C7) narks) cribe Record	. ,	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (E Frost-Heave Hummi	(B6) Concave Surface (B8 B10) Irres on Living Roots (C8) A Aerial Imagery (C9) In (D2) D5) Ocks (D7) (LRR F)
Vetland Hydro Primary Indicate Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Water-Staine	cors (minimum of corer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) //isible on Aerial Ined Leaves (B9) crions:	magery (B	Salt Crust Aquatic Inv Hydrogen S Dry-Seaso Oxidized R (where n Presence c Thin Muck Other (Exp Depth No (inches)	(B11) vertebrates Sulfide Od n Water Ta hizosphere not tilled) of Reduced Surface (C lain in Rer	or (C1) able (C2) es on Living d Iron (C4) C7) narks) cribe Record	led Data (strea	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (E Frost-Heave Hummi	(B6) Concave Surface (B8 B10) Irres on Living Roots (C8) A Aerial Imagery (C9) In (D2) D5) Ocks (D7) (LRR F)
Vetland Hydro Primary Indicate Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Water-Staine	cors (minimum of corer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) //isible on Aerial Ined Leaves (B9) crions:	magery (B	Salt Crust Aquatic Inv Hydrogen S Dry-Seaso Oxidized R (where r Presence C Thin Muck Other (Exp	(B11) vertebrates Sulfide Od n Water Ta hizosphere not tilled) of Reduced Surface (C lain in Rer	or (C1) able (C2) es on Living d Iron (C4) C7) narks) cribe Record	led Data (strea	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (E Frost-Heave Hummi	(B6) Concave Surface (B8 B10) Irres on Living Roots (C8) A Aerial Imagery (C9) In (D2) D5) Ocks (D7) (LRR F)
Vetland Hydro Primary Indicate Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Water-Staine	cer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) //isible on Aerial Index (B9) cions: present?	magery (B	Salt Crust Aquatic Inv Hydrogen S Dry-Seaso Oxidized R (where n Presence c Thin Muck Other (Exp Depth No (inches)	(B11) vertebrates Sulfide Od n Water Ta hizosphere not tilled) of Reduced Surface (C lain in Rer	or (C1) able (C2) es on Living d Iron (C4) C7) narks) cribe Record	led Data (strea	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (E Frost-Heave Hummi	(B6) Concave Surface (B8 B10) Irres on Living Roots (C8) A Aerial Imagery (C9) In (D2) D5) Ocks (D7) (LRR F)
Vetland Hydro Primary Indicate Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Water-Staine Field Observat Vater Table pre	cer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) //sible on Aerial Ined Leaves (B9) cions: present? esent? ent?	magery (B	Salt Crust Aquatic Inv Hydrogen S Oxidized R (where n Presence c Thin Muck Other (Exp No Depth (inches)	(B11) vertebrates Sulfide Od n Water Ta hizosphere not tilled) of Reduced Surface (C lain in Rer	or (C1) able (C2) es on Living d Iron (C4) C7) narks) cribe Record	led Data (strea	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (E Frost-Heave Hummi	(B6) Concave Surface (B8 B10) Irres on Living Roots (C8) A Aerial Imagery (C9) In (D2) D5) Ocks (D7) (LRR F)
Vetland Hydro Primary Indicate Surface Wat High Water Saturation (A Sediment De Drift Deposite Algal Mat or Iron Deposite Inundation V Water-Staine Field Observat Surface Water p	cer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) //sible on Aerial Ined Leaves (B9) cions: present? esent? ent?	magery (B	Salt Crust Aquatic Inv Hydrogen S Oxidized R (where n Presence c Thin Muck Other (Exp No Depth (inches)	(B11) vertebrates Sulfide Od n Water Ta hizosphere not tilled) of Reduced Surface (C lain in Rer	or (C1) able (C2) es on Living d Iron (C4) C7) narks) cribe Record	led Data (strea	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (E Frost-Heave Hummi	(B6) Concave Surface (B8 B10) Irres on Living Roots (C8) A Aerial Imagery (C9) In (D2) D5) Ocks (D7) (LRR F)
Vetland Hydro Primary Indicate Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Water-Staine Field Observat Vater Table presented on Presented Securation Presented Metland Hydro	creater (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) risible on Aerial Index (B9) citions: present? ent? eary fringe)	magery (B	Salt Crust Aquatic Inv Hydrogen S Dry-Seaso Oxidized R (where n Presence C Thin Muck Other (Exp Depth (inches) S S S S S S S S S S S S S S S S S S	(B11) vertebrates Sulfide Od n Water Ta hizosphere not tilled) of Reduced Surface (C lain in Rer	or (C1) able (C2) es on Living d Iron (C4) C7) narks) cribe Record	led Data (strea	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (E Frost-Heave Hummi	(B6) Concave Surface (B8 B10) Irres on Living Roots (C8) A Aerial Imagery (C9) In (D2) D5) Ocks (D7) (LRR F)

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Project	City/County: Hand County	Sampling Date: 6/26/2018
Applicant/Owner: Sweetland Wind Farm, LLC	Stat	te: SD Sampling Point: SP-011
	Section, Township, Ra	ange: S9, T110N, R66W
Landform (hillslope, terrace, etc.) <u>depression</u>		
Subregion (LRR): Northern Great Plains Spring Wheat R	Region Lat: 44.350397	Long: -98.770315 Datum: NAD83
Soil Map Unit Name: Tetonka silt loam, 0 to 1 percent sk	<u></u>	· · · · · · · · · · · · · · · · · · ·
Are climate/hydrologic conditions on the site typical for this tyear?		(If no, explain in Remarks)
Vegetation Soil Hydrolo	Pgy Are "Normal Circums	stances" present? 🛛 Yes 🔲 No
Significantly Disturbed? Naturally Problematic?	(If neede	ed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locations, tra	nnsects, important features, etc.
Hydrophytic Vegetation Present? □ □ Hydric Soil Present? □ □ Wetland Hydrology Present? □ □ Is the Sampled Area within a Wetland? □ □	Remarks: Upland confirmation pl	ot.
VEGETATION – Use scientific names of plants		I
Tree Stratum (Plot size: 30')	Absolute Dominant Indicator % Cover Species? Status	Dominance Test Worksheet:
1	<u>%</u>	Number of Dominant Species that are OBL, FACW, or FAC
2	<u> </u>	(excluding FAC-): 0 (A)
3		Total Number of Dominant
4		Species Across All Strata:1_(B)
Conline/Chrush Ctrotum (Diet circu 451)	0 % = Total Cover	Percent of Dominant Species that
Sapling/Shrub Stratum (Plot size: 15') 1	<u></u> %	are OBL, FACW, or FAC: 0% (A/B)
2.	<u> </u>	Duayalan as Inday Wadsahaati
3.	0.4	Prevalence Index Worksheet:
4	<u> </u>	Total % Cover of: Multiply by:
5	<u>%</u>	OBL species% x 1 =0 FACW species
	0 % = Total Cover	FACW species% x 2 =0 FAC species
Herb Stratum (Plot size: <u>5'</u>)		FACU species% x 4 =
1. Bromus arvensis	60 % Y FACU	UPL species % x 5 = 0
2. Xanthium strumarium	5 % N FAC 5 % N FACW	Column Totals:0% (A)0 (B)
3. <u>Eleocharis compressa</u> 4.	<u>5 %</u> N FACW	Prevalence Index = B/A =
5.	<u>%</u>	Hydrophytic Vegetation Indicators:
6.	<u> </u>	
7.	<u></u> %	☐ 1 Rapid Test for Hydrophytic Vegetation
8	<u>%</u>	☐ 2 Dominance Test is >50%
9	<u>%</u>	☐ 3 Prevalence Index is ≤3.0¹
10.		☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>)	0/	☐ Problematic Hydrophytic Vegetation¹ (explain)
1	<u>%</u>	¹ Indicators of hydric soil and wetland hydrology
	0 % = Total Cover	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 60 %		Hydrophytic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photograph	h C-2.	

SOIL Sampling Point: SP-011

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix			Re	dox Fea	tures				
(inches)	Color (moist)	%	C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-20	10YR 2/1	95		10YR 3/3	5	C	M	clay		
								•		
									· _	
									· 	
1T C. C.		lation DA	4 Das	Lucad Matrix, CC				21 anations DI Day	a Lining M. Matrix	
• • • • • • • • • • • • • • • • • • • •	ndicators: (Applic						a Sand Grains	² Location: PL=Por Indicators for Probler	<u> </u>	
•	`	abie to a	II LIXIN	·		,			•	
☐ Histosol (/	,			☐ Sandy Gle		rix (S4)		☐ 1 cm Muck (A9) (LF		
☐ Histic Epi				☐ Sandy Red	. ,			☐ Coast Prairie Redox		
☐ Black Hist	tic (A3)			☐ Stripped IV				☐ Dark Surface (S7) (LRR G)	
☐ Hydrogen	Sulfide (A4)			☐ Loamy Mu	cky Mine	eral (F1)		☐ High Plains Depres		
☐ Stratified	Layers (A5) (LRR F))		☐ Loamy Gle	yed Mat	rix (F2)		(LRR H outside of	•	
☐ 1 cm Muc	k (A9) (LRR F, G, H)		□ Depleted N	/latrix (F	3)		☐ Reduced Vertic (F1	8)	
□ Depleted	Below Dark Surface	(A11)		□ Redox Dar	k Surfac	e (F6)		☐ Red Parent Materia	l (TF2)	
☐ Thick Dar	k Surface (A12)	, ,		☐ Depleted □	ark Sur	face (F7)		□ Very Shallow Dark :	Surface (TF 12)	
	ıcky Mineral (S1)			☐ Redox Dep		` '		Other (Explain in Re	emarks)	
	ucky Peat or Peat (S	2) (LRR	G. H)	☐ High Plain		, ,		³ Indicators of hydrophy	tic vocatation and	
	ky Peat or Peat (S3)			(MLRA 72	•	` ,		wetland hydrology mus		
o om wao	ky r car or r car (co)	, (L)		(disturbed or problemati		
Da atriativa I	(if managed):									
	ayer (if present):							Hydric Soil Present?		
Type:		_	Deptr	ı (inches):				⊠ Yes □ No		
HYDROLOG	Υ									
Wetland Hyd	Irology Indicators:									
Primary Indic	ators (minimum of o	ne reauir	ed: ch	eck all that apply	/)			Secondary Indicators	(2 or more required)	
☐ Surface W	•	•		☐ Salt Crust (B1				☐ Surface Soil Crack		
_	` '			,	•	(D40)			` '	
☐ High Wate				Aquatic Invert		` '		☐ Sparsely Vegetated Concave Surface (B8)		
Saturation	` '			Hydrogen Sul		` ,		☐ Drainage Patterns	• •	
☐ Water Ma	, ,			Dry-Season V		, ,			eres on Living Roots (C3)	
	Deposits (B2)		L	Oxidized Rhiz		s on Living	Roots (C3)	(where tilled)	20)	
☐ Drift Depo	, ,		_	where not	•	. (0.1)		Crayfish Burrows (·	
-	or Crust (B4)		_	Presence of F		` ,		☐ Saturation Visible of	• • • • • •	
☐ Iron Depo	` '		_	Thin Muck Su				☐ Geomorphic Position		
☐ Inundation	n Visible on Aerial In	nagery (B	7) L	☐ Other (Explair	in Rem	narks)		FAC-Neutral Test (*	
☐ Water-Sta	ined Leaves (B9)							☐ Frost-Heave Humn	nocks (D7) (LRR F)	
				Depth	Desc		ed Data (strea	m gauge, monitoring well	, aerial photos, previous	
Field Observ	. ,	Yes	No	(inches)	inen	actions atc.)	if available.	3 3 1		
Field Observ	vations:	_		(inches)	inspe	ections, etc.)	, if available:			
Field Observ	vations: er present?		\boxtimes	(inches)	inspe	ections, etc.)	, if available:			
Field Observ Surface Water Water Table	vations: er present? present?	_	\boxtimes	(inches)	inspe	ections, etc.)	, if available:			
Field Observ Surface Wate Water Table Saturation Pr	vations: er present? present? esent?		\boxtimes	(inches)	inspe	ections, etc.)	, if available:			
Field Observ Surface Water Water Table	vations: er present? present? esent?		\boxtimes	(inches)	inspe	ections, etc.)	, if available:			
Surface Water Water Table Saturation Pr (includes cap	vations: er present? present? esent?		\boxtimes	(inches)	inspe	ections, etc.)	, if available:			
Field Observ Surface Water Water Table Saturation Pr (includes cap Wetland Hyd	vations: er present? present? esent? eillary fringe) drology Present?				inspe	ections, etc.)	, if available:			
Field Observ Surface Water Water Table Saturation Pr (includes cap Wetland Hyd	vations: er present? present? essent? illary fringe)				inspe	ections, etc.)	, if available:			
Field Observ Surface Water Water Table Saturation Pr (includes cap Wetland Hyd	vations: er present? present? esent? eillary fringe) drology Present?				inspe	ections, etc.)	, if available:			
Field Observ Surface Water Water Table Saturation Pr (includes cap Wetland Hyd	vations: er present? present? esent? eillary fringe) drology Present?				inspe	ections, etc.)	, if available:			

Project/Site: Sweetland Wind Project	City/County: Hand Coun	Sampling Date: 6/25/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-501
Investigator(s): T. Beemer, W. Hirst	Section, Township	
Landform (hillslope, terrace, etc.) swale	Local relief (concave, convex	
Subregion (LRR): Northern Great Plains Spring Wheat Region	n Lat: 44.454069	Long: -98.813009 Datum: NAD83
Soil Map Unit Name: Betts-Java loams, steep		NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this time of	f year? ⊠ Yes □ No	(If no, explain in Remarks.)
Vegetation Soil Hydrology	Are "Normal Circun	nstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?	(If needed, explain a	any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sar	mpling point locations, tra	ensects, important features, etc.
	Remarks: Upland sample plot.	
Hydrophytic Vegetation Present?	Kemarks. Opiano sample piot.	
Hydric Soil Present? □ ⊠		
Wetland Hydrology Present? □ ⊠		
Is the Sampled Area within a Wetland?		
VEGETATION – Use scientific names of plants		
Abso	olute Dominant Indicator	Dominance Test Worksheet:
	over Species? Status	
1	<u> </u>	Number of Dominant Species that are OBL, FACW, or FAC
2	<u></u>	(excluding FAC-): 0 (A)
3.	<u>%</u>	Total Number of Dominant
4	<u>%</u>) % = Total Cover	Species Across All Strata: 1 (B)
Sapling/Shrub Stratum (Plot size: 15')	<u> </u>	Percent of Dominant Species that
1.	%	are OBL, FACW, or FAC:0%_(A/B)
2.	%	Prevalence Index Worksheet:
3	<u> </u>	
4	<u> </u>	Total % Cover of: Multiply by:
5	<u>%</u>	OBL species% x 1 =0 FACW species
) % = Total Cover	FAC species
Herb Stratum (Plot size: <u>5'</u>) 1. Poa pratensis	00 % Y FACU	FACU species % x 4 = 0
2	%	UPL species% x 5 =0
3.	%	Column Totals:0% (A)0 (B)
4	<u></u>	Prevalence Index = B/A =
5	<u></u>	Hydrophytic Vegetation Indicators:
6	<u>%</u>	☐ 1 Rapid Test for Hydrophytic Vegetation
7	<u>%</u>	☐ 2 Dominance Test is >50%
8	%	☐ 3 Prevalence Index is ≤3.0¹
10.	%	
Woody Vine Stratum (Plot size: 30')	00 % = Total Cover	4 Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
1	<u>%</u>	☐ Problematic Hydrophytic Vegetation¹ (explain)
2	%	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 0 %		Hydrophytic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photograph C-3.		1
, , , , , , , , , , , , , , , , , , ,		

SOIL Sampling Point: SP-501

Profile Description: (Describ	e to the de	pth n	eeded to docum	ent the	indicator o	r confirm the	absence of indicators.)	
Depth Matrix	(Red	ox Fea	tures			
(inches) Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6 10YR 3/2	100						Silt Loam	
6-18 10YR 3/3	100						Silt Loam	
								
¹ Type: C=Concentration, D=D	epletion, RM	1=Red	duced Matrix, CS=	-Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil Indicators: (Appl	icable to al	I LRF	Rs, unless otherv	vise no	ted.)		Indicators for Problems	atic Hydric Soils ³ :
☐ Histosol (A1)			☐ Sandy Gley	ed Mat	rix (S4)		1 cm Muck (A9) (LRF	? I, J)
☐ Histic Epipedon (A2)			☐ Sandy Redo	ox (S5)			☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Black Histic (A3)			☐ Stripped Ma				☐ Dark Surface (S7) (LI	,
☐ Hydrogen Sulfide (A4)			☐ Loamy Muc	ky Mine	eral (F1)		☐ High Plains Depression	
☐ Stratified Layers (A5) (LRR			Loamy Gley				(LRR H outside of I	•
☐ 1 cm Muck (A9) (LRR F, G ,	•		Depleted Ma				Reduced Vertic (F18)	
☐ Depleted Below Dark Surface	ce (A11)		Redox Dark		. ,		Red Parent Material (
☐ Thick Dark Surface (A12)			☐ Depleted Da		` '		☐ Very Shallow Dark St☐ Other (Explain in Ren	
☐ Sandy Mucky Mineral (S1)	(CO) (LDD (.	Redox Depr		. ,			,
2.5 cm Mucky Peat or Peat		∍, Ħ)	☐ High Plains (MLRA 72		, ,		³ Indicators of hydrophytic	
5 cm Mucky Peat or Peat (S	55) (LKK F)		(WILKA 12	Q 73 U	LIXIX II)		wetland hydrology must disturbed or problematic	be present, unless
Restrictive Layer (if present)	:						Hydric Soil Present?	
Type:		Deptl	h (inches):				☐ Yes ☒ No	
Remarks: No hydric soil indicat	nr is nresen	ıt						
rtemants. No riyane son maleat	or to present							
HYDROLOGY								
Wetland Hydrology Indicator	s·							
Primary Indicators (minimum o		ed. ch	neck all that apply)				Secondary Indicators (2	or more required)
	r one require			-			-	
Surface Water (A1)		-	Salt Crust (B11	,	(D40)		Surface Soil Cracks	` '
☐ High Water Table (A2)☐ Saturation (A3)			Aquatic Inverte				☐ Sparsely Vegetated	
☐ Water Marks (B1)			☐ Hydrogen Sulfi☐ Dry-Season W				☐ Drainage Patterns (E☐ Oxidized Rhizospher	
☐ Sediment Deposits (B2)			Oxidized Rhizo		` ,	Roots (C3)	(where tilled)	es on Living Roots (CS)
☐ Drift Deposits (B3)			(where not t		o on Living i	(00)	☐ Crayfish Burrows (C8	3)
☐ Algal Mat or Crust (B4)		[☐ Presence of Re	duced	Iron (C4)		☐ Saturation Visible on	
☐ Iron Deposits (B5)		[☐ Thin Muck Sur	ace (C	7)		☐ Geomorphic Position	(D2)
☐ Inundation Visible on Aerial	Imagery (B	7) [Other (Explain	in Rem	arks)		☐ FAC-Neutral Test (D	5)
☐ Water-Stained Leaves (B9)		•					☐ Frost-Heave Hummo	cks (D7) (LRR F)
Field Observations:	V	NI-	Depth (in a trans)				m gauge, monitoring well,	aerial photos, previous
	Yes	No	(inches)	inspe	ections, etc.)	, if available:		
Surface Water present?		\boxtimes						
Water Table present?		\boxtimes						
Saturation Present?		\boxtimes						
(includes capillary fringe)								
Wetland Hydrology Present?		\boxtimes						
Remarks: Wetland hydrology in	ndicator D2	is pre	sent.					

Project/Site: Sweetland Wind Project	Ci	ty/County: H	Hand Coun	ty Sampling Date: _6/25/2018
Applicant/Owner: Sweetland Wind Farm, LLC		_		state: SD Sampling Point: SP-502
Investigator(s): T. Beemer, W. Hirst		Section	, Township	, Range: _ S6, T111N, 66W
Landform (hillslope, terrace, etc.) swale	Loc	al relief (conc		· · · · · · · · · · · · · · · · · · ·
Subregion (LRR): Northern Great Plains Spring Wheat Re	egion	Lat: 44.454	681	Long: -98.820307 Datum: NAD83
Soil Map Unit Name: Betts-Java loams, steep	<u> </u>			NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this tin	ne of year?	Yes	□ No	(If no, explain in Remarks.)
	-			
Vegetation Soil Hydrolo	gy	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?		(If neede	ed, explain	any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	a camplin	a point loca	ations tra	incocts important foatures etc
				insects, important leatures, etc.
Yes No Hydrophytic Vegetation Present? □ □	Remar	ks: Upland sa	mple plot.	
Hydric Soil Present?				
Wetland Hydrology Present?				
Is the Sampled Area within a Wetland?				
<u> </u>				
VEGETATION – Use scientific names of plants				T
	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1	% COVE	орсоюз.	Olalas	Number of Dominant Species that
2.	%			are OBL, FACW, or FAC (excluding FAC-): 0 (A)
3	<u>%</u>			Total Number of Dominant
4	%			Species Across All Strata: 1 (B)
	0 %	= Total Cove	er	Percent of Dominant Species that
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1	%			are OBL, FACW, or FAC: 0% (A/B)
2.	<u> </u>			
3.	<u>%</u>			Prevalence Index Worksheet:
4.	%			Total % Cover of: Multiply by:
5	<u>%</u>			OBL species% x 1 =0
	0 %	= Total Cove	er	FACW species% x 2 =0 FAC species
Herb Stratum (Plot size: <u>5'</u>)		.,	=	FACU species
1. Poa pratensis	10 %	<u>Y</u>	<u>FACU</u>	UPL species
2	<u>%</u> %			Column Totals: % (A) 0 (B)
4				Prevalence Index = B/A =
5.	%			Hydrophytic Vegetation Indicators:
6	%			
7	%			1 Rapid Test for Hydrophytic Vegetation
8	<u>%</u>			☐ 2 Dominance Test is >50%
9 10	<u>%</u> %			☐ 3 Prevalence Index is ≤3.0¹
	10 %	= Total Cove	er	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)
2.	%			¹ Indicators of hydric soil and wetland hydrology
	0 %	= Total Cove	er	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 90 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photograph	C-4.			

SOIL Sampling Point: SP-502

	•	to the de	pth r				r confirm the	absence of indicators.)	
Depth	Matrix			Red	dox Fea	atures			
(inches)	Color (moist)	%		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-8	10YR 3/2	100						Silt Loam	
8-18	10YR 3/2	90		10YR 4/4	10	C	M	Silt Loam	
		_							
	-								
		- -							
		<u> </u>							
¹Type: C=Co	ncentration, D=De	pletion, RN	л=Re	duced Matrix, CS	=Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix
	ndicators: (Appli	-						Indicators for Problem	natic Hydric Soils³:
☐ Histosol (A	\1)			☐ Sandy Gley	ed Mat	trix (S4)		1 cm Muck (A9) (LR	R I, J)
☐ Histic Epip	pedon (A2)			☐ Sandy Red				☐ Coast Prairie Redox	
☐ Black Hist				☐ Stripped M				☐ Dark Surface (S7) (L	
☐ Hydrogen	Sulfide (A4)			☐ Loamy Mud	cky Min	eral (F1)		☐ High Plains Depress	ions (F16)
	_ayers (A5) (LRR F	=)		☐ Loamy Gle				(LRR H outside of	MLRA 72 & 73)
☐ 1 cm Muc	k (A9) (LRR F, G, I	H)		□ Depleted M	latrix (F	3)		☐ Reduced Vertic (F18	,
☐ Depleted I	Below Dark Surface	e (A11)		□ Redox Darl	k Surfa	ce (F6)		☐ Red Parent Material	• •
☐ Thick Darl	Surface (A12)			□ Depleted D	ark Su	face (F7)		☐ Very Shallow Dark S	` '
☐ Sandy Mu	cky Mineral (S1)			☐ Redox Dep	ression	ıs (F8)		Other (Explain in Re	marks)
☐ 2.5 cm Mu	icky Peat or Peat (S2) (LRR	G, H)			, ,		³ Indicators of hydrophyt	
5 cm Muc	ky Peat or Peat (S	3) (LRR F)		(MLRA 72	& 73 o	f LRR H)		wetland hydrology must disturbed or problematic	
Restrictive I	ayer (if present):							Hydric Soil Present?	
	ayor (procont).		Dont	h (inahaa).				⊠ Yes □ No	
Type:		_	Бері	h (inches):					
HYDROLOG	Υ								
1	rology Indicators								
Primary Indic	ators (minimum of	one requir	ed; cl	neck all that apply	<u>')</u>			Secondary Indicators (2	2 or more required)
☐ Surface W	ater (A1)			☐ Salt Crust (B1	1)			☐ Surface Soil Cracks	(B6)
☐ High Wate	er Table (A2)			☐ Aquatic Invert	ebrates	(B13)		☐ Sparsely Vegetated	Concave Surface (B8)
☐ Saturation	(A3)			☐ Hydrogen Sulf	ide Od	or (C1)		□ Drainage Patterns (B10)
☐ Water Ma	rks (B1)			□ Dry-Season W	ater Ta	able (C2)		Oxidized Rhizosphe	res on Living Roots (C3)
☐ Sediment	Deposits (B2)			Oxidized Rhiz		es on Living	Roots (C3)	(where tilled)	\
☐ Drift Depo	` ,			(where not	,	(0.1)		☐ Crayfish Burrows (C	
☐ Algal Mat	. ,			☐ Presence of R		` '		☐ Saturation Visible or	0 , ()
☐ Iron Depo	, ,			Thin Muck Su				☐ Geomorphic Positio	` '
	Visible on Aerial I	magery (B	7)	Other (Explain	ı ın Ken	narks)		☐ FAC-Neutral Test (□	,
	ined Leaves (B9)							☐ Frost-Heave Humm	OCKS (D7) (LRR F)
Field Observ	rations:	Yes	No	Depth (inches)			ed Data (strear , if available:	m gauge, monitoring well,	aerial photos, previous
Surface Water	er present?		\boxtimes						
Water Table	oresent?		\boxtimes						
Saturation Pr									
(includes cap									
	Irology Present?		\boxtimes						
	tland hydrology inc			at					
Nemaiks. We	and Hydrology Inc	uicaiOI DZ	13 1116	7 . .					

Project/Site: Sweetland Wind Project	Ci	ty/County: _	Hand Coun	ty Sampling Date: _6/25/2018
Applicant/Owner: Sweetland Wind Farm, LLC		_		State: SD Sampling Point: SP-503
Investigator(s): T. Beemer, W. Hirst		Section		, Range: S1, T111N, R67W
Landform (hillslope, terrace, etc.) swale		al relief (conc		· · · · · · · · · · · · · · · · · · ·
Subregion (LRR): Northern Great Plains Spring Wheat Reg		Lat: 44.452		Long: -98.827746 Datum: NAD83
Soil Map Unit Name: Betts-Java loams, steep	<u> </u>	11.102	107	NWI Classification: R4SBC
Are climate/hydrologic conditions on the site typical for this time	of vear?	Yes	□ No	(If no, explain in Remarks.)
, , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,			(,,,
Vegetation Soil Hydrology	/	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?		(If neede	ed, explain	any answers in Remarks.)
Naturally Problematic?				
SUMMARY OF FINDINGS – Attach site map showing s	samplin	g point loca	ations, tra	nsects, important features, etc.
Yes No	Remar	ks: Sample pl	ot located i	n PEM W-501.
Hydrophytic Vegetation Present? □				
Hydric Soil Present? □				
Wetland Hydrology Present?				
Is the Sampled Area within a Wetland?				
/EGETATION – Use scientific names of plants				
•		.	1 " .	Ta
	osolute Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1	<u>%</u>			Number of Dominant Species that
2.	%			are OBL, FACW, or FAC (excluding FAC-): (A)
3	%			
4	<u>%</u>			Total Number of Dominant Species Across All Strata: (B)
-	0 %	= Total Cove	er	Percent of Dominant Species that
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	0.4			are OBL, FACW, or FAC: (A/B)
1	<u>%</u>			
2	<u>%</u> %			Prevalence Index Worksheet:
4	%			Total % Cover of: Multiply by:
5.	%		-	OBL species % x 1 = 0
	0 %	= Total Cove	er	FACW species % x 2 = 0
Herb Stratum (Plot size: <u>5'</u>)				FAC species% x 3 =0
Spartina pectinata	90 %	<u>Y</u>	FACW	FACU species% x 4 =0 UPL species
2. <u>Carex sp.*</u>	10 %	<u>N</u>	FAC	Column Totals:
3	<u>%</u>			
4	<u>%</u>			Prevalence Index = B/A =
5	<u>%</u> %		-	Hydrophytic Vegetation Indicators:
6	%			□ 1 Rapid Test for Hydrophytic Vegetation
8	%			☐ 2 Dominance Test is >50%
9.	%			☐ 3 Prevalence Index is ≤3.0¹
10	%			4 Morphological Adaptations¹ (Provide
Woody Vine Stratum (Plot size: 30')	<u>100 %</u>	= Total Cove	er	supporting data in Remarks or on a separate sheet)
1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)
2	%			¹ Indicators of hydric soil and wetland hydrology
-	0 %	= Total Cove	er	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum0 %				Hydrophytic Vegetation Present? ⊠ Yes ☐ No
Remarks: Rapid test for hydrophytic vegetation is met. * Carex	species	could not be i	dentified pa	ast genus. Most Carex species in this region
are Facultative or wetter, therefore, an indicator of FAC is assu				

SOIL Sampling Point: SP-503

Profile Description: (Describe to the depth needed to document the indicator or confirm the	ne absence of indicators.)
Depth Matrix Redox Features	
(inches) Color (moist) % Color (moist) % Type ¹ Loc ²	Texture Remarks
0-18 10YR 3/1 100	Silty Clay
	 -
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grain	² Location: PL=Pore Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1) ☐ Sandy Gleyed Matrix (S4)	☐ 1 cm Muck (A9) (LRR I, J)
☐ Histic Epipedon (A2) ☐ Sandy Redox (S5)	☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Black Histic (A3) ☐ Stripped Matrix (S6)	☐ Dark Surface (S7) (LRR G)
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1)	High Plains Depressions (F16)
☐ Stratified Layers (A5) (LRR F) ☐ Loamy Gleyed Matrix (F2)	(LRR H outside of MLRA 72 & 73)
1 cm Muck (A9) (LRR F, G, H) Depleted Matrix (F3)	☐ Reduced Vertic (F18) ☐ Red Parent Material (TF2)
Depleted Below Dark Surface (A11) Redox Dark Surface (F6)	☐ Very Shallow Dark Surface (TF 12)
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)	☑ Other (Explain in Remarks)
☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8) ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) ☐ High Plains Depressions (F16)	,
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless
(and the state of	disturbed or problematic
Restrictive Layer (if present):	Hydric Soil Present?
Type: Depth (inches):	⊠ Yes □ No
Remarks: Redox is likely masked. The soil considered hydric soil based upon the positive preser	ice of hydrophytic vegetation and wetland hydrology.
HYDROLOGY	
HYDROLOGY	
Wetland Hydrology Indicators:	
	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) ☐ Surface Water (A1) ☐ Salt Crust (B11)	Surface Soil Cracks (B6)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates (B13)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates (B13) □ Saturation (A3) □ Hydrogen Sulfide Odor (C1)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates (B13) □ Saturation (A3) □ Hydrogen Sulfide Odor (C1) □ Water Marks (B1) □ Dry-Season Water Table (C2)	□ Surface Soil Cracks (B6) □ Sparsely Vegetated Concave Surface (B8) □ Drainage Patterns (B10) □ Oxidized Rhizospheres on Living Roots (C3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates (B13) □ Saturation (A3) □ Hydrogen Sulfide Odor (C1) □ Water Marks (B1) □ Dry-Season Water Table (C2) □ Sediment Deposits (B2) □ Oxidized Rhizospheres on Living Roots (C3)	□ Surface Soil Cracks (B6) □ Sparsely Vegetated Concave Surface (B8) □ Drainage Patterns (B10) □ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates (B13) □ Saturation (A3) □ Hydrogen Sulfide Odor (C1) □ Water Marks (B1) □ Dry-Season Water Table (C2) □ Sediment Deposits (B2) □ Oxidized Rhizospheres on Living Roots (C3) □ Drift Deposits (B3) (where not tilled)	□ Surface Soil Cracks (B6) □ Sparsely Vegetated Concave Surface (B8) □ Drainage Patterns (B10) □ Oxidized Rhizospheres on Living Roots (C3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates (B13) □ Saturation (A3) □ Hydrogen Sulfide Odor (C1) □ Water Marks (B1) □ Dry-Season Water Table (C2) □ Sediment Deposits (B2) □ Oxidized Rhizospheres on Living Roots (C3) □ Drift Deposits (B3) (where not tilled) □ Algal Mat or Crust (B4) □ Presence of Reduced Iron (C4)	□ Surface Soil Cracks (B6) □ Sparsely Vegetated Concave Surface (B8) □ Drainage Patterns (B10) □ Oxidized Rhizospheres on Living Roots (C3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates (B13) □ Saturation (A3) □ Hydrogen Sulfide Odor (C1) □ Water Marks (B1) □ Dry-Season Water Table (C2) □ Sediment Deposits (B2) □ Oxidized Rhizospheres on Living Roots (C3) □ Drift Deposits (B3) (where not tilled) □ Algal Mat or Crust (B4) □ Presence of Reduced Iron (C4) □ Iron Deposits (B5) □ Thin Muck Surface (C7)	□ Surface Soil Cracks (B6) □ Sparsely Vegetated Concave Surface (B8) □ Drainage Patterns (B10) □ Oxidized Rhizospheres on Living Roots (C3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates (B13) □ Saturation (A3) □ Hydrogen Sulfide Odor (C1) □ Water Marks (B1) □ Dry-Season Water Table (C2) □ Sediment Deposits (B2) □ Oxidized Rhizospheres on Living Roots (C3) □ Drift Deposits (B3) (where not tilled) □ Algal Mat or Crust (B4) □ Presence of Reduced Iron (C4) □ Iron Deposits (B5) □ Thin Muck Surface (C7)	□ Surface Soil Cracks (B6) □ Sparsely Vegetated Concave Surface (B8) □ Drainage Patterns (B10) □ Oxidized Rhizospheres on Living Roots (C3)
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Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Dry-Season Water Table (C2) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Drift Deposits (B3) (where not tilled) Rogal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Dry-Season Water Table (C2) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Drift Deposits (B3) (where not tilled) Roots (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Depth Describe Recorded Data (street)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
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Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Dry-Season Water Table (C2) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Drift Deposits (B3) (where not tilled) Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Water-Stained Leaves (B9) Field Observations: Depth (inches) Describe Recorded Data (stream inspections, etc.), if available Surface Water present? Mater Table present? Mater Table present? Mater Table present?	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Dry-Season Water Table (C2) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Drift Deposits (B3) (where not tilled) Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Water-Stained Leaves (B9) Field Observations: Depth (inches) Describe Recorded Data (stream inspections, etc.), if available Surface Water present? Mater Table present? Mater Table present? Mater Table present? Saturation Present? Mater Table present? Mater Table present? Mater Table present?	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
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Project/Site: Sweetland Wind Project	C	ity/County: _ _F	land Coun	ty	Sampling	Date: 6/25/2018
Applicant/Owner: Sweetland Wind Farm, LLC			S	tate: SD	Samp	oling Point: SP-504
Investigator(s): T. Beemer, W. Hirst		Section,	Township	, Range: S1,	—— Г111N, R67V	V
Landform (hillslope, terrace, etc.) toeslope	Loc	al relief (conca				Slope (%): 3 %
Subregion (LRR): Northern Great Plains Spring Wh	eat Region	Lat: 44.4522	245		327764	Datum: NAD83
Soil Map Unit Name: Betts-Java loams, steep	cat region	44.4022	-10		assification:	NA
Are climate/hydrologic conditions on the site typical for t	his time of year	? X Yes	□No	(If no, explain		
The chinates of a contained on the checky production of				(, ٥٨٩		,
Vegetation Soil Hy	/drology	Are "Nor	mal Circun	nstances" preser	nt? 🛛 Yes	□ No
Significantly Disturbed?		(If neede	d, explain	any answers in F	Remarks.)	
Naturally Problematic?						
SUMMARY OF FINDINGS – Attach site map sho	wing samplin	ng point loca	tions, tra	nsects, impo	rtant featur	es, etc.
Yes	No Rema	rks: An upland	plot adjace	ent to PEM W-50)1.	
Hydrophytic Vegetation Present?	\boxtimes	·	. ,			
Hydric Soil Present?	\boxtimes					
Wetland Hydrology Present?	\boxtimes					
Is the Sampled Area within a Wetland?	\boxtimes					
/EGETATION – Use scientific names of plants	l .					
2021/ATTON GGC GGIGHAING HAINGG GT PIGHTG	Absoluto	Dominant	Indicator	Dominance T	oot Workshi	
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance T		
1	%	<u></u>		Number of Do		es that
2	%			are OBL, FAC (excluding FA)		0 (A)
3	%			Total Number	,	 : :
4				Species Acros		1_(B)
	0 %	= Total Cover	r	Percent of Doi		·
Sapling/Shrub Stratum (Plot size: 15')				are OBL, FAC		0% (A/B)
1		-		,		
2				Prevalence In	idex Worksh	ieet:
3				Total %	Cover of:	Multiply by:
5.		-		OBL species		% x 1 = 0
·	0 %	= Total Cover		FACW specie	es	% x 2 = 0
Herb Stratum (Plot size: 5')				FAC species		% x 3 = <u>0</u>
1. Poa pratensis	<u>70 %</u>	Y	FACU	FACU specie	s	_% x 4 =0
2. Euphorbia sp.*	10 %	N		UPL species Column Total	c·	
3	%					<u>5</u> 76 (A)(B)
4	%			Prevalence In	idex = B/A =	
5				Hydrophytic '	Vegetation In	ndicators:
6				☐ 1 Rapid Te	st for Hydron	hytic Vegetation
7	0/			☐ 2 Dominan	, ,	, 0
9						
10	<u>%</u>			3 Prevalen		
Woody Vine Stratum (Plot size: 30')	<u>80 %</u>	= Total Cover	r			tions¹ (Provide or on a separate sheet)
1	%			☐ Problemati	c Hydrophytic	c Vegetation¹ (explain)
2.	<u>%</u>					nd wetland hydrology
	0 %	= Total Cover	r	must be prese	nt, unless dis	sturbed or problematic
Bare Ground in Herb Stratum				Hydrophytic V	egetation Pre	esent? 🗌 Yes 🖾 No
Remarks: Hydrophytic vegetation is not present. * Euph	orbia species c	ould not be ide	ntified pas	t genus, no indic	ator is given.	Photograph C-6.

SOIL Sampling Point: SP-504

Profile Desc	ription: (Describe	to the d	epth n	eeded to docun	nent the	indicator o	or confirm the	absence of indicators.)		
Depth	Matrix			Re	dox Fea	tures				
(inches)	Color (moist)	%		color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 3/2	100						Silt Loam		
6-18	10YR 4/3	100						Silt Loam		
-										
-										
	-								_	
¹Type: C=Co	oncentration, D=De	pletion, R	M=Re	duced Matrix, CS	=Cover	ed or Coate	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil	ndicators: (Appli	cable to a	all LRF	Rs, unless other	wise no	oted.)		Indicators for Problema	atic Hydric Soils ³ :	
☐ Histosol (A1)			☐ Sandy Gle	yed Mat	rix (S4)		1 cm Muck (A9) (LRF	? I, J)	
☐ Histic Epi	pedon (A2)			☐ Sandy Red	lox (S5)			☐ Coast Prairie Redox (A16) (LRR F, G, H)	
☐ Black His	tic (A3)			☐ Stripped M	atrix (S6	6)		☐ Dark Surface (S7) (LI	RR G)	
☐ Hydrogen	Sulfide (A4)			☐ Loamy Mu	cky Mine	eral (F1)		☐ High Plains Depression		
☐ Stratified	Layers (A5) (LRR F	=)		☐ Loamy Gle	yed Mat	trix (F2)		(LRR H outside of I	•	
1 cm Muc	k (A9) (LRR F, G, I	H)		□ Depleted N	latrix (F	3)		Reduced Vertic (F18)		
☐ Depleted	Below Dark Surface	e (A11)		☐ Redox Dar	k Surfac	e (F6)		Red Parent Material (
	k Surface (A12)			□ Depleted □		. ,		☐ Very Shallow Dark St	, ,	
-	ucky Mineral (S1)			☐ Redox Dep		. ,		Other (Explain in Ren	narks)	
	ucky Peat or Peat (•	` ,		3Indicators of hydrophytic		
5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H)								wetland hydrology must be present, unless disturbed or problematic		
Restrictive I	_ayer (if present):							Hydric Soil Present?		
Type:		_	Dept	h (inches):				☐ Yes ☒ No		
Domorko: No	hydric soil indicato	r io proce	nt							
ixemaiks. Ive	Trydric Son malcato	i is prese	ii.							
HYDROLOG	v									
	drology Indicators									
·	cators (minimum of		rod: ck	ook all that apply	Λ			Secondary Indicators (2	or more required)	
	•	one requi			_			_		
☐ Surface V	` '			Salt Crust (B1	,			☐ Surface Soil Cracks	` '	
	er Table (A2)			Aquatic Invert				☐ Sparsely Vegetated		
☐ Saturation				☐ Hydrogen Sul				☐ Drainage Patterns (B	,	
☐ Water Ma	` '			☐ Dry-Season V		, ,	Dooto (C2)	Oxidized Rhizospher (where tilled)	es on Living Roots (C3)	
	Deposits (B2)			Oxidized Rhiz (where not	ospnere tilled)	s on Living	Roots (C3)	☐ Crayfish Burrows (C8	3)	
☐ Drift Depo	or Crust (B4)			☐ Presence of F		Iron (C4)		☐ Saturation Visible on		
☐ Iron Depo				☐ Thin Muck Su		` ,		☐ Geomorphic Position	• • • •	
	n Visible on Aerial I	manery (F		☐ Other (Explair	•	•		☐ FAC-Neutral Test (D		
	ained Leaves (B9)	magory (L	<i>31)</i>	_ ` .		,		☐ Frost-Heave Hummo	cks (D7) (LRR F)	
	, ,			Depth			15			
Field Obser	vations:	Yes	No	(inches)			ed Data (strear , if available:	m gauge, monitoring well, a	aerial photos, previous	
Surface Wate	er present?		\boxtimes			•				
Water Table	•		\boxtimes							
Saturation P	•									
(includes cap										
	drology Present?		\boxtimes							
	drology indicators a				<u> </u>					
Nemarks. Hy	diology indicators a	are not pr	000							
Nemarks. Hy	diology indicators a	are not pro								

Project/Site: Sweetland Wind Project	City/County:	Hand Count	Sampling Date: 6/25/20)18	
Applicant/Owner: Sweetland Wind Farm, LLC	-		rate: SD Sampling Point: SF		
Investigator(s): T. Beemer, W. Hirst	Section		Range: S1, T111N, R67W		
Landform (hillslope, terrace, etc.) depression	Local relief (cond			0 %	
Subregion (LRR): Northern Great Plains Spring Wheat Regio			Long: 98.828842 Datum: NAC		
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 percent		3000	NWI Classification: PEM1A	700	
Are climate/hydrologic conditions on the site typical for this time o		□ No	(If no, explain in Remarks.)		
, ,	, _	_			
Vegetation Soil Hydrology	Are "No	ormal Circum	stances" present? ⊠ Yes ☐ No		
Significantly Disturbed?	(If need	ed, explain a	ny answers in Remarks.)		
		-41 4	and important factions at		
SUMMARY OF FINDINGS – Attach site map showing sa					
	Remarks: Upland co	onfirmation p	lot.		
Hydrophytic Vegetation Present? □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □					
Wetland Hydrology Present?					
Is the Sampled Area within a Wetland?					
·					
VEGETATION – Use scientific names of plants					
	olute Dominant Cover Species?	Indicator Status	Dominance Test Worksheet:		
1		Status	Number of Dominant Species that		
2.	%		are OBL, FACW, or FAC (excluding FAC-):	0_(A)	
3	<u></u>			<u>o_</u> (/ t/	
4	<u>%</u>		Total Number of Dominant Species Across All Strata:	1_(B)	
	0 % = Total Cov	er	Percent of Dominant Species that	` /	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	0/		•	%_(A/B)	
1	<u>%</u> <u> </u>				
2. 3.	<u>%</u>		Prevalence Index Worksheet:		
4.	%		Total % Cover of: Multiply b	y:	
5	<u></u>		OBL species% x 1 =	0	
	0 % = Total Cov	er	FACW species% x 2 =0		
Herb Stratum (Plot size: <u>5'</u>)			FAC species% x 3 = FACU species	0	
· · · · · · · · · · · · · · · · · · ·	<u>00 %</u> Y	<u>FACU</u>	UPL species	0	
2	<u>%</u>		Column Totals: 0 % (A)	0 (B)	
4	<u> </u>		Prevalence Index = B/A =		
5	%		Hydrophytic Vegetation Indicators:		
6	%				
7	<u> </u>		☐ 1 Rapid Test for Hydrophytic Vegetation	1	
8	<u>%</u>		☐ 2 Dominance Test is >50%		
9	<u>%</u>		☐ 3 Prevalence Index is ≤3.0¹		
	00 % = Total Cov	er	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate s	sheet)	
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%		☐ Problematic Hydrophytic Vegetation¹ (ex	xplain)	
2.	%		¹ Indicators of hydric soil and wetland hydro		
	0 % = Total Cov	er	must be present, unless disturbed or proble	ematic	
Bare Ground in Herb Stratum0 %			Hydrophytic Vegetation Present? ☐ Yes	⊠ No	
Remarks: No test is met. Photograph C-7.					

SOIL Sampling Point: SP-505

		in needed to docum	ient the indicator of	or confirm the	absence of indicators.)						
Depth Matrix	X	Red	dox Features								
(inches) Color (moist)	%	Color (moist)	% Type ¹	Loc ²	Texture	Remarks					
0-18 10YR 3/2	100				Silty Loam						
						_					
¹ Type: C=Concentration, D=D	epletion, RM=	Reduced Matrix, CS	=Covered or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix					
Hydric Soil Indicators: (App	licable to all	LRRs, unless other	wise noted.)		Indicators for Problema	tic Hydric Soils ³ :					
☐ Histosol (A1)		☐ Sandy Gley	yed Matrix (S4)		1 cm Muck (A9) (LRR	I, J)					
☐ Histic Epipedon (A2)		☐ Sandy Red	lox (S5)		☐ Coast Prairie Redox (A	A16) (LRR F, G, H)					
☐ Black Histic (A3)		☐ Stripped M	, ,		☐ Dark Surface (S7) (LF						
☐ Hydrogen Sulfide (A4)			cky Mineral (F1)		High Plains Depression	ons (F16)					
☐ Stratified Layers (A5) (LRR			yed Matrix (F2)		(LRR H outside of N	•					
1 cm Muck (A9) (LRR F, G		☐ Depleted M			☐ Reduced Vertic (F18) ☐ Red Parent Material (
Depleted Below Dark Surfa	ce (A11)	Redox Dar	, ,		☐ Very Shallow Dark Su	,					
☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1)		☐ Redox Dep	Park Surface (F7)		Other (Explain in Rem	` '					
2.5 cm Mucky Peat or Peat	(S2) (I RR G		Depressions (F16)								
5 cm Mucky Peat or Peat (\$			& 73 of LRR H)		³ Indicators of hydrophytic wetland hydrology must b						
o an mass, real or real (s	disturbed or problematic										
Restrictive Layer (if present)	:				Hydric Soil Present?						
Type:		epth (inches):			☐ Yes ☒ No						
Remarks: No hydric soil indica	tor is present.										
LIVERGLOOV											
HYDROLOGY											
Wetland Hydrology Indicator											
		l; check all that apply	<u>u</u>		Secondary Indicators (2	or more required)					
Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1)		☐ Salt Crust (B1	1)		Surface Soil Cracks (B6)					
Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1) High Water Table (A2)		Salt Crust (B1	1) ebrates (B13)		☐ Surface Soil Cracks (☐ Sparsely Vegetated C	B6) Concave Surface (B8)					
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)		Salt Crust (B1 Aquatic Invert Hydrogen Sul	1) ebrates (B13) fide Odor (C1)		☐ Surface Soil Cracks (☐ Sparsely Vegetated (☐ Drainage Patterns (B	B6) Concave Surface (B8) 10)					
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Salt Crust (B1 Aquatic Inverted Hydrogen Sulfed Dry-Season W	1) ebrates (B13) fide Odor (C1) /ater Table (C2)	Danta (02)	☐ Surface Soil Cracks (☐ Sparsely Vegetated (☐ Drainage Patterns (B☐ Oxidized Rhizosphere	B6) Concave Surface (B8) 10)					
Wetland Hydrology Indicator Primary Indicators (minimum of the content of the co		☐ Salt Crust (B1 ☐ Aquatic Invert ☐ Hydrogen Sult ☐ Dry-Season W ☐ Oxidized Rhiz	1) ebrates (B13) fide Odor (C1) /ater Table (C2) ospheres on Living	Roots (C3)	☐ Surface Soil Cracks (☐ Sparsely Vegetated (☐ Drainage Patterns (B☐ Oxidized Rhizosphere (where tilled)	B6) Concave Surface (B8) 10) es on Living Roots (C3)					
Wetland Hydrology Indicator Primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (Material Parks) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		☐ Salt Crust (B1 ☐ Aquatic Invert ☐ Hydrogen Sult ☐ Dry-Season W ☐ Oxidized Rhiz (where not	1) ebrates (B13) fide Odor (C1) /ater Table (C2) ospheres on Living tilled)	Roots (C3)	☐ Surface Soil Cracks (☐ Sparsely Vegetated C☐ Drainage Patterns (B☐ Oxidized Rhizosphere (where tilled)☐ Crayfish Burrows (C8	B6) Concave Surface (B8) 10) es on Living Roots (C3)					
Wetland Hydrology Indicator Primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (Material Parks) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		☐ Salt Crust (B1 ☐ Aquatic Invert ☐ Hydrogen Sull ☐ Dry-Season W ☐ Oxidized Rhiz (where not ☐ Presence of R	1) ebrates (B13) fide Odor (C1) /ater Table (C2) ospheres on Living tilled) leduced Iron (C4)	Roots (C3)	□ Surface Soil Cracks (□ Sparsely Vegetated C □ Drainage Patterns (B □ Oxidized Rhizosphere (where tilled) □ Crayfish Burrows (C8 □ Saturation Visible on	B6) Concave Surface (B8) 10) es on Living Roots (C3) 8) Aerial Imagery (C9)					
Wetland Hydrology Indicator Primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (Material Material Indicators (Material Indic	f one required	☐ Salt Crust (B1 ☐ Aquatic Invert ☐ Hydrogen Sult ☐ Dry-Season W ☐ Oxidized Rhiz	1) ebrates (B13) fide Odor (C1) /ater Table (C2) ospheres on Living tilled) leduced Iron (C4) rface (C7)	Roots (C3)	☐ Surface Soil Cracks (☐ Sparsely Vegetated C☐ Drainage Patterns (B☐ Oxidized Rhizosphere (where tilled)☐ Crayfish Burrows (C8	B6) Concave Surface (B8) 10) es on Living Roots (C3) 8) Aerial Imagery (C9) (D2)					
Wetland Hydrology Indicator Primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (Material Parks) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	f one required	☐ Salt Crust (B1 ☐ Aquatic Invert ☐ Hydrogen Sult ☐ Dry-Season W ☐ Oxidized Rhiz	1) ebrates (B13) fide Odor (C1) /ater Table (C2) ospheres on Living tilled) leduced Iron (C4) rface (C7)	Roots (C3)	□ Surface Soil Cracks (□ Sparsely Vegetated C □ Drainage Patterns (B □ Oxidized Rhizosphere (where tilled) □ Crayfish Burrows (C8 □ Saturation Visible on □ Geomorphic Position	B6) Concave Surface (B8) 10) es on Living Roots (C3) 8) Aerial Imagery (C9) (D2) 5)					
Wetland Hydrology Indicator Primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (Mater Marks (Mater Mater Mate	f one required	☐ Salt Crust (B1 ☐ Aquatic Invert ☐ Hydrogen Sult ☐ Dry-Season W ☐ Oxidized Rhiz	1) ebrates (B13) fide Odor (C1) /ater Table (C2) ospheres on Living tilled) teduced Iron (C4) rface (C7) n in Remarks)		□ Surface Soil Cracks (□ Sparsely Vegetated C □ Drainage Patterns (B □ Oxidized Rhizosphere (where tilled) □ Crayfish Burrows (C8 □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D8 □ Frost-Heave Hummo	B6) Concave Surface (B8) 10) es on Living Roots (C3) 8) Aerial Imagery (C9) (D2) 6) cks (D7) (LRR F)					
Wetland Hydrology Indicator Primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (Minimum of the primary Indicators (Material Parks (Minimum of the properties (Material Parks (Material Parks (Minimum of the primary Indicators (Minimum of the primary Indicators (Material Parks (Minimum of the primary Indicators (Material Parks (Minimum of the primary Indicators (Material Parks (Minimum of the primary Indicators (Material Parks (Minimum of the primary Indicators (Mi	f one required	☐ Salt Crust (B1 ☐ Aquatic Invert ☐ Hydrogen Sult ☐ Dry-Season W ☐ Oxidized Rhiz (where not ☐ Presence of R ☐ Thin Muck Su ☐ Other (Explain	1) ebrates (B13) fide Odor (C1) /ater Table (C2) ospheres on Living tilled) teduced Iron (C4) rface (C7) n in Remarks)	ed Data (strea	□ Surface Soil Cracks (□ Sparsely Vegetated C □ Drainage Patterns (B □ Oxidized Rhizosphere (where tilled) □ Crayfish Burrows (C8 □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D8	B6) Concave Surface (B8) 10) es on Living Roots (C3) 8) Aerial Imagery (C9) (D2) 6) cks (D7) (LRR F)					
Wetland Hydrology Indicator Primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (Minimum of the primary Indicators (Material Parks (Minimum of the properties (Material Parks (Material Parks (Minimum of the primary Indicators (Minimum of the primary Indicators (Material Parks (Minimum of the primary Indicators (Material Parks (Minimum of the primary Indicators (Material Parks (Minimum of the primary Indicators (Material Parks (Minimum of the primary Indicators (Mi	I Imagery (B7)	Salt Crust (B1 Aquatic Invert Hydrogen Sult Dry-Season W Oxidized Rhiz (where not Presence of R Thin Muck Su Other (Explair	1) ebrates (B13) fide Odor (C1) /ater Table (C2) ospheres on Living tilled) teduced Iron (C4) rface (C7) n in Remarks) Describe Record	ed Data (strea	□ Surface Soil Cracks (□ Sparsely Vegetated C □ Drainage Patterns (B □ Oxidized Rhizosphere (where tilled) □ Crayfish Burrows (C8 □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D8 □ Frost-Heave Hummo	B6) Concave Surface (B8) 10) es on Living Roots (C3) 8) Aerial Imagery (C9) (D2) 6) cks (D7) (LRR F)					
Wetland Hydrology Indicator Primary Indicators (minimum of the primary Indicators (min	I Imagery (B7)	□ Salt Crust (B1 □ Aquatic Invert □ Hydrogen Sull □ Dry-Season W □ Oxidized Rhiz (where not □ Presence of R □ Thin Muck Su □ Other (Explain	1) ebrates (B13) fide Odor (C1) /ater Table (C2) ospheres on Living tilled) teduced Iron (C4) rface (C7) n in Remarks) Describe Record	ed Data (strea	□ Surface Soil Cracks (□ Sparsely Vegetated C □ Drainage Patterns (B □ Oxidized Rhizosphere (where tilled) □ Crayfish Burrows (C8 □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D8 □ Frost-Heave Hummo	B6) Concave Surface (B8) 10) es on Living Roots (C3) 8) Aerial Imagery (C9) (D2) 6) cks (D7) (LRR F)					
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present?	I Imagery (B7)	□ Salt Crust (B1 □ Aquatic Invert □ Hydrogen Sult □ Dry-Season W □ Oxidized Rhiz (where not □ Presence of R □ Thin Muck Su □ Other (Explair Depth (inches)	1) ebrates (B13) fide Odor (C1) /ater Table (C2) ospheres on Living tilled) teduced Iron (C4) rface (C7) n in Remarks) Describe Record	ed Data (strea	□ Surface Soil Cracks (□ Sparsely Vegetated C □ Drainage Patterns (B □ Oxidized Rhizosphere (where tilled) □ Crayfish Burrows (C8 □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D8 □ Frost-Heave Hummo	B6) Concave Surface (B8) 10) es on Living Roots (C3) 8) Aerial Imagery (C9) (D2) 6) cks (D7) (LRR F)					
Wetland Hydrology Indicator Primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (Management of the primary Indi	Yes !	Salt Crust (B1 Aquatic Invert Hydrogen Sult Dry-Season W Oxidized Rhiz (where not Presence of R Thin Muck Su Other (Explair Depth (inches)	1) ebrates (B13) fide Odor (C1) /ater Table (C2) ospheres on Living tilled) teduced Iron (C4) rface (C7) n in Remarks) Describe Record	ed Data (strea	□ Surface Soil Cracks (□ Sparsely Vegetated C □ Drainage Patterns (B □ Oxidized Rhizosphere (where tilled) □ Crayfish Burrows (C8 □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D8 □ Frost-Heave Hummo	B6) Concave Surface (B8) 10) es on Living Roots (C3) 8) Aerial Imagery (C9) (D2) 6) cks (D7) (LRR F)					
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present?	Yes !	Salt Crust (B1 Aquatic Invert Hydrogen Sult Dry-Season W Oxidized Rhiz (where not Presence of R Thin Muck Su Other (Explair Depth (inches)	1) ebrates (B13) fide Odor (C1) /ater Table (C2) ospheres on Living tilled) teduced Iron (C4) rface (C7) n in Remarks) Describe Record	ed Data (strea	□ Surface Soil Cracks (□ Sparsely Vegetated C □ Drainage Patterns (B □ Oxidized Rhizosphere (where tilled) □ Crayfish Burrows (C8 □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D8 □ Frost-Heave Hummo	B6) Concave Surface (B8) 10) es on Living Roots (C3) 8) Aerial Imagery (C9) (D2) 6) cks (D7) (LRR F)					
Wetland Hydrology Indicator Primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (minimum of the primary Indicators (Management of the primary Indi	Yes !	□ Salt Crust (B1 □ Aquatic Invert □ Hydrogen Sult □ Dry-Season W □ Oxidized Rhiz (where not □ Presence of R □ Thin Muck Su □ Other (Explain Depth (inches) □ □	1) ebrates (B13) fide Odor (C1) /ater Table (C2) ospheres on Living tilled) teduced Iron (C4) rface (C7) n in Remarks) Describe Record	ed Data (strea	□ Surface Soil Cracks (□ Sparsely Vegetated C □ Drainage Patterns (B □ Oxidized Rhizosphere (where tilled) □ Crayfish Burrows (C8 □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D8 □ Frost-Heave Hummo	B6) Concave Surface (B8) 10) es on Living Roots (C3) 8) Aerial Imagery (C9) (D2) 6) cks (D7) (LRR F)					
Wetland Hydrology Indicator Primary Indicators (minimum of the primary Indicators (Management of the primary Indicat	Yes !	□ Salt Crust (B1 □ Aquatic Invert □ Hydrogen Sult □ Dry-Season W □ Oxidized Rhiz (where not □ Presence of R □ Thin Muck Su □ Other (Explain Depth (inches) □ □	1) ebrates (B13) fide Odor (C1) /ater Table (C2) ospheres on Living tilled) teduced Iron (C4) rface (C7) n in Remarks) Describe Record	ed Data (strea	□ Surface Soil Cracks (□ Sparsely Vegetated C □ Drainage Patterns (B □ Oxidized Rhizosphere (where tilled) □ Crayfish Burrows (C8 □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D8 □ Frost-Heave Hummo	B6) Concave Surface (B8) 10) es on Living Roots (C3) 8) Aerial Imagery (C9) (D2) 6) cks (D7) (LRR F)					

Project/Site: Sweetland Wind Project	Cit	y/County: _	Hand Coun	ty Sampling Date: 6/25/2018		
Applicant/Owner: Sweetland Wind Farm, LLC				State: SD Sampling Point: SP-515		
Investigator(s): T. Beemer, W. Hirst		Section		, Range:, R66W		
Landform (hillslope, terrace, etc.) depression	Loca	 al relief (conc				
Subregion (LRR): Northern Great Plains Spring Wheat Re	egion L	at: 44.442	974	Long: -98.820747 Datum: NAD83		
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 per	ogion		017	NWI Classification: NA		
Are climate/hydrologic conditions on the site typical for this tim			□ No	(If no, explain in Remarks.)		
	, , ,	_		(-, -, -, -, -, -, -, -, -, -, -, -, -,		
Vegetation Soil Hydrolog	gy	Are "No	rmal Circum	nstances" present? 🛛 Yes 🔲 No		
Significantly Disturbed?		(If neede	ed, explain a	any answers in Remarks.)		
Naturally Problematic?						
SUMMARY OF FINDINGS – Attach site map showing	g sampling	g point loca	ations, tra	nsects, important features, etc.		
Yes No	Remark	s: Upland sa	mple plot.			
Hydrophytic Vegetation Present?						
Hydric Soil Present?						
Wetland Hydrology Present?						
Is the Sampled Area within a Wetland?						
/EGETATION – Use scientific names of plants						
•	A1 1 1	D		Ta		
	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:		
1	<u>%</u>			Number of Dominant Species that		
2.	%			are OBL, FACW, or FAC (excluding FAC-): 0 (A)		
3	<u>%</u>					
4	<u></u> %			Total Number of Dominant Species Across All Strata: 1 (B)		
	0 %	= Total Cove	er	Percent of Dominant Species that		
Sapling/Shrub Stratum (Plot size: 15')	0/			are OBL, FACW, or FAC: 0% (A/B)		
1	<u>%</u>					
2 3.	<u>%</u> %			Prevalence Index Worksheet:		
4.				Total % Cover of: Multiply by:		
5.	%			OBL species % x 1 = 0		
		= Total Cove	er	FACW species % x 2 = 0		
Herb Stratum (Plot size: <u>5'</u>)				FAC species% x 3 =0		
1. Poa pratensis	90 %	<u> </u>	FACU	FACU species% x 4 =0 UPL species		
2. <u>Salvia sp.*</u>	5 %	<u>N</u>		Column Totals:		
3	<u>%</u>			Prevalence Index = B/A =		
4	<u>%</u>					
5	<u>%</u> %			Hydrophytic Vegetation Indicators:		
6			-	☐ 1 Rapid Test for Hydrophytic Vegetation		
8.				☐ 2 Dominance Test is >50%		
9.	%			☐ 3 Prevalence Index is ≤3.0¹		
10	<u></u> %			4 Morphological Adaptations¹ (Provide		
Woody Vine Stratum (Plot size: 30')	<u>95 %</u>	= Total Cove	er	supporting data in Remarks or on a separate sheet)		
1	<u>%</u>			☐ Problematic Hydrophytic Vegetation¹ (explain)		
2	<u>%</u>			¹ Indicators of hydric soil and wetland hydrology		
	0 %	= Total Cove	er	must be present, unless disturbed or problematic		
Bare Ground in Herb Stratum 5 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No		
Remarks: Hydrophytic vegetation is not present. * Salvia spec	cies could r	not be identifi	ed beyond	genus, therefore, no indicator status is		
listed. Photograph C-8.			-			

SOIL Sampling Point: SP-515

Profile Desc	ription: (Describe	to the de	epth n	eeded to docum	ent the	indicator o	or confirm the	absence of indicators.)			
Depth	Matrix			Red	lox Fea	tures					
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-8	10YR 3/2	100						Silt Loam			
8-18	10YR 3/3	100						Silt Loam			
	-										
¹Type: C=Cd	oncentration, D=De	nletion RI	M-Re	duced Matrix, C.S.	-Cover	ed or Coate	Sand Grains	² Location: PL=Pore	Lining M-Matrix		
	ndicators: (Applie						d Carla Crairis	Indicators for Problems			
l <u> </u>						-		_	•		
☐ Histosol (☐ Histic Epi	,			☐ Sandy Gley ☐ Sandy Red				☐ 1 cm Muck (A9) (LRF☐ Coast Prairie Redox (
☐ Black His				☐ Stripped Ma				☐ Dark Surface (S7) (L			
☐ Hydrogen	` '			Loamy Muc	,	,		☐ High Plains Depressi	•		
	Layers (A5) (LRR F	=)		☐ Loamy Gley				(LRR H outside of I			
	k (A9) (LRR F, G, I			☐ Depleted M		, ,		☐ Reduced Vertic (F18)	•		
	Below Dark Surface			☐ Redox Dark				☐ Red Parent Material (
	k Surface (A12)	- ()		☐ Depleted D		, ,		☐ Very Shallow Dark Si	,		
	icky Mineral (S1)			☐ Redox Dep		, ,		Other (Explain in Ren	, ,		
-	ucky Peat or Peat (S2) (LRR	G , H)	·				³ Indicators of hydrophytic	r vegetation and		
	ky Peat or Peat (S3			(MLRA 72	•	` ,		wetland hydrology must			
	,	, ,						disturbed or problematic			
Restrictive I	ayer (if present):							Hydric Soil Present?			
Type:			Dept	h (inches):				☐ Yes ⊠ No			
Remarks: No	hydric soil indicato	r is prese	nt.								
HYDROLOG	Υ										
·	drology Indicators										
Primary India	ators (minimum of	one requir	ed; ch	eck all that apply	<u>)</u>			Secondary Indicators (2	or more required)		
☐ Surface V	Vater (A1)			☐ Salt Crust (B1	,			☐ Surface Soil Cracks	(B6)		
	er Table (A2)			Aquatic Inverte	ebrates	(B13)		☐ Sparsely Vegetated	Concave Surface (B8)		
☐ Saturation	n (A3)		1	☐ Hydrogen Sulf	ide Odo	or (C1)		☐ Drainage Patterns (B10)			
☐ Water Ma	` '			□ Dry-Season W		, ,			res on Living Roots (C3)		
	Deposits (B2)			Oxidized Rhize	osphere	es on Living	Roots (C3)	(where tilled)	2)		
☐ Drift Depo				(where not		Iron (C4)		☐ Crayfish Burrows (C			
	or Crust (B4)			☐ Presence of R☐ Thin Muck Sur		` ,		☐ Saturation Visible on☒ Geomorphic Position	• • • •		
☐ Iron Depo				☐ Triiff Muck Sui				☐ FAC-Neutral Test (D			
	n Visible on Aerial I	magery (E	37) 1		III Keli	iaiks)		☐ Frost-Heave Hummo	,		
☐ water-Sta	ained Leaves (B9)				1				CK3 (D7) (EKK1)		
Field Obser	vations:	Yes	No	Depth (inches)			ed Data (strear , if available:	m gauge, monitoring well,	aerial photos, previous		
Surface Wate	er present?		\boxtimes	•		, ,	,				
Water Table	•			·							
Saturation P	•	_									
(includes cap			\boxtimes								
	drology Present?		\boxtimes								
				o o n t	<u> </u>						
Remarks: W	etland hydrology ind	aicator D2	is pre	sen.							

Project/Site: Sweetland Wind Project	Ci	ty/County: _	ty Sampling Date: 6/25/2018	
Applicant/Owner: Sweetland Wind Farm, LLC				state: SD Sampling Point: SP-516
Investigator(s): T. Beemer, W. Hirst		Section	, Township	, Range:, R66W
Landform (hillslope, terrace, etc.) depression	Loc	al relief (conc		•
Subregion (LRR): Northern Great Plains Spring Wheat I		Lat: 44.443		Long: -98.819913 Datum: NAD83
Soil Map Unit Name: Glenham-Prosper loams, 1 to 6 pe	rtogion		000	NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this t			□No	(If no, explain in Remarks.)
, , , , , , , , , , , , , , , , , , ,				(,,,
Vegetation Soil Hydrol	ogy	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?	ı	(If neede	ed, explain	any answers in Remarks.)
Naturally Problematic?	'			
SUMMARY OF FINDINGS – Attach site map showin	g samplin	g point loca	ations, tra	nsects, important features, etc.
Yes No	Remar	rks: Wetland s	ample plot	located in PEM W-507.
Hydrophytic Vegetation Present?				
Hydric Soil Present?				
Wetland Hydrology Present?				
Is the Sampled Area within a Wetland?				
VEGETATION – Use scientific names of plants				
	Absolute	Dominant	Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: <u>30'</u>)	% Cover	Species?	Status	Number of Dominant Species that
1.	<u>%</u>			are OBL, FACW, or FAC
2.	<u>%</u>			(excluding FAC-):(A)
3 4.	<u>%</u> %			Total Number of Dominant
4	0 %	= Total Cove	er	Species Across All Strata:(B)
Sapling/Shrub Stratum (Plot size: 15')	<u> </u>			Percent of Dominant Species that
1.	<u>%</u>			are OBL, FACW, or FAC:(A/B)
2	<u>%</u>			Prevalence Index Worksheet:
3	<u>%</u>			
4	<u>%</u>			Total % Cover of: Multiply by:
5	%	= Total Cove		OBL species% x 1 =0 FACW species
Herb Stratum (Plot size: 5')	0 %	= Total Cove) I	FAC species
Herb Stratum (Plot size: <u>5'</u>) 1. Spartina pectinata	90 %	Υ	FACW	FACU species
2	<u>%</u>			UPL species% x 5 =0
3.	%			Column Totals:0% (A)0 (B)
4	<u>%</u>			Prevalence Index = B/A =
5	%			Hydrophytic Vegetation Indicators:
6	<u>%</u>			
7 8	<u>%</u> %			2 Dominance Test is >50%
9				
10.	%			3 Prevalence Index is ≤3.0¹
Woody Vine Stratum (Plot size: 30')	90 %	= Total Cove	er	4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
1	<u>%</u>			☐ Problematic Hydrophytic Vegetation¹ (explain)
2	%			¹ Indicators of hydric soil and wetland hydrology
	0 %	= Total Cove	er	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum10 %				Hydrophytic Vegetation Present? ⊠ Yes ☐ No
Remarks: Rapid test for hydrophytic vegetation is met. Phot	tograph C-9			

SOIL Sampling Point: SP-516

Profile Desc	ription: (Describe	to the de	pth n	eeded to docur	nent the	e indicator o	or confirm the	absence of indicators.)			
Depth	Matrix			Re	dox Fea	ntures					
(inches)	Color (moist)	<u></u> %	Co	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-4	10YR 3/1	100						Silt Loam			
4-20	10YR 3/1	90		10YR 5/6	10	C	M	Silt Loam			
-	-										
-	-	-	· 								
-											
¹Type: C=Co	oncentration, D=De	pletion, RN	л=Rec	duced Matrix, CS	S=Cover	ed or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil	ndicators: (Appli	cable to a	II LRR	s, unless other	wise no	oted.)		Indicators for Problema	atic Hydric Soils³:		
☐ Histosol (A1)			☐ Sandy Gle	yed Mat	rix (S4)		1 cm Muck (A9) (LRF	R I, J)		
☐ Histic Epi	pedon (A2)			☐ Sandy Red	dox (S5)			☐ Coast Prairie Redox ((A16) (LRR F, G, H)		
☐ Black His	tic (A3)			☐ Stripped M	latrix (Se	6)		☐ Dark Surface (S7) (LI	RR G)		
☐ Hydrogen	Sulfide (A4)			☐ Loamy Mu	cky Min	eral (F1)		☐ High Plains Depression			
☐ Stratified	Layers (A5) (LRR F	=)		☐ Loamy Gle	yed Ma	trix (F2)		(LRR H outside of I	MLRA 72 & 73)		
1 cm Muc	k (A9) (LRR F, G, I	- I)		□ Depleted N	Лatrix (F	3)		Reduced Vertic (F18)			
☐ Depleted	Below Dark Surface	e (A11)		□ Redox Dar	k Surfac	ce (F6)		Red Parent Material (,		
☐ Thick Dar	k Surface (A12)			☐ Depleted □	Dark Sur	face (F7)		☐ Very Shallow Dark Su	, ,		
	ucky Mineral (S1)			☐ Redox Dep		` '		Other (Explain in Ren	narks)		
	ucky Peat or Peat (☐ High Plain		` ,		3Indicators of hydrophytic			
5 cm Muc	ky Peat or Peat (S3	3) (LRR F)		(MLRA 72	2 & 73 o	f LRR H)		wetland hydrology must disturbed or problematic			
Restrictive I	_ayer (if present):							Hydric Soil Present?			
Type:			Depth	n (inches):				⊠ Yes □ No			
	dric soil indicator F	0.									
HYDROLOG	·v										
	drology Indicators	•									
_	cators (minimum of		ed: ch	eck all that apply	v)			Secondary Indicators (2	or more required)		
☐ Surface V	•	01.10 1.0 qui		☐ Salt Crust (B1				☐ Surface Soil Cracks			
_	er Table (A2)		_	☐ Aquatic Invert	,	(B12)			` '		
Saturation				☐ Hydrogen Sul				☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10)			
☐ Water Ma				☐ Dry-Season V				Oxidized Rhizospher			
_	Deposits (B2)			Oxidized Rhiz		` ,	Roots (C3)	(where tilled)	co on Living record (Co)		
☐ Drift Depo			_	(where not		, o og .	(00)	☐ Crayfish Burrows (C8	3)		
	or Crust (B4)			☐ Presence of F	Reduced	I Iron (C4)		☐ Saturation Visible on	Aerial Imagery (C9)		
☐ Iron Depo				☐ Thin Muck Su	ırface (C	(7)		☐ Geomorphic Position	n (D2)		
	n Visible on Aerial I	magery (B	7) [☐ Other (Explain	n in Rem	narks)			5)		
☐ Water-Sta	ained Leaves (B9)							☐ Frost-Heave Hummo	ocks (D7) (LRR F)		
Field Obser	vations:	V	NI-	Depth				m gauge, monitoring well,	aerial photos, previous		
		Yes	No	(inches)	inspe	ections, etc.)	, if available:				
Surface Water	•		\boxtimes								
Water Table	present?		\boxtimes								
Saturation P			\boxtimes								
(includes cap	oillary fringe)										
Wetland Hy	drology Present?	\boxtimes									
Remarks: W	etland hydrology ind	dicators D2	2 and I	D5 are present.							

Project/Site: Sweetland Wind Project	City/County: H	land Count	nty Sampling Date: 6/25/2018		
Applicant/Owner: Sweetland Wind Farm, LLC			tate: SD	Sampling Point: SP-517	
Investigator(s): T. Beemer, W. Hirst	Section,	Township,		 11N, R66W	
Landform (hillslope, terrace, etc.) toeslope	Local relief (conca	ve, convex		Slope (%): 1 %	
Subregion (LRR): Northern Great Plains Spring Wheat Region			Long: -98.819	Determina	
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 percent s		,	NWI Class		
Are climate/hydrologic conditions on the site typical for this time of		□No	(If no, explain in	101	
,			(3, 3 3	,	
Vegetation Soil Hydrology	Are "Norr	mal Circum	stances" present?	P ⊠ Yes □ No	
Significantly Disturbed?	(If needed	d, explain a	any answers in Rei	marks.)	
Naturally Problematic?		_			
SUMMARY OF FINDINGS – Attach site map showing sam	ipling point loca	tions, tra	nsects, importa	ant features, etc.	
	emarks: An upland	plot adjace	ent to PEM W-507	and PEM W-508.	
Hydrophytic Vegetation Present?					
Hydric Soil Present?					
, 3, – –					
Is the Sampled Area within a Wetland?					
VEGETATION – Use scientific names of plants					
Absol		Indicator	Dominance Tes	t Worksheet:	
Tree Stratum (Plot size: 30') % Co		Status	Number of Domi	nant Species that	
1	<u>%</u>		are OBL, FACW,		
3.	<u>%</u>		(excluding FAC-)	(A)	
4.	%		Total Number of		
0	% = Total Cover	r	Species Across /	· · ·	
Sapling/Shrub Stratum (Plot size: 15')			Percent of Domir are OBL, FACW,	nant Species that , or FAC: 0% (A/B)	
1	<u> </u>		are OBL, I ACW,	, or rac(A/B)	
2	<u>%</u>		Prevalence Inde	ex Worksheet:	
3	<u>%</u>		Total % Co	over of: Multiply by:	
4	<u>%</u> <u>%</u>		OBL species	% x1 = 0	
	% = Total Cover		FACW species	% x 2 = 0	
Herb Stratum (Plot size: <u>5'</u>)	<u></u>	'	FAC species	% x 3 = 0	
`	<u>%</u> Y	FACU	FACU species	% x 4 = 0	
2	%		UPL species Column Totals:	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	
3	<u> </u>				
4	<u>%</u>		Prevalence Inde	ex = B/A =	
5	<u>%</u>		Hydrophytic Ve	getation Indicators:	
6	<u>%</u>		☐ 1 Rapid Test	for Hydrophytic Vegetation	
7	<u>%</u>		☐ 2 Dominance	, , , ,	
9.	%		☐ 3 Prevalence		
10.	%				
95 Woody Vine Stratum (Plot size: 30')	% = Total Cover	r	☐ 4 Morphologic supporting data in	cal Adaptations ¹ (Provide n Remarks or on a separate sheet)	
1	<u>%</u>		☐ Problematic F	Hydrophytic Vegetation ¹ (explain)	
2	<u>%</u>			dric soil and wetland hydrology	
0	<u>%</u> = Total Cover	r	must be present,	, unless disturbed or problematic	
Bare Ground in Herb Stratum 5 %			Hydrophytic Veg	etation Present? Yes No	
Remarks: Hydrophytic vegetation is not present. Photograph C-10					

SOIL Sampling Point: SP-517

Profile Desc	ription: (Describe	to the de	epth n	eeded to docum	ent the	indicator o	or confirm the	absence of indicators.)		
Depth	Matrix			Red	lox Fea	tures				
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	10YR 3/2	100						Silt Loam		
8-18	10YR 3/3	100						Silt Loam		
		<u> </u>								
-										
-										
	-	-								
¹Type: C=Co	oncentration, D=De	pletion, RI	M=Re	duced Matrix, CS:	=Covere	ed or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil	ndicators: (Appli	cable to a	II LRF	Rs, unless other	vise no	oted.)		Indicators for Problem	atic Hydric Soils³:	
☐ Histosol (A1)			☐ Sandy Gley	ed Mat	rix (S4)		1 cm Muck (A9) (LRF	R I, J)	
☐ Histic Epi	pedon (A2)			☐ Sandy Red	ox (S5)			☐ Coast Prairie Redox	(A16) (LRR F, G, H)	
☐ Black His	tic (A3)			☐ Stripped Ma	atrix (Se	6)		☐ Dark Surface (S7) (L	RR G)	
☐ Hydrogen	Sulfide (A4)			☐ Loamy Muc	ky Mine	eral (F1)		☐ High Plains Depressi		
☐ Stratified	Layers (A5) (LRR F	-)		☐ Loamy Gley	ed Mat	trix (F2)		(LRR H outside of I	•	
1 cm Muc	k (A9) (LRR F, G, I	H)		□ Depleted M	atrix (F	3)		Reduced Vertic (F18)		
	Below Dark Surface	e (A11)		☐ Redox Dark		` ,		Red Parent Material	,	
	k Surface (A12)			☐ Depleted D		, ,		☐ Very Shallow Dark St	, ,	
	ucky Mineral (S1)			☐ Redox Dep		, ,		Other (Explain in Rer	narks)	
	ucky Peat or Peat (•	` ,		³ Indicators of hydrophyti		
5 cm Muc	ky Peat or Peat (S3	B) (LRR F))	(MLRA 72	& 73 of	FLRR H)		wetland hydrology must be present, unless disturbed or problematic		
Restrictive I	_ayer (if present):							Hydric Soil Present?		
Type:		_	Dept	h (inches):				☐ Yes		
Domorkovkk	dria agil indigatora a	ro not nro	oont.							
Remarks.rry	dric soil indicators a	ie not pre	Sent.							
LIVERGLOG	<u>.</u>									
HYDROLOG										
·	drology Indicators ators (minimum of		od: ok	and all that apply	١			Cocondon, Indicators (2	or more required)	
	•	one requir			_			Secondary Indicators (2		
☐ Surface V	` '			Salt Crust (B1	,			☐ Surface Soil Cracks	` '	
	er Table (A2)			Aquatic Inverte				☐ Sparsely Vegetated		
☐ Saturation				☐ Hydrogen Sulf				☐ Drainage Patterns (E		
☐ Water Ma	` '			☐ Dry-Season W		. ,	Dooto (C2)	(where tilled)	res on Living Roots (C3)	
	Deposits (B2)			Oxidized Rhizo (where not to	illed)	es on Living	Roots (C3)	☐ Crayfish Burrows (C	3)	
☐ Drift Depo	or Crust (B4)			☐ Presence of R		Iron (C4)		☐ Saturation Visible on		
☐ Iron Depo				☐ Thin Muck Sur		` '		☐ Geomorphic Position	• • • •	
	n Visible on Aerial I	magery (F		Other (Explain				☐ FAC-Neutral Test (D		
	ained Leaves (B9)	magery (E	,,,	(,		☐ Frost-Heave Hummo	,	
	, ,			Donth			15 / //			
Field Obser	vations:	Yes	No	Depth (inches)			ed Data (strear , if available:	m gauge, monitoring well,	aeriai photos, previous	
Surface Wate	er present?		\boxtimes		'	,				
Water Table	•		\boxtimes							
Saturation P	•									
(includes cap										
	drology Present?		\boxtimes							
	hydrology indicato				1					
inclinates. NO	mydrology maicato	ı present.								

Project/Site: Sweetland Wind Project	City/County: Hand Cou	unty Sampling Date: 6/25/2018
Applicant/Owner: Sweetland Wind Farm, LLC	-	State: SD Sampling Point: SP-518
Investigator(s): T. Beemer, W. Hirst	Section, Townsh	
Landform (hillslope, terrace, etc.) depression	Local relief (concave, conv	
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.443892	Long: -98.818880 Datum: NAD83
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 percent s		NWI Classification: PEM1A
Are climate/hydrologic conditions on the site typical for this time of y		
, , , , , , , , , , , , , , , , , , , ,		,
Vegetation Soil Hydrology	Are "Normal Circ	umstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?	(If needed, explai	n any answers in Remarks.)
, – – –		
SUMMARY OF FINDINGS – Attach site map showing sam		
	emarks: Wetland sample plo	ot located in PEM W-508.
Hydrophytic Vegetation Present? □ □ Hydric Soil Present? □ □		
Wetland Hydrology Present?		
Is the Sampled Area within a Wetland?		
VEGETATION – Use scientific names of plants		
Absoli Tree Stratum (Plot size: 30') % Cov		Dominance Test Worksheet:
Tree Stratum (Plot size: <u>30'</u>) % Cov 1	ver Species? Status <u>%</u>	Number of Dominant Species that
2.	%	are OBL, FACW, or FAC (excluding FAC-): (A)
3.	%	
4	<u>%</u>	Total Number of Dominant Species Across All Strata: (B)
0	% = Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)		Percent of Dominant Species that are OBL, FACW, or FAC: (A/B)
1	<u>%</u>	
3.	<u>%</u>	Prevalence Index Worksheet:
4	<u>%</u>	Total % Cover of: Multiply by:
5.	%	OBL species% x 1 =0
0	% = Total Cover	FACW species% x 2 =0
Herb Stratum (Plot size: <u>5'</u>)		FAC species% x 3 =0 FACU species% x 4 =0
1. <u>Spartina pectinata</u> 90		UPL species
2	<u>%</u>	Column Totals: 0 % (A) 0 (B)
3	%	- Prevalence Index = B/A =
5	<u>%</u>	Hydrophytic Vegetation Indicators:
6	%	
7	<u>%</u>	1 Rapid Test for Hydrophytic Vegetation
8	<u>%</u>	_ ☐ 2 Dominance Test is >50%
9	<u>%</u>	- ☐ 3 Prevalence Index is ≤3.0¹
10		4 Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%	☐ Problematic Hydrophytic Vegetation¹ (explain)
2	<u>%</u>	Indicators of hydric soil and wetland hydrology
0	% = Total Cover	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 10 %		Hydrophytic Vegetation Present? ⊠ Yes ☐ No
Remarks: Rapid test for hydrophytic vegetation is met. Photograph	C-11.	

SOIL Sampling Point: SP-518

Profile Desc	ription: (Describe	to the de	pth n	eeded to docur	nent the	e indicator o	or confirm the	absence of indicators.)			
Depth	Matrix			Re	dox Fea	ntures					
(inches)	Color (moist)	<u>%</u>	Co	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-4	10YR 3/1	100						Silt Loam			
4-20	10YR 3/1	90		10YR 5/6	10	C	M	Silt Loam			
-	-										
-	-	-	· 								
-											
¹Type: C=Co	oncentration, D=De	pletion, RN	л=Rec	duced Matrix, CS	S=Cover	ed or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil	ndicators: (Appli	cable to a	II LRR	s, unless other	wise no	oted.)		Indicators for Problema	atic Hydric Soils³:		
☐ Histosol (A1)			☐ Sandy Gle	yed Mat	rix (S4)		1 cm Muck (A9) (LRF	R I, J)		
☐ Histic Epi	pedon (A2)			☐ Sandy Red	dox (S5)			☐ Coast Prairie Redox ((A16) (LRR F, G, H)		
☐ Black His	tic (A3)			☐ Stripped M	latrix (Se	6)		☐ Dark Surface (S7) (LI	RR G)		
☐ Hydrogen	Sulfide (A4)			☐ Loamy Mu	cky Min	eral (F1)		☐ High Plains Depression			
☐ Stratified	Layers (A5) (LRR F	=)		☐ Loamy Gle	yed Ma	trix (F2)		(LRR H outside of I	MLRA 72 & 73)		
1 cm Muc	k (A9) (LRR F, G, I	- I)		□ Depleted N	Лatrix (F	3)		Reduced Vertic (F18)			
☐ Depleted	Below Dark Surface	e (A11)		□ Redox Dar	k Surfac	ce (F6)		Red Parent Material (,		
☐ Thick Dar	k Surface (A12)			☐ Depleted □	Dark Sur	face (F7)		☐ Very Shallow Dark Su	, ,		
	ucky Mineral (S1)			☐ Redox Dep		` '		Other (Explain in Ren	narks)		
	ucky Peat or Peat (☐ High Plain		` ,		3Indicators of hydrophytic			
5 cm Muc	ky Peat or Peat (S3	3) (LRR F)		(MLRA 72	2 & 73 o	f LRR H)		wetland hydrology must disturbed or problematic			
Restrictive I	_ayer (if present):							Hydric Soil Present?			
Type:			Depth	n (inches):				⊠ Yes □ No			
	dric soil indicator F	0.									
HYDROLOG	·v										
	drology Indicators	•									
_	cators (minimum of		ed: ch	eck all that apply	v)			Secondary Indicators (2	or more required)		
☐ Surface V	•	01.10 1.0 qui		☐ Salt Crust (B1				☐ Surface Soil Cracks			
_	er Table (A2)		_	☐ Aquatic Invert	,	(B12)			` '		
Saturation				☐ Hydrogen Sul				☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10)			
☐ Water Ma				☐ Dry-Season V				Oxidized Rhizospher			
_	Deposits (B2)			Oxidized Rhiz		` ,	Roots (C3)	(where tilled)	co on Living record (Co)		
☐ Drift Depo			_	(where not		, o og .	(00)	☐ Crayfish Burrows (C8	3)		
	or Crust (B4)			☐ Presence of F	Reduced	I Iron (C4)		☐ Saturation Visible on	Aerial Imagery (C9)		
☐ Iron Depo				☐ Thin Muck Su	ırface (C	(7)		☐ Geomorphic Position	n (D2)		
	n Visible on Aerial I	magery (B	7) [☐ Other (Explain	n in Rem	narks)			5)		
☐ Water-Sta	ained Leaves (B9)							☐ Frost-Heave Hummo	ocks (D7) (LRR F)		
Field Obser	vations:	V	NI-	Depth				m gauge, monitoring well,	aerial photos, previous		
		Yes	No	(inches)	inspe	ections, etc.)	, if available:				
Surface Water	•		\boxtimes								
Water Table	present?		\boxtimes								
Saturation P			\boxtimes								
(includes cap	oillary fringe)										
Wetland Hy	drology Present?	\boxtimes									
Remarks: W	etland hydrology ind	dicators D2	2 and I	D5 are present.							

Project/Site: Sweetland Wind Project	Ci	ty/County:	Hand Coun	Sampling Date: 6/25/20	18
Applicant/Owner: Sweetland Wind Farm, LLC				tate: SD Sampling Point: SP	-519
Investigator(s): T. Beemer, W. Hirst		Section	, Township	Range: S6, T111N, R66W	
Landform (hillslope, terrace, etc.) swale	Loc	al relief (conc		· · · · · · · · · · · · · · · · · · ·	3 %
Subregion (LRR): Northern Great Plains Spring Wheat I		Lat: 44.445		Long: -98.808208 Datum: NAD	
	Region	44.443	210	NNA(1 O) - (C - C)	03
Soil Map Unit Name: <u>Betts-Java loams, steep</u> Are climate/hydrologic conditions on the site typical for this t	time of year	? X Yes	□ No	(If no, explain in Remarks.)	
7 to difficulty distingtion contained by the site typical for this t	anno or your	<u> </u>		(ii iio, explain iii recinano.)	
Vegetation Soil Hydrol	logy	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No	
Significantly Disturbed?		(If neede	ed. explain	any answers in Remarks.)	
Naturally Problematic?		(,	,	
SUMMARY OF FINDINGS – Attach site map showin	ıg samplin	g point loca	ations, tra	nsects, important features, etc.	
Yes No	Remai	rks: Upland sa	mple plot.		
Hydrophytic Vegetation Present? □ ⊠		•			
Hydric Soil Present? □					
Wetland Hydrology Present?					
Is the Sampled Area within a Wetland?					
VEGETATION – Use scientific names of plants	•				
VEGETATION - Ose scientific flames of plants					
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1	<u>%</u>	Оробіоб.	Otatao	Number of Dominant Species that	
2.	%			are OBL, FACW, or FAC (excluding FAC-):) (A)
3	%				_('')
4	%			Total Number of Dominant Species Across All Strata: 1	I_(B)
	0 %	= Total Cove	er	Percent of Dominant Species that	_` ′
Sapling/Shrub Stratum (Plot size: 15')	0/				(A/B)
1	<u>%</u> %				
2. 3.	<u> </u>			Prevalence Index Worksheet:	
4.				Total % Cover of: Multiply by	y:
5.	%			OBL species % x 1 =	0
	0 %	= Total Cove	er		0
Herb Stratum (Plot size: <u>5'</u>)				· — —	0
1. Poa pratensis	<u>100 %</u>	<u> </u>	FACU		0
2	<u></u> %			· · · · · · · · · · · · · · · · · · ·	0 (B)
3	<u>%</u>			Prevalence Index = B/A =	
4	<u>%</u>				
5 6	<u>//</u>			Hydrophytic Vegetation Indicators:	
7.	<u>%</u>			☐ 1 Rapid Test for Hydrophytic Vegetation	
8.	%			☐ 2 Dominance Test is >50%	
9	%			☐ 3 Prevalence Index is ≤3.0¹	
10	<u>%</u>			☐ 4 Morphological Adaptations¹ (Provide	
Marada Vina Otastara (Plataina 2001)	95 %	= Total Cove	er	supporting data in Remarks or on a separate s	heet)
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%			☐ Problematic Hydrophytic Vegetation¹ (ex	plain)
2.				¹ Indicators of hydric soil and wetland hydrol	logy
- -	0 %	= Total Cove	er	must be present, unless disturbed or problem	
Bare Ground in Herb Stratum 0 %				Hydrophytic Vegetation Present? ☐ Yes	⊠ No
Remarks: Hydrophytic vegetation is not present. Photograp	h C-12.				
, , , : : : : : : : : : : : : : : : : :					

SOIL Sampling Point: SP-519

Profile Desc	ription: (Describe	to the dep	oth needed to docu	ment th	e indicator c	or confirm the	absence of indicators.)			
Depth	Matrix		R	edox Fe	atures					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-20	10YR 3/2	100					Clay Loam			
-										
-	-	· ——					_			
¹Type: C=Ce	oncentration, D=Dep	pletion, RM	=Reduced Matrix, C	S=Cove	red or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil	ndicators: (Applie	cable to all	LRRs, unless other	erwise n	oted.)		Indicators for Problems	atic Hydric Soils³:		
☐ Histosol (A1)		☐ Sandy Gl	eyed Ma	trix (S4)		1 cm Muck (A9) (LRF	R I, J)		
☐ Histic Epi	pedon (A2)		☐ Sandy Re	dox (S5)		☐ Coast Prairie Redox	(A16) (LRR F, G, H)		
☐ Black His	tic (A3)		☐ Stripped I	Matrix (S	66)		☐ Dark Surface (S7) (L	RR G)		
	Sulfide (A4)		☐ Loamy M				☐ High Plains Depressi			
	Layers (A5) (LRR F		☐ Loamy GI	-	, ,		(LRR H outside of I	•		
	k (A9) (LRR F, G, F		Depleted				Reduced Vertic (F18)			
	Below Dark Surface	e (A11)	Redox Da		` '		Red Parent Material			
	k Surface (A12)		☐ Depleted		` '		☐ Very Shallow Dark St☐ Other (Explain in Rer			
	ucky Mineral (S1)	CO) / DD C	Redox De				, .	•		
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) ☐ High Plains Depressions (F16) ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) ☐ High Plains Depressions (F16) ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) ☐ (MLRA 72 & 73 of LRR H) ☐ wetland hydrology must be present, unless										
	ky Peat of Peat (53) (LKK F)	(WILIXA)	2 0 73 0	JI LIKIK III)		disturbed or problematic			
Restrictive I	_ayer (if present):						Hydric Soil Present?			
Type:		I	Depth (inches):				☐ Yes ⊠ No			
Remarks: No	hydric soil indicato	r is present								
HYDROLOG	Υ									
Wetland Hy	drology Indicators	:								
Primary India	ators (minimum of	one require	d; check all that app	oly)			Secondary Indicators (2	or more required)		
☐ Surface V	Vater (A1)		☐ Salt Crust (B	311)			☐ Surface Soil Cracks	(B6)		
☐ High Wat	er Table (A2)		Aquatic Inve	rtebrates	s (B13)		☐ Sparsely Vegetated Concave Surface (B8)			
☐ Saturation			☐ Hydrogen St				☐ Drainage Patterns (E			
☐ Water Ma	rks (B1)		☐ Dry-Season	Water Ta	able (C2)		Oxidized Rhizospher	res on Living Roots (C3)		
☐ Sediment	Deposits (B2)		Oxidized Rhi		es on Living	Roots (C3)	(where tilled)			
☐ Drift Depo	osits (B3)		(where no				☐ Crayfish Burrows (C	•		
_	or Crust (B4)		☐ Presence of				☐ Saturation Visible on	0, 1,		
☐ Iron Depo	. ,		☐ Thin Muck S				☐ Geomorphic Position			
	n Visible on Aerial I	magery (B7) Dther (Expla	ın ın Rer	marks)		☐ FAC-Neutral Test (D	,		
☐ Water-Sta	ained Leaves (B9)						☐ Frost-Heave Hummo	DCKS (D7) (LRR F)		
Field Obser	vations:	Yes	Depth No (inches)		cribe Record ections, etc.)		m gauge, monitoring well,	aerial photos, previous		
Surface Wat	ar present?	_	_	IIISP	ections, etc.)	, ii avaliable.				
	·									
Water Table	•									
Saturation P										
(includes car			\square							
	drology Present?	<u> </u>								
Remarks: W	etland hydrology inc	alcator D2 is	s met.							

Project/Site: Sweetland Wind Project	(City/County: _	Hand Coun	ty Sampling Date: 6/26/2018
Applicant/Owner: Sweetland Wind Farm, LLC				State: SD Sampling Point: SP-522
Investigator(s): T. Beemer, W. Hirst		Section	, Township	, Range:S12, T111N, R67W
Landform (hillslope, terrace, etc.) depression	Lo	cal relief (conc		·
Subregion (LRR): Northern Great Plains Spring Wheat	Region	Lat: 44.440	352	Long: _98.829151
Soil Map Unit Name: Hoven silt loam, 0 to 1 percent slo			002	NWI Classification: PEM1C
Are climate/hydrologic conditions on the site typical for this		r? X Yes	П No	(If no, explain in Remarks.)
γ, γ, γ, ρ γ, ρ				(,,,
Vegetation Soil Hydro	logy	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?]	(If neede	ed, explain	any answers in Remarks.)
Naturally Problematic?	-			
SUMMARY OF FINDINGS – Attach site map showir	ng sampli	ng point loca	ations, tra	insects, important features, etc.
Yes No				located in PEM W-510. No upland sample plot was
Hydrophytic Vegetation Present?		ded for W-510	due to adja	cent agricultural fields.
Hydric Soil Present?				
Wetland Hydrology Present?				
Is the Sampled Area within a Wetland?	J			
VEGETATION – Use scientific names of plants				
	Absolute	Dominant	Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: <u>30'</u>)	% Cover	Species?	Status	Number of Dominant Species that
1	%			are OBL, FACW, or FAC
2. 3.	<u>%</u> %		-	(excluding FAC-):(A)
3. 4.	<u> </u>			Total Number of Dominant
	0 %	= Total Cove	er	Species Across All Strata:(B)
Sapling/Shrub Stratum (Plot size: 15')				Percent of Dominant Species that
1.	<u>%</u>			are OBL, FACW, or FAC:(A/B)
2	%			Prevalence Index Worksheet:
3	%			
4	<u>%</u>			Total % Cover of: Multiply by: OBL species % x 1 = 0
5	<u>%</u> 0 %	= Total Cove		OBL species% x1 =0 FACW species
Herb Stratum (Plot size: 5')	0 70	= Total Cove	ž1	FAC species% x 3 =0
1. Alisma triviale	80 %	Υ	OBL	FACU species% x 4 =0
2.	%			UPL species% x 5 =0 Column Totals: 0 % (A) 0 (B)
3	<u>%</u>			(,
4	<u>%</u>			Prevalence Index = B/A =
5	%			Hydrophytic Vegetation Indicators:
6	%			□ 1 Rapid Test for Hydrophytic Vegetation
7 8	<u>%</u>			2 Dominance Test is >50%
9.				☐ 3 Prevalence Index is ≤3.0¹
10.	%			
Woody Vine Stratum (Plot size: 30')	80 %	= Total Cove	er	4 Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
1	<u>%</u>			☐ Problematic Hydrophytic Vegetation¹ (explain)
2	%			¹ Indicators of hydric soil and wetland hydrology
	0 %	= Total Cove	er	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 20 %				Hydrophytic Vegetation Present? ⊠ Yes ☐ No
Remarks: Rapid test for hydrophytic vegetation is met. Pho	tograph C-	13.		

SOIL Sampling Point: SP-522

Profile Desc	ription: (Describe	to the de	pth n	eeded to docun	nent the	indicator o	r confirm the	absence of indicators.)		
Depth	Matrix			Re	dox Fea	atures				
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-2	10YR 3/1	100						Clay Loam		
2-10	10YR 3/1	85		10YR 4/6	15	<u>C</u>	M	Clay Loam		
10-20	10YR 3/1	75		10YR 5/6	25	C	M	Clay Loam		
	-		-							
-		-								
	-		- —							
¹Type: C=Co	oncentration, D=Dep	oletion, RI	M=Red	duced Matrix, CS	=Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil	ndicators: (Applic	cable to a	II LRF	Rs, unless other	wise no	oted.)		Indicators for Problem	atic Hydric Soils ³ :	
☐ Histosol (A1)			☐ Sandy Gle	yed Mat	trix (S4)		1 cm Muck (A9) (LR	R I, J)	
☐ Histic Epi	pedon (A2)			☐ Sandy Red	lox (S5)			☐ Coast Prairie Redox	(A16) (LRR F, G, H)	
☐ Black His	tic (A3)			☐ Stripped M	atrix (Se	6)		☐ Dark Surface (S7) (L	.RR G)	
☐ Hydrogen				☐ Loamy Mu				☐ High Plains Depress		
	Layers (A5) (LRR F			☐ Loamy Gle	-			(LRR H outside of	•	
	k (A9) (LRR F, G, F	•		□ Depleted N				Reduced Vertic (F18	,	
	Below Dark Surface	e (A11)		Redox Dar		, ,		Red Parent Material		
	k Surface (A12)			☐ Depleted □		, ,		☐ Very Shallow Dark S☐ Other (Explain in Re	· · · · ·	
	icky Mineral (S1)	20) (1.55	 .	☐ Redox Dep				` '	,	
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) Indicators of hydrophytic vegetation and										
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be present, unless disturbed or problematic										
Restrictive I	ayer (if present):							Hydric Soil Present?		
Type: Depth (inches):										
Domorko: Us	dric soil indicator F	e io propo	nt							
Tromano. Try	and son maleator r	o lo prese								
HYDROLOG										
_	drology Indicators									
Primary India	ators (minimum of	one requir	ed; ch	eck all that apply	<u>/)</u>			Secondary Indicators (2	2 or more required)	
☐ Surface V	Vater (A1)		[☐ Salt Crust (B1	1)			☐ Surface Soil Cracks	(B6)	
☐ High Wat	er Table (A2)		[Aquatic Invert	ebrates	(B13)		Sparsely Vegetated Concave Surface (B8)		
☐ Saturation	n (A3)			☐ Hydrogen Sul				☐ Drainage Patterns (,	
☐ Water Ma	` '			☐ Dry-Season V		` ,			res on Living Roots (C3)	
	Deposits (B2)		l	Oxidized Rhiz		es on Living I	Roots (C3)	(where tilled)	·o\	
☐ Drift Depo			ſ	(where not	,	Uron (C4)		☐ Crayfish Burrows (C	· ·	
	or Crust (B4)			☐ Presence of F☐ Thin Muck Su				☐ Saturation Visible or☒ Geomorphic Positio		
☐ Iron Depo				☐ Other (Explair				☐ Geomorphic Fosition		
	n Visible on Aerial II ained Leaves (B9)	magery (E	۱ (۱۸	_ Other (Explain	i iii ixcii	iaiks)		☐ Frost-Heave Humm	′	
				Danth	1_					
Field Obser	vations:	Yes	No	Depth (inches)			ed Data (strea , if available:	m gauge, monitoring well,	aerial photos, previous	
Surface Wate	or procent?	_		(/	шэр	ections, etc.)	, ii available.			
Surface Water	·									
Water Table	•									
Saturation P		\boxtimes		8						
(includes cap		\square								
	drology Present?	<u> </u>			<u> </u>					
	etland hydrology inc erved. Therefore, inc				ough sa	turation was	observed at a	depth of 8 inches, an acc	ompanying water table	
was not obse	,, voa. Therefole, III	aioaioi A3	13 1101	mot.						

Project/Site: Sweetland Wind Project	Ci	ity/County: H	Hand Coun	ty Sampling Date: 6/26/2018
Applicant/Owner: Sweetland Wind Farm, LLC				tate: SD Sampling Point: SP-536
Investigator(s): T. Beemer, W. Hirst		Section		, Range: S23, T111N, R67W
Landform (hillslope, terrace, etc.) drainage	Loc	al relief (conca		· · · · · · · · · · · · · · · · · · ·
Subregion (LRR): Northern Great Plains Spring Wheat F		Lat: 44,409		Long: -98.853713 Datum: NAD83
O The Hard	region	44.409	103	NWI Classification: PABFh
Are climate/hydrologic conditions on the site typical for this ti	ime of year	? 🛛 Yes	П №	(If no, explain in Remarks.)
Are diffiate/flydrologic conditions on the site typical for this ti	inc or year:	. 🔼 103		(II IIO, CAPIAIII III I COITIAINS.)
Vegetation Soil Hydrolo	ogy	Are "Nor	rmal Circun	nstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?		(If neede	ed. explain a	any answers in Remarks.)
Naturally Problematic?		(,	,,
SUMMARY OF FINDINGS – Attach site map showing	g samplin	g point loca	ations, tra	nsects, important features, etc.
Yes No	Remai	rks: Wetland s	ample plot	located in PEM W-518.
Hydrophytic Vegetation Present?				
Hydric Soil Present? □				
Wetland Hydrology Present?				
Is the Sampled Area within a Wetland?				
VEGETATION – Use scientific names of plants				
VEGETATION - 03e scientific flames of plants				T
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1	<u>%</u>			Number of Dominant Species that
2.	%			are OBL, FACW, or FAC (excluding FAC-): (A)
3	<u></u> %			Total Number of Dominant
4	<u></u> %			Species Across All Strata: (B)
	0 %	= Total Cove	er	Percent of Dominant Species that
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	0/			are OBL, FACW, or FAC: (A/B)
1	<u>%</u> %			
2. 3.				Prevalence Index Worksheet:
4.	<u>%</u>			Total % Cover of:Multiply by:
5.	%			OBL species% x 1 =0
	0 %	= Total Cove	er	FACW species% x 2 =0
Herb Stratum (Plot size: <u>5'</u>)				FAC species% x 3 =0 FACU species % x 4 =0
1. Hordeum jubatum	60 %	<u>Y</u>	FACW	UPL species
2. Persicaria maculosa	<u>30 %</u>	<u>Y</u>	FACW	Column Totals: 0 % (A) 0 (B)
3. <u>Phalaris arundinacea</u>	20 %	<u>N</u>	FACW	Prevalence Index = B/A =
4 5	<u>%</u> %			
6				Hydrophytic Vegetation Indicators:
7.	%			□ 1 Rapid Test for Hydrophytic Vegetation
8	<u></u> %			☐ 2 Dominance Test is >50%
9	<u>%</u>			☐ 3 Prevalence Index is ≤3.0¹
10	<u>%</u>	= Total Cove		☐ 4 Morphological Adaptations¹ (Provide
Woody Vine Stratum (Plot size: 30')	<u>110 %</u>	= Total Cove	ei.	supporting data in Remarks or on a separate sheet)
1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)
2.	%			¹ Indicators of hydric soil and wetland hydrology
	0 %	= Total Cove	er	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum0 %				Hydrophytic Vegetation Present? ⊠ Yes ☐ No
Remarks: Rapid test for hydrophytic vegetation is met. Photo	ograph C-1	4.		1
	-			

SOIL Sampling Point: SP-536

Profile Desc	ription: (Describe	to the de	pth n	eeded to docum	ent the	e indicator o	r confirm the	absence of indicators.)		
Depth	Matrix			Red	lox Fea	atures				
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10YR 3/2	100						Clay Loam		
4-10	10YR 3/2	95		10YR 4/6	5	C	M	Clay Loam		
10-20	10YR 3/2	90		10YR 4/6	10	C	M	Clay Loam		
-										
-	-	·							_	
-	-									
-		•								
¹Tvpe: C=Ce	oncentration, D=De	oletion. RN	л=Re	duced Matrix. CS:	=Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
71	Indicators: (Applie	•		· · · · · · · · · · · · · · · · · · ·				Indicators for Problema		
☐ Histosol (☐ Sandy Gley		-		1 cm Muck (A9) (LRR	•	
☐ Histosor (,			☐ Sandy Red				☐ Coast Prairie Redox (A		
☐ Black His				☐ Stripped Ma				☐ Dark Surface (S7) (LF		
	Sulfide (A4)			☐ Loamy Muc				☐ High Plains Depression	•	
	Layers (A5) (LRR F	-)		Loamy Gley	-			(LRR H outside of N		
	k (A9) (LRR F, G, I			☐ Depleted M				☐ Reduced Vertic (F18)		
	Below Dark Surface			□ Redox Dark				☐ Red Parent Material (
☐ Thick Dar	k Surface (A12)			□ Depleted D	ark Sui	face (F7)		☐ Very Shallow Dark Su		
	ucky Mineral (S1)			☐ Redox Dep	ression	ıs (F8)		Other (Explain in Rem	arks)	
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) ☐ High Plains Depressions (F16) ³ Indicators of hydrophytic vegetation and										
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be present, unless disturbed or problematic								pe present, unless		
Restrictive I	_ayer (if present):							Hydric Soil Present?		
Type:		_	Dept	h (inches):				⊠ Yes □ No		
Remarks: Hy	dric soil indicator F	o is preser	π.							
HYDROLOG	iΥ									
Wetland Hy	drology Indicators	:								
Primary India	cators (minimum of	one requir	ed; ch	neck all that apply	<u>)</u>			Secondary Indicators (2	or more required)	
☐ Surface V	Vater (A1)			Salt Crust (B1	1)			☐ Surface Soil Cracks (B6)	
☐ High Wat	er Table (A2)			Aquatic Inverte	ebrates	(B13)		☐ Sparsely Vegetated Concave Surface (B8)		
☐ Saturation	n (A3)		1	☐ Hydrogen Sulf	ide Od	or (C1)		☑ Drainage Patterns (B)	10)	
☐ Water Ma	ırks (B1)		l	□ Dry-Season W	ater Ta	able (C2)		Oxidized Rhizosphere	es on Living Roots (C3)	
	Deposits (B2)			Oxidized Rhizo		es on Living I	Roots (C3)	(where tilled)	,	
☐ Drift Depo	, ,			(where not	-	(0.4)		☐ Crayfish Burrows (C8	•	
_	or Crust (B4)			☐ Presence of R				☐ Saturation Visible on	• , , ,	
☐ Iron Depo	, ,	-		☐ Thin Muck Sur ☐ Other (Explain				☑ Geomorphic Position☑ FAC-Neutral Test (D5	` '	
	n Visible on Aerial I	magery (B	7)	☐ Other (Explain	in Ken	narks)		☐ Frost-Heave Hummo	,	
☐ water-Sta	ained Leaves (B9)				1			1 103t-1 leave 1 lullillillo	CR3 (D1) (LIKICI)	
Field Obser	vations:	Yes	No	Depth (inches)			ed Data (strea , if available:	m gauge, monitoring well, a	erial photos, previous	
Surface Wat	er present?		\boxtimes			·				
Water Table	•		\boxtimes	 .						
Saturation P	•		\boxtimes							
(includes car		_	الت							
	drology Present?	\boxtimes								
	etland hydrology inc			2 and D5 are pres	ent.					
			-,							
Ĩ										

Project/Site: Sweetland Wind Project		City/County:	Hand Coun	ty	Sampling Date: 6/26/2018	
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP				
Investigator(s): T. Beemer, W. Hirst		Section	n, Township		 T111N, 67W	
Landform (hillslope, terrace, etc.) toeslope		Local relief (cond	cave, conve		01 (01)	
Subregion (LRR): Northern Great Plains Spring Wheat R	Region	Lat: 44.409	9805	Long: -98.85	53890 Datum: NAD83	
Soil Map Unit Name: Water	, in the second			NWI Clas	ssification: PABFh	
Are climate/hydrologic conditions on the site typical for this til	me of ye	ear? 🛚 🖂 Yes	☐ No	(If no, explain i	n Remarks.)	
Vegetation Soil Hydrold Significantly Disturbed? ☐ ☐ ☐	ogy	Are "Normal Circumstances" present? ☐ Yes ☐ No				
Naturally Problematic?		(If need	led, explain	any answers in Re	emarks.)	
SUMMARY OF FINDINGS – Attach site map showing	a samr	olina point loc	ations, tra	ınsects, import	tant features, etc.	
Yes No	1			djacent to PEM V		
Hydrophytic Vegetation Present?	IV6	marks. Opiana s	ample plut a	lujaceni to FEIVI V	V-516.	
Hydric Soil Present?						
Wetland Hydrology Present? □						
Is the Sampled Area within a Wetland? $\ \square$						
VEGETATION – Use scientific names of plants	•					
	Absolu	te Dominant	Indicator	Dominance Te	est Worksheet:	
Tree Stratum (Plot size: <u>30'</u>)	% Cove	er Species?	Status		ninant Species that	
1		<u></u>		are OBL, FACW	V, or FAC	
2		<u>//</u> // ₆		(excluding FAC	-): <u> </u>	
4.		<u></u> <u>//</u> 6		Total Number o		
	0 (er	Species Across	· · ·	
Sapling/Shrub Stratum (Plot size: 15')				Percent of Dom are OBL, FACW	ninant Species that V, or FAC: 0% (A/B)	
1		<u></u>		are OBL, I ACV	V, 011 AC	
2.		<u></u>		Prevalence Inc	dex Worksheet:	
3 4		<u>%</u>		Total % C	Cover of: Multiply by:	
5.		<u></u>		OBL species	% x 1 = 0	
	0 9		er	FACW species		
Herb Stratum (Plot size: <u>5'</u>)				FAC species FACU species		
1. Poa pratensis	90 9		FACU	UPL species	${}$ % x 5 = 0	
2. <u>Solidago canadensis</u>	15 9	<u>%</u> <u>N</u> %	FACU	Column Totals:	: <u>0</u> % (A) <u>0</u> (B)	
3 4		<u></u> <u>/</u> 6		Prevalence Ind	dex = B/A =	
5.		<u></u>		Hydrophytic V	egetation Indicators:	
6		<u></u>				
7		<u></u>		_ '	t for Hydrophytic Vegetation	
8 9		<u>//</u> // ₆		2 Dominance		
9 10		<u></u> <u>//</u>		3 Prevalence		
Woody Vine Stratum (Plot size: 30')	105		er	☐ 4 Morpholog supporting data i	gical Adaptations ¹ (Provide in Remarks or on a separate sheet)	
1		<u></u>		☐ Problematic	Hydrophytic Vegetation ¹ (explain)	
2		<u></u>			nydric soil and wetland hydrology	
	0 9	<u>%</u> = Total Cov	er	must be presen	t, unless disturbed or problematic	
Bare Ground in Herb Stratum0 %				Hydrophytic Ve	getation Present? ☐ Yes ⊠ No	
Remarks: Hydrophytic vegetation is not present. Photograph	C-15.					

SOIL Sampling Point: SP-537

Profile Description: (Describe to the depth needed to document the indicator or confirm the	e absence of indicators.)							
Depth Matrix Redox Features								
(inches) Color (moist) % Color (moist) % Type ¹ Loc ²	Texture Remarks							
0-20 10YR 3/2 100	Clay Loam							
	· · · · · · · · · · · · · · · · · · ·							
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grain	s ² Location: PL=Pore Lining, M=Matrix							
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :							
☐ Histosol (A1) ☐ Sandy Gleyed Matrix (S4)	☐ 1 cm Muck (A9) (LRR I, J)							
☐ Histic Epipedon (A2) ☐ Sandy Redox (S5)	Coast Prairie Redox (A16) (LRR F, G, H)							
☐ Black Histic (A3) ☐ Stripped Matrix (S6)	☐ Dark Surface (S7) (LRR G)							
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1)	☐ High Plains Depressions (F16)							
☐ Stratified Layers (A5) (LRR F) ☐ Loamy Gleyed Matrix (F2)	(LRR H outside of MLRA 72 & 73)							
☐ 1 cm Muck (A9) (LRR F, G, H) ☐ Depleted Matrix (F3)	Reduced Vertic (F18)							
☐ Depleted Below Dark Surface (A11) ☐ Redox Dark Surface (F6)	☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF 12)							
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7)	☐ Other (Explain in Remarks)							
Sandy Mucky Mineral (S1) Redox Depressions (F8) Redox Depressions (F8)								
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) ☐ High Plains Depressions (F16) ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) ☐ (MLRA 72 & 73 of LRR H) ☐ 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless								
(MEIA 72 & 70 of Elik II)	disturbed or problematic							
Restrictive Layer (if present):	Hydric Soil Present?							
Type: Depth (inches):	☐ Yes ☒ No							
Remarks: No hydric soil indicator is present.								
HYDROLOGY								
Wetland Hydrology Indicators:								
	Secondary Indicators (2 or more required)							
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11)	Surface Soil Cracks (B6)							
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates (B13)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8)							
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates (B13) □ Saturation (A3) □ Hydrogen Sulfide Odor (C1)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10)							
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates (B13) □ Saturation (A3) □ Hydrogen Sulfide Odor (C1) □ Water Marks (B1) □ Dry-Season Water Table (C2)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Oxidized Rhizospheres on Living Roots (C3)							
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Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates (B13) □ Saturation (A3) □ Hydrogen Sulfide Odor (C1) □ Water Marks (B1) □ Dry-Season Water Table (C2) □ Sediment Deposits (B2) □ Oxidized Rhizospheres on Living Roots (C3) □ Drift Deposits (B3) (where not tilled)	□ Surface Soil Cracks (B6) □ Sparsely Vegetated Concave Surface (B8) □ Drainage Patterns (B10) □ Oxidized Rhizospheres on Living Roots (C3)							
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Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates (B13) □ Saturation (A3) □ Hydrogen Sulfide Odor (C1) □ Water Marks (B1) □ Dry-Season Water Table (C2) □ Sediment Deposits (B2) □ Oxidized Rhizospheres on Living Roots (C3) □ Drift Deposits (B3) (where not tilled) □ Algal Mat or Crust (B4) □ Presence of Reduced Iron (C4) □ Iron Deposits (B5) □ Thin Muck Surface (C7) □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ Water-Stained Leaves (B9) Depth (inches) Describe Recorded Data (street inspections, etc.), if availables:	□ Surface Soil Cracks (B6) □ Sparsely Vegetated Concave Surface (B8) □ Drainage Patterns (B10) □ Oxidized Rhizospheres on Living Roots (C3)							
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates (B13) □ Saturation (A3) □ Hydrogen Sulfide Odor (C1) □ Water Marks (B1) □ Dry-Season Water Table (C2) □ Sediment Deposits (B2) □ Oxidized Rhizospheres on Living Roots (C3) □ Drift Deposits (B3) (where not tilled) □ Algal Mat or Crust (B4) □ Presence of Reduced Iron (C4) □ Iron Deposits (B5) □ Thin Muck Surface (C7) □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ Water-Stained Leaves (B9) Field Observations: Depth (inches) Surface Water present? □ Describe Recorded Data (street inspections, etc.), if available:	□ Surface Soil Cracks (B6) □ Sparsely Vegetated Concave Surface (B8) □ Drainage Patterns (B10) □ Oxidized Rhizospheres on Living Roots (C3)							
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Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates (B13) □ Saturation (A3) □ Hydrogen Sulfide Odor (C1) □ Water Marks (B1) □ Dry-Season Water Table (C2) □ Sediment Deposits (B2) □ Oxidized Rhizospheres on Living Roots (C3) □ Drift Deposits (B3) (where not tilled) □ Algal Mat or Crust (B4) □ Presence of Reduced Iron (C4) □ Iron Deposits (B5) □ Thin Muck Surface (C7) □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ Water-Stained Leaves (B9) Field Observations: Yes No (inches) Describe Recorded Data (street inspections, etc.), if available: Surface Water present? □ □ Describe Recorded Data (street inspections, etc.), if available: Saturation Present? □ □ Describe Recorded Data (street inspections, etc.), if available: Wetland Hydrology Present? □ □ Describe Recorded Data (street inspections, etc.)	□ Surface Soil Cracks (B6) □ Sparsely Vegetated Concave Surface (B8) □ Drainage Patterns (B10) □ Oxidized Rhizospheres on Living Roots (C3)							

Project/Site: Sweetland Wind Project	С	ity/County:	Hand Coun	ty Sampling Date: 6/27/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-538		
Investigator(s): T. Beemer, W. Hirst		Section		, Range: S20, T111N, R66W
Landform (hillslope, terrace, etc.) swale	Loc	 cal relief (conc		
Subregion (LRR): Northern Great Plains Spring Wheat		Lat: 44.411		Long: -98.790429 Datum: NAD83
	Region	44.411	311	NAM CI (f) (f)
Soil Map Unit Name: <u>Betts-Java loams, steep</u> Are climate/hydrologic conditions on the site typical for this	time of year	? X Yes	□ No	(If no, explain in Remarks.)
7 to diffially fry drologic container to the top local for this	unic or your	. 🖂 100		(ii no, explain iii recinance.)
Vegetation Soil Hydro	logy	Are "No	rmal Circun	nstances" present? ⊠ Yes ☐ No
Significantly Disturbed?	l	(If neede	ed. explain	any answers in Remarks.)
Naturally Problematic?	İ	(,	,,
SUMMARY OF FINDINGS – Attach site map showir	ıg samplir	ng point loca	ations, tra	insects, important features, etc.
Yes No	Rema	rks: Wetland s	sample plot	located in PEM W-520.
Hydrophytic Vegetation Present? ☐				
Hydric Soil Present? □	1			
Wetland Hydrology Present?	1			
Is the Sampled Area within a Wetland? $\ oximes$	1			
VEGETATION – Use scientific names of plants				
	Absoluto	Dominant	Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	
1	<u></u> %	<u> </u>		Number of Dominant Species that are OBL, FACW, or FAC
2	<u>%</u>			(A)
3	%			Total Number of Dominant
4	<u>%</u>			Species Across All Strata:(B)
(5) (6) (7) (7)	0 %	= Total Cove	er	Percent of Dominant Species that
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1	%			are OBL, FACW, or FAC:(A/B)
2.	<u> </u>			
3.	<u>%</u>			Prevalence Index Worksheet:
4.	%			Total % Cover of: Multiply by:
5	%			OBL species% x 1 =0
	0 %	= Total Cove	er	FACW species% x 2 =0
Herb Stratum (Plot size: <u>5'</u>)				FAC species% x 3 =0 FACU species % x 4 =0
1. <u>Carex vulpinoidea</u>	_100 %	<u> </u>	<u>FACW</u>	UPL species
2	<u> %</u> %			Column Totals: 0 % (A) 0 (B)
3.				Prevalence Index = B/A =
4 5				
6.	%			Hydrophytic Vegetation Indicators:
7	<u>%</u>			□ 1 Rapid Test for Hydrophytic Vegetation
8	<u>%</u>			☐ 2 Dominance Test is >50%
9	<u>%</u>			☐ 3 Prevalence Index is ≤3.0¹
10	<u>%</u> 	= Total Cove	er	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>)	0/			☐ Problematic Hydrophytic Vegetation¹ (explain)
1	<u>%</u> %			¹ Indicators of hydric soil and wetland hydrology
Z	0 %	= Total Cove	er	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 0 %				Hydrophytic Vegetation Present? ⊠ Yes □ No
Remarks: Rapid test for hydrophytic vegetation is met. Pho	tograph C-1	6.		1
, , , , , , , , , , , , , , , , , , , ,	5 1 - 1			

SOIL Sampling Point: SP-538

Profile Desc	ription: (Describe	to the dept	h needed to docum	ent the	e indicator o	r confirm the	absence of indicators.)			
Depth	Matrix		Red	dox Fea	atures					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-2	10YR 3/1	100					Clay Loam			
2-12	10YR 5/2	85	10YR 4/6	15	C	M	Clay Loam			
12-20	10YR 5/1	<u>85</u>	10YR 5/6	15	C	M	Clay Loam			
-										
-										
-										
¹Type: C=Co	oncentration, D=Dep	oletion, RM=	Reduced Matrix, CS	=Cover	ed or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil I	ndicators: (Applic	able to all l	RRs, unless other	wise no	oted.)		Indicators for Problems	atic Hydric Soils³:		
☐ Histosol (A1)		☐ Sandy Gley	ed Mat	trix (S4)		1 cm Muck (A9) (LRF	R I, J)		
☐ Histic Epi	pedon (A2)		☐ Sandy Red				☐ Coast Prairie Redox (. , ,		
☐ Black His	` '		Stripped Ma	•	•		Dark Surface (S7) (L			
Hydrogen			Loamy Muc	-			High Plains Depressi	ons (F16)		
	Layers (A5) (LRR F		Loamy Gle				(LRR H outside of I	•		
	k (A9) (LRR F, G, F		☐ Depleted M				Red Parent Material (
	Below Dark Surface	(ATT)	Redox Dark		` '		☐ Very Shallow Dark St			
	k Surface (A12)		☐ Depleted D		, ,		☐ Other (Explain in Ren	` '		
Grant Control of the										
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) ☐ High Plains Depressions (F16) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless										
		, (=====,	•				disturbed or problematic			
Restrictive I	ayer (if present):						Hydric Soil Present?			
Type:		_ D	epth (inches):				⊠ Yes □ No			
Damania, III	alain neil in dinetea F) :t								
Remarks. Hy	dric soil indicator F	o is present.								
HYDROLOG	v									
_	drology Indicators		; check all that apply	١			Secondary Indicators (2	or more required)		
	•	<u>Jile required</u>	_	_						
Surface V	` '		☐ Salt Crust (B1	,	(D.10)		☐ Surface Soil Cracks (B6)			
☐ High Wat			Aquatic Inverte				☐ Sparsely Vegetated Concave Surface (B8)☑ Drainage Patterns (B10)			
	` '		☐ Hydrogen Sulf☐ Dry-Season W				_ 0	res on Living Roots (C3)		
	Deposits (B2)		Oxidized Rhize		, ,	Poots (C3)	(where tilled)	les on Living Roots (C3)		
☐ Drift Depo			(where not		53 On Living	(00)	☐ Crayfish Burrows (Ca	8)		
	or Crust (B4)		☐ Presence of R		l Iron (C4)		☐ Saturation Visible on			
☐ Iron Depo			☐ Thin Muck Sur	face (C	C7)		□ Geomorphic Position	• • • •		
	n Visible on Aerial Ir	magery (B7)	Other (Explain	in Ren	narks)			5)		
☐ Water-Sta	ained Leaves (B9)	0 , (,					☐ Frost-Heave Hummo	ocks (D7) (LRR F)		
Field Observ	vations:		Depth	Des	cribe Record	ed Data (strea	m gauge, monitoring well,	aerial photos, previous		
			lo (inches)	insp	ections, etc.)	, if available:				
Surface Water	er present?		1							
Water Table	•		0							
Saturation P			0							
(includes cap		_	_							
Wetland Hyd	drology Present?									
Remarks: We	etland hydrology inc	licators A1,	A2, A3, B10, D2 and	D5 pre	sent.					

Project/Site: Sweetland Wind Project	Ci	ity/County:	Hand Coun	ty Sampling Date: 6/27/2018			
Applicant/Owner: Sweetland Wind Farm, LLC State: SD Sampling Point:							
Investigator(s): T. Beemer, W. Hirst		Section	n, Township	, Range: S20, T111N, R66W			
Landform (hillslope, terrace, etc.) hillslope	Loc	al relief (conc		· · · · · · · · · · · · · · · · · · ·			
Subregion (LRR): Northern Great Plains Spring Wheat R		Lat: 44.411		Long: -98.790267 Datum: NAD83			
- Troutient Ground Lance Spining Tritout L	egion	44.411	1309	NATION 15 15			
Soil Map Unit Name: <u>Betts-Java loams, steep</u> Are climate/hydrologic conditions on the site typical for this til	me of vear	? 🛛 Yes	□ No	NWI Classification: NA (If no, explain in Remarks.)			
The difficulty divides definitions of the die typical for this th	me or year.	. 🔼 100		(ii no, explain iii recinano.)			
Vegetation Soil Hydrolo	ogy	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No			
Significantly Disturbed?		(If need	ed. explain a	any answers in Remarks.)			
Naturally Problematic?		(,,	,,			
SUMMARY OF FINDINGS – Attach site map showing	g samplin	g point loc	ations, tra	nsects, important features, etc.			
Yes No	Remar	rks: Upland sa	ample plot a	djacent to PEM W-520.			
Hydrophytic Vegetation Present? □		·		•			
Hydric Soil Present? □ ⊠							
Wetland Hydrology Present?							
Is the Sampled Area within a Wetland?							
VEGETATION – Use scientific names of plants							
	Absolute	Dominant	Indicator	Dominance Test Worksheet:			
Tree Stratum (Plot size: <u>30'</u>)	% Cover	Species?	Status				
1	<u>%</u>			Number of Dominant Species that are OBL, FACW, or FAC			
2	<u>%</u>			(excluding FAC-): 0 (A)			
3	<u>%</u>			Total Number of Dominant			
4	<u>%</u>			Species Across All Strata: 2 (B)			
Openhand Objects (Districtions (Districtions 45))	0 %	= Total Cove	er	Percent of Dominant Species that			
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1. Lonicera japonica	20 %	Υ	FACU	are OBL, FACW, or FAC:0%_ (A/B)			
2.	<u>20 %</u>		1700				
3.	%			Prevalence Index Worksheet:			
4.	%			Total % Cover of: Multiply by:			
5	<u>%</u>			OBL species% x 1 =0			
	20 %	= Total Cove	er	FACW species% x 2 =0			
Herb Stratum (Plot size: <u>5'</u>)				FAC species% x 3 =0 FACU species % x 4 =0			
1. Poa pratensis	80 %	<u>Y</u>	<u>FACU</u>	UPL species			
2. <u>Solidago canadensis</u>	<u>10 %</u>	<u>N</u>	FACU	Column Totals: 0 % (A) 0 (B)			
3.	<u>%</u> %			Prevalence Index = B/A =			
4 5							
6.	%			Hydrophytic Vegetation Indicators:			
7	<u>%</u>			☐ 1 Rapid Test for Hydrophytic Vegetation			
8	<u>%</u>			☐ 2 Dominance Test is >50%			
9	<u>%</u>			☐ 3 Prevalence Index is ≤3.0¹			
10	<u>%</u> 90 %	= Total Cove	er	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)			
Woody Vine Stratum (Plot size: <u>30'</u>)	<u></u>			☐ Problematic Hydrophytic Vegetation¹ (explain)			
1 2				¹ Indicators of hydric soil and wetland hydrology			
	0 %	= Total Cove	er	must be present, unless disturbed or problematic			
Bare Ground in Herb Stratum 10 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No			
Remarks: Hydrophytic vegetation is not present. Photograph	n C-17.			1			

SOIL Sampling Point: SP-539

Profile Descrip	tion: (Describe	to the de	pth n	eeded to docum	ent the	indicator o	or confirm the	absence of indicators.)			
Depth	Matrix			Red	lox Fea	tures					
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-6	10YR 3/2	100						Clay Loam			
6-18	10YR 3/3	100						Clay Loam			
		-									
¹Type: C=Conc	entration, D=Der	oletion, RN	—— ∕I=Red	duced Matrix, CS=	=Covere	ed or Coated		² Location: PL=Pore	Lining M=Matrix		
	· · · · · · · · · · · · · · · · · · ·			Rs, unless other				Indicators for Problems			
☐ Histosol (A1)				∑ Sandy Gley		-		1 cm Muck (A9) (LRF	•		
☐ Histic Epiped				☐ Sandy Red		11X (O-1)		☐ Coast Prairie Redox (
☐ Black Histic				☐ Stripped Ma		3)		☐ Dark Surface (S7) (LI			
☐ Hydrogen St	` '			☐ Loamy Muc	,	,		☐ High Plains Depressi	•		
	ers (A5) (LRR F)		Loamy Gley				(LRR H outside of I			
	A9) (LRR F, G, F			☐ Depleted M		, ,		☐ Reduced Vertic (F18)			
	low Dark Surface			☐ Redox Dark				Red Parent Material	(TF2)		
☐ Thick Dark S		` '		☐ Depleted Da		, ,		☐ Very Shallow Dark St	urface (TF 12)		
☐ Sandy Muck	, ,			Redox Depi		, ,		Other (Explain in Ren	narks)		
2.5 cm Muck	y Peat or Peat (S	S2) (LRR (G, H)	☐ High Plains	Depres	sions (F16)		³ Indicators of hydrophytic	c vegetation and		
5 cm Mucky	Peat or Peat (S3	(LRR F)		(MLRA 72	& 73 of	LRR H)		wetland hydrology must disturbed or problematic	be present, unless		
Restrictive Lay	er (if present):							Hydric Soil Present?			
Type: Depth (inches):								☐ Yes ⊠ No			
Danie de Nata	dric soil indicato										
HYDROLOGY											
	logy Indicators:	ı									
1	•		od: ch	eck all that apply	١			Secondary Indicators (2	or more required)		
	•	ne requir			-						
Surface Wat	` '		-	Salt Crust (B1	,	(D.10)		Surface Soil Cracks (B6)			
☐ High Water 1				Aquatic Inverte				☐ Sparsely Vegetated Concave Surface (B8)			
☐ Saturation (A☐ Water Marks				☐ Hydrogen Sulfi				☐ Drainage Patterns (E	310) es on Living Roots (C3)		
Sediment De	` '			☐ Dry-Season W☐ Oxidized Rhizo			Poots (C3)	(where tilled)	es on Living Roots (C3)		
☐ Drift Deposit			ı	Oxidized Rnizo (where not t		S OII LIVILIY	1.0013 (03)	☐ Crayfish Burrows (Ca	3)		
☐ Algal Mat or			[☐ Presence of R	-	Iron (C4)		☐ Saturation Visible on			
☐ Iron Deposits				Thin Muck Sur		` '		☐ Geomorphic Position	• • • •		
	isible on Aerial Ir	magery (B	7) [Other (Explain	in Rem	arks)		☐ FAC-Neutral Test (D			
☐ Water-Staine			.,					☐ Frost-Heave Hummo	ocks (D7) (LRR F)		
Field Observat	ions.			Depth	Desc	ribe Record	ed Data (strear	n gauge, monitoring well,	aerial photos, previous		
l loid Obcol ful	.0.10.	Yes	No	(inches)			, if available:	ir gaago, monitoring won,	aoriai priotoo, provioao		
Surface Water p	present?		\boxtimes								
Water Table pre	esent?		\boxtimes								
Saturation Pres			\boxtimes								
(includes capilla		_	_								
Wetland Hydro			\boxtimes								
	drology indicator				1						
	5,	- 130									
1											

Project/Site: Sweetland Wind Project	City/County: Hand	I County S	Sampling Date: 6/27/2018			
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SF				
Investigator(s): T. Beemer, W. Hirst	Section, Tow	vnship, Range: S15, T1	11N, R67W			
Landform (hillslope, terrace, etc.) swale	Local relief (concave, o		OI (0/)			
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.421129	Long: -98.8645	D-time:			
Soil Map Unit Name: Houdek-Dudley complex, 0 to 2 percent s		NWI Classif				
Are climate/hydrologic conditions on the site typical for this time of		 ☐ No	-			
Vegetation Soil Hydrology	Are "Normal of	Circumstances" present?	⊠ Yes □ No			
Significantly Disturbed? Naturally Problematic?	(If needed, ex	xplain any answers in Rem	narks.)			
SUMMARY OF FINDINGS – Attach site map showing sam	nnling point location	ns transects importar	nt features etc			
			nt routures, etc.			
Yes No R Hydrophytic Vegetation Present? □ ⊠	emarks: Upland sample	e piot.				
Hydric Soil Present?						
Wetland Hydrology Present? □ ⊠						
Is the Sampled Area within a Wetland?						
VEGETATION – Use scientific names of plants						
Absol	ute Dominant Indi	cator Dominance Test	Worksheet:			
Tree Stratum (Plot size: 30') % Co		atus				
1	<u></u>	Number of Dominarie OBL, FACW, of				
2	<u>%</u>	(excluding FAC-):				
3	<u>%</u>	Total Number of D	Dominant			
	<u>%</u> % = Total Cover	Species Across A	Il Strata: 1 (B)			
Sapling/Shrub Stratum (Plot size: 15')	<u></u>	Percent of Domina				
1	<u>%</u>	are OBL, FACW,	or FAC:0%_(A/B)			
2	<u> </u>	Prevalence Index	k Worksheet:			
3	<u></u>					
4	<u>%</u>	Total % Cov OBL species	<u> </u>			
5	% % = Total Cover	FACW species				
Herb Stratum (Plot size: 5')	<u></u>	FAC species	% x 3 = 0			
1. Poa pratensis 100)% Y FA	ACU FACU species	% x 4 =0			
2	%	UPL species	${}$ \times $5 = \frac{0}{}$			
3	<u></u>	Column Totals:	0% (A)0(B)			
4	<u>%</u>	Prevalence Index	c = B/A =			
5	<u>%</u>	Hydrophytic Veg	etation Indicators:			
6	<u>%</u>		or Hydrophytic Vegetation			
7	<u>%</u>	2 Dominance	, , , ,			
9.	%	3 Prevalence I				
10	<u>%</u>		al Adaptations ¹ (Provide			
) % = Total Cover	supporting data in I	Remarks or on a separate sheet)			
1	<u>%</u>	Problematic Hy	ydrophytic Vegetation ¹ (explain)			
2	<u>%</u>		lric soil and wetland hydrology			
	<u>%</u> = Total Cover	must be present, t	unless disturbed or problematic			
Bare Ground in Herb Stratum0 %		Hydrophytic Vege	tation Present? Yes No			
Remarks: Hydrophytic vegetation is not present. Photograph C-18.						

SOIL Sampling Point: SP-541

Profile Desc	cription: (Describe	to the dept	h needed to docum	nent the	e indicator o	or confirm the	absence of indicators.)		
Depth	Matrix		Red	dox Fea	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 3/1	100					Clay Loam		
6-18	10YR 3/2	100					Clay Loam		
¹Type: C=C	oncentration, D=Dep	pletion, RM=	Reduced Matrix, CS	=Cover	red or Coate	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil	Indicators: (Applic	cable to all	LRRs, unless other	wise n	oted.)		Indicators for Problema	atic Hydric Soils³:	
☐ Histosol (A1)		☐ Sandy Gley	yed Ma	trix (S4)		1 cm Muck (A9) (LRF	R I, J)	
☐ Histic Epi	pedon (A2)		☐ Sandy Red	lox (S5))		☐ Coast Prairie Redox ((A16) (LRR F, G, H)	
☐ Black His	tic (A3)		Stripped M	atrix (S	6)		☐ Dark Surface (S7) (LI	•	
☐ Hydroger	Sulfide (A4)		☐ Loamy Mud	cky Min	eral (F1)		☐ High Plains Depressi		
☐ Stratified	Layers (A5) (LRR F	=)	☐ Loamy Gle	yed Ma	trix (F2)		_ (LRR H outside of I	•	
1 cm Mud	ck (A9) (LRR F, G, F	H)	□ Depleted M	1atrix (F	⁻ 3)		Reduced Vertic (F18)		
☐ Depleted	Below Dark Surface	e (A11)	☐ Redox Dar	k Surfa	ce (F6)		Red Parent Material (,	
☐ Thick Da	rk Surface (A12)		□ Depleted D	ark Su	rface (F7)		☐ Very Shallow Dark St	, ,	
	ucky Mineral (S1)		☐ Redox Dep				Other (Explain in Ren	narks)	
	ucky Peat or Peat (` ,		3Indicators of hydrophytic		
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be present, unles disturbed or problematic									
Restrictive	Layer (if present):						Hydric Soil Present?		
Type:	, , ,	Р	epth (inches):				☐ Yes ☒ No		
Турс.									
HYDROLOG	Υ								
Wetland Hy	drology Indicators	:							
Primary India	cators (minimum of	one required	; check all that apply	<u>′)</u>			Secondary Indicators (2	or more required)	
☐ Surface V	Vater (A1)		☐ Salt Crust (B1	1)			☐ Surface Soil Cracks (B6)		
☐ High Wat	er Table (A2)		Aquatic Invert	ebrates	(B13)		☐ Sparsely Vegetated	Concave Surface (B8)	
☐ Saturatio			i ☐ Hydrogen Sulf				☐ Drainage Patterns (E		
☐ Water Ma			☐ Dry-Season W					res on Living Roots (C3)	
☐ Sediment	Deposits (B2)		Oxidized Rhiz	osphere	es on Living	Roots (C3)	(where tilled)		
☐ Drift Dep	osits (B3)		(where not	tilled)			☐ Crayfish Burrows (Ca	8)	
☐ Algal Mat	or Crust (B4)		Presence of R		` ,		Saturation Visible on	• • • •	
☐ Iron Depo	osits (B5)		Thin Muck Su				☐ Geomorphic Position		
☐ Inundatio	n Visible on Aerial II	magery (B7)	Other (Explain	in Ren	narks)		FAC-Neutral Test (D	,	
☐ Water-St	ained Leaves (B9)						☐ Frost-Heave Hummo	ocks (D7) (LRR F)	
Field Obser	vations:	Yes N	Depth No (inches)				m gauge, monitoring well,	aerial photos, previous	
			_ ` ′	ınsp	ections, etc.)	, if available:			
Surface Wat	er present?		⊻						
Water Table	•		⊠						
Saturation P			⊠						
(includes cap	oillary fringe)								
Wetland Hy	drology Present?		\boxtimes						
Remarks: W	etland hydrology inc	dicator D2 is	present.			·			
	,								
ĺ									

Project/Site: Sweetland Wind Project	City/County: Hand Cou	Inty Sampling Date: 6/27/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-544
Investigator(s): T. Beemer, W. Hirst		ip, Range: S18, T111N, R66W
Landform (hillslope, terrace, etc.) depression	Local relief (concave, conve	
Subregion (LRR): Northern Great Plains Spring Wheat Regi	 ion	Long: _98.815380 Datum: NAD83
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 percel	nt slopes	NWI Classification: PABFh
Are climate/hydrologic conditions on the site typical for this time	of year? ☐ Yes ☐ No	(If no, explain in Remarks.)
Vanatation Orilla Hadraham	A "NI 1 Cinner	
Vegetation Soil Hydrology Significantly Disturbed? ☐ ☐ ☐		umstances" present? ☐ Yes ☐ No
Naturally Problematic?	(If needed, explain	n any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing s	ampling point locations, tr	ransects, important features, etc.
Yes No	Remarks: Wetland sample plo	ot located in PEM W-524.
Hydrophytic Vegetation Present?	· ·	
Hydric Soil Present? □		
Wetland Hydrology Present?		
Is the Sampled Area within a Wetland?		
VEGETATION – Use scientific names of plants		
	solute Dominant Indicator	Dominance Test Worksheet:
· —	Cover Species? Status	Number of Dominant Species that
1	<u>%</u>	are OBL, FACW, or FAC
2	<u>%</u>	- (excluding FAC-):(A)
3	<u></u>	Total Number of Dominant
T	0 % = Total Cover	Species Across All Strata:(B)
Sapling/Shrub Stratum (Plot size: <u>15'</u>)		Percent of Dominant Species that
1	<u></u>	are OBL, FACW, or FAC:(A/B)
2	<u></u>	Prevalence Index Worksheet:
3	<u>%</u>	_
4	<u>%</u>	Total % Cover of: Multiply by: OBL species % x 1 = 0
5	% 0 % = Total Cover	FACW species
Herb Stratum (Plot size: 5')	<u>0 70</u> = 10tal Covel	FAC species
` <u> </u>	50 % Y OBL	FACU species % x 4 = 0
	40 % Y FACW	UPL species% x 5 =0
3	<u></u>	Column Totals:0% (A)0(B)
4	<u></u>	Prevalence Index = B/A =
5	<u></u>	Hydrophytic Vegetation Indicators:
6	<u>%</u>	-
7	<u>%</u>	2 Dominance Test is >50%
9.	<u>%</u>	- ☐ 3 Prevalence Index is ≤3.0¹
10.	%	
Woody Vine Stratum (Plot size: <u>30'</u>)	90 % = Total Cover	4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
1	<u></u>	Problematic Hydrophytic Vegetation¹ (explain)
2	<u>%</u>	¹ Indicators of hydric soil and wetland hydrology
_	0 % = Total Cover	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum		Hydrophytic Vegetation Present? ⊠ Yes ☐ No
Remarks: Rapid test for hydrophytic vegetation is met. Photogra	iph C-19.	

SOIL Sampling Point: SP-544

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-2	10YR 3/1	100					Clay Loam		
2-10	10YR 3/1	85	10YR 4/6	15	C	M	Clay Loam		
10-20	10YR 3/1	75	10YR 5/6	25	C	M	Clay Loam		
		· ·			·				
		· —— ·			-				
¹Type: C=Co	ncentration, D=De	pletion, RM=	Reduced Matrix, C	S=Cove	red or Coate	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil Ir	ndicators: (Applic	cable to all	LRRs, unless other	erwise n	oted.)		Indicators for Problem	atic Hydric Soils³:	
☐ Histosol (A	. 1)		☐ Sandy Gl	eyed Ma	trix (S4)		1 cm Muck (A9) (LRI	R I, J)	
☐ Histic Epip	edon (A2)		☐ Sandy Re	edox (S5)		☐ Coast Prairie Redox	(A16) (LRR F, G, H)	
☐ Black Histi	c (A3)		☐ Stripped I	Matrix (S	6)		☐ Dark Surface (S7) (L	RR G)	
☐ Hydrogen	Sulfide (A4)		☐ Loamy M	ucky Min	eral (F1)		☐ High Plains Depressi		
☐ Stratified L	ayers (A5) (LRR F	;)	☐ Loamy G	leyed Ma	atrix (F2)		(LRR H outside of	MLRA 72 & 73)	
	(A9) (LRR F, G, H		☐ Depleted	-			Reduced Vertic (F18	•	
	Below Dark Surface		⊠ Redox Da				Red Parent Material	` '	
☐ Thick Dark	Surface (A12)		□ Depleted	Dark Su	rface (F7)		☐ Very Shallow Dark S	, ,	
☐ Sandy Mu	cky Mineral (S1)		☐ Redox De	epression	ns (F8)		☐ Other (Explain in Rer	narks)	
☐ 2.5 cm Mu	cky Peat or Peat (S2) (LRR G	, H) 🔲 High Plaiı	ns Depre	ssions (F16))	3Indicators of hydrophyti	c vegetation and	
5 cm Muck	xy Peat or Peat (S3	3) (LRR F)	(MLRA 7	2 & 73 c	of LRR H)		wetland hydrology must disturbed or problematic		
Restrictive L	ayer (if present):						Hydric Soil Present?		
Type:		Г	Depth (inches):				⊠ Yes □ No		
	dric soil indicator F								
HYDROLOGY	<u> </u>								
	rology Indicators	<u> </u>							
-			d; check all that app	oly)			Secondary Indicators (2	or more required)	
Surface W			☐ Salt Crust (E				☐ Surface Soil Cracks (B6)		
☐ High Wate	` '		☐ Aquatic Inve	,	: (B13)		☐ Sparsely Vegetated Concave Surface (B8)		
☐ Saturation			☐ Hydrogen Si				☐ Drainage Patterns (F		
☐ Water Mar	` '		☐ Dry-Season				_ •	res on Living Roots (C3)	
☐ Sediment I	` '		Oxidized Rh		, ,	Roots (C3)	(where tilled)	ios on ziving resets (50)	
☐ Drift Depos			(where no		oo on Eiving	110010 (00)	☐ Crayfish Burrows (C	8)	
☐ Algal Mat o	, ,		☐ Presence of	Reduced	d Iron (C4)		☐ Saturation Visible or	Aerial Imagery (C9)	
☐ Iron Depos			☐ Thin Muck S	urface (0	C7)		☐ Geomorphic Position	n (D2)	
	Visible on Aerial I	magery (B7	Other (Expla	in in Rer	marks)			5)	
	ned Leaves (B9)		,				☐ Frost-Heave Hummo	ocks (D7) (LRR F)	
Field Observ	ations:	.,	Depth	Des	cribe Record	led Data (strea	am gauge, monitoring well,	aerial photos, previous	
			No (inches)	insp	ections, etc.), if available:			
Surface Wate	r present?	\boxtimes	2						
Water Table p	resent?	\boxtimes	0						
Saturation Pre	esent?		0						
(includes capi	llary fringe)								
· ·	rology Present?	\boxtimes							
Remarks: We	tland hydrology inc	dicators A1,	A2, A3, D2, and D5	are pres	sent.				

Project/Site: Sweetland Wind Project	City/County: Hand	County Sampling Date: 6/27/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-545
Investigator(s): T. Beemer, W. Hirst	Section, Tow	rnship, Range: S18, T111N, R66W
Landform (hillslope, terrace, etc.) roadside ditch	Local relief (concave, c	
Subregion (LRR): Northern Great Plains Spring Wheat Region	1	Long: _98.815433
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 percent s		NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this time of		No (If no, explain in Remarks.)
,	,	
Vegetation Soil Hydrology	Are "Normal C	Circumstances" present? ☐ Yes ☐ No
Significantly Disturbed?	(If needed, ex	plain any answers in Remarks.)
Naturally Problematic?		
SUMMARY OF FINDINGS – Attach site map showing sam	pling point location	s, transects, important features, etc.
	emarks: Upland sample	plot adjacent to PEM W-524.
Hydrophytic Vegetation Present?		
Hydric Soil Present?		
Wetland Hydrology Present?		
Is the Sampled Area within a Wetland?		
VEGETATION – Use scientific names of plants		
Absol		
Tree Stratum (Plot size: 30') % Co		Number of Dominant Species that
1	<u>%</u>	are OBL, FACW, or FAC
3.	<u>%</u>	(excluding FAC-):0 (A)
4.	%	Total Number of Dominant
	% = Total Cover	Species Across All Strata:1_(B)
Sapling/Shrub Stratum (Plot size: 15')		Percent of Dominant Species that
1	<u> </u>	are OBL, FACW, or FAC:0%(A/B)
2	<u>%</u>	Prevalence Index Worksheet:
3	<u>%</u>	Total % Cover of: Multiply by:
4	<u>%</u>	Total % Cover of: Multiply by: OBL species % x 1 = 0
5	<u>%</u> = Total Cover	FACW species
Herb Stratum (Plot size: <u>5'</u>)		FAC species % x 3 = 0
· —	% Y FA	CU FACU species% x 4 =0
	% N FA	
3.	%	Column Totals:0% (A)0 (B)
4	%	Prevalence Index = B/A =
5	<u>%</u>	Hydrophytic Vegetation Indicators:
6	<u>%</u>	
7	<u>%</u>	<u> </u>
8	<u>%</u>	2 Dominance Test is >50%
10.	%	— ☐ 3 Prevalence Index is ≤3.0¹
Woody Vine Stratum (Plot size: 30')		4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
1	%	☐ Problematic Hydrophytic Vegetation¹ (explain)
2	%	Indicators of hydric soil and wetland hydrology
0	% = Total Cover	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum0 %		Hydrophytic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photograph C-20.		

SOIL Sampling Point: SP-545

Profile Desc	ription: (Describe	to the de	pth needed to	documer	nt the indic	ator or	confirm the	absence of indicators.)		
Depth	Matrix			Redox	r Features					
(inches)	Color (moist)	%	Color (mois	t) 9	<u> Тур</u>	oe¹	Loc ²	Texture	Remarks	
0-6	10YR 3/2	100						Clay Loam		
6-18	10YR 3/3	100						Clay Loam		
-	-									
-										
	-									
¹Type: C=Co	oncentration, D=De	pletion, RN	/=Reduced Mat	trix, CS=C	overed or C	Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil I	ndicators: (Applic	cable to al	I LRRs, unless	otherwis	se noted.)			Indicators for Problema	atic Hydric Soils ³ :	
☐ Histosol (A1)		☐ San	dy Gleyed	l Matrix (S4	.)		1 cm Muck (A9) (LRF	R I, J)	
☐ Histic Epi	pedon (A2)		☐ San	dy Redox	(S5)			☐ Coast Prairie Redox ((A16) (LRR F, G, H)	
☐ Black His	` '			ped Matr	, ,			Dark Surface (S7) (L		
Hydrogen					Mineral (F			High Plains Depressi	ons (F16)	
	Layers (A5) (LRR F				d Matrix (F2	2)		(LRR H outside of I	•	
	k (A9) (LRR F, G, F			leted Mat				Red Parent Material (
	Below Dark Surface k Surface (A12)	e (A11)			Surface (F6) < Surface (F			☐ Very Shallow Dark St	` '	
	icky Mineral (S1)				ssions (F8)	-7)		Other (Explain in Ren	, ,	
	ucky Peat or Peat (S2) (I RR (epressions	(F16)		³ Indicators of hydrophytic		
	ky Peat or Peat (S3				73 of LRR			wetland hydrology must		
		,						disturbed or problematic		
Restrictive I	ayer (if present):							Hydric Soil Present?		
Type:			Depth (inches):	:				☐ Yes ☐ No		
Remarks: No	hydric soil indicato	r is preser	IT.							
HADBOI OC										
HYDROLOG										
_	drology Indicators							0)	
	ators (minimum of	one require						Secondary Indicators (2 or more required)		
☐ Surface V	` '		☐ Salt Cru	, ,				☐ Surface Soil Cracks	` '	
☐ High Wat					rates (B13)			☐ Sparsely Vegetated		
☐ Saturation	` '				Odor (C1)			☐ Drainage Patterns (E	,	
☐ Water Ma	` '		•		er Table (Ca oheres on L		ooto (C2)	(where tilled)	res on Living Roots (C3)	
☐ Sediment	Deposits (B2)			re not till		Iving R	00ts (C3)	☐ Crayfish Burrows (Ca	8)	
	or Crust (B4)		-		uced Iron (C4)		☐ Saturation Visible on		
☐ Iron Depo			☐ Thin M		`	- /		☐ Geomorphic Position	• • • •	
	n Visible on Aerial I	magery (B						☐ FAC-Neutral Test (D		
_	ained Leaves (B9)		,					☐ Frost-Heave Hummo	ocks (D7) (LRR F)	
Field Observ	vations:		Dept	h	Describe R	ecorde	d Data (strea	m gauge, monitoring well,	aerial photos, previous	
		Yes	No (inche				if available:			
Surface Wate	er present?									
Water Table	present?									
Saturation Pr	esent?									
(includes cap	oillary fringe)									
Wetland Hyd	drology Present?		\boxtimes							
Remarks: Wo	etland hydrology inc	dicator D2	is met.							

Project/Site: Sweetland Wind Project	Ci	ity/County: _	Hand Coun	ty Sampling Date: 6/27/2018					
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-548							
Investigator(s): T. Beemer, W. Hirst		, Range:S19, T111N, R66W							
Landform (hillslope, terrace, etc.) depression	Loc	al relief (conc		·					
Subregion (LRR): Northern Great Plains Spring Wheat R		Lat: 44.412		Long: -98.810003 Datum: NAD83					
Soil Map Unit Name: Tetonka silt loam, 0 to 1 percent sle	togion		500	NWI Classification: PEM1C					
Are climate/hydrologic conditions on the site typical for this ti		? X Yes	П №	(If no, explain in Remarks.)					
, ,	,	_	_	,					
Vegetation Soil Hydrolo	ogy	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No					
Significantly Disturbed?									
, – – –									
SUMMARY OF FINDINGS – Attach site map showing	g samplin	ig point loca	ations, tra	insects, important features, etc.					
Yes No	Remar	rks: Wetland s	ample plot	located in PEM W-526.					
Hydrophytic Vegetation Present? □ Hydric Soil Present? □									
Hydric Soil Present? □ Wetland Hydrology Present? □									
Is the Sampled Area within a Wetland?									
is the dampled Area within a Wetland:									
VEGETATION – Use scientific names of plants									
Trace Observer (Plates See 200)	Absolute	Dominant	Indicator	Dominance Test Worksheet:					
Tree Stratum (Plot size: 30') 1.	% Cover <u>%</u>	Species?	Status	Number of Dominant Species that					
2.				are OBL, FACW, or FAC					
3.	%			(excluding FAC-):(A)					
4	<u>%</u>			Total Number of Dominant Species Across All Strata: (B)					
	0 %	= Total Cove	er						
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Percent of Dominant Species that are OBL, FACW, or FAC: (A/B)					
1.	<u>%</u>								
2	<u>%</u> %			Prevalence Index Worksheet:					
4.				Total % Cover of: Multiply by:					
5.	%			OBL species% x 1 =0					
	0 %	= Total Cove	er	FACW species% x 2 =0					
Herb Stratum (Plot size: <u>5'</u>)				FAC species% x 3 =0 FACU species % x 4 =0					
1. <u>Spartina pectinata</u>	<u>100 %</u>	<u> </u>	<u>FACW</u>	UPL species					
2	<u>%</u> %			Column Totals: 0 % (A) 0 (B)					
3 4	%			Prevalence Index = B/A =					
5				Hydrophytic Vegetation Indicators:					
6.	%								
7	<u></u> %			□ 1 Rapid Test for Hydrophytic Vegetation					
8	<u>%</u>			☐ 2 Dominance Test is >50%					
9	<u>%</u> %			☐ 3 Prevalence Index is ≤3.0¹					
10(Plut airs 200)	100 %	= Total Cove	er	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)					
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)					
2				¹ Indicators of hydric soil and wetland hydrology					
	0 %	= Total Cove	er	must be present, unless disturbed or problematic					
Bare Ground in Herb Stratum0 %				Hydrophytic Vegetation Present? ⊠ Yes ☐ No					
Remarks: Rapid test for hydrophytic vegetation is met. Photo	ograph C-2	1.							

SOIL Sampling Point: SP-548

Profile Desc	ription: (Describe	to the de	pth ne	eded to docur	nent the	e indicator o	or confirm the	absence of indicators.)	
Depth	Matrix			Re	dox Fea	atures			
(inches)	Color (moist)	%	Co	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 3/2	100						Silt Loam	
4-18	10YR 3/2	95	1	0YR 4/6	5	C	M	Silt Loam	
		- ——							
-		- ——							
-									
-	-								
-	· -								
¹Type: C=C	oncentration, D=De	pletion, RN	∕l=Red	uced Matrix, CS	S=Cover	ed or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil	Indicators: (Appli	cable to a	II LRR	s, unless other	rwise no	oted.)		Indicators for Problem	atic Hydric Soils ³ :
☐ Histosol (A1)			☐ Sandy Gle	yed Mat	trix (S4)		1 cm Muck (A9) (LRF	R I, J)
☐ Histic Epi	pedon (A2)			☐ Sandy Red	-			☐ Coast Prairie Redox	(A16) (LRR F, G, H)
☐ Black His				☐ Stripped M				☐ Dark Surface (S7) (L	
☐ Hydroger	Sulfide (A4)			☐ Loamy Mu	cky Min	eral (F1)		☐ High Plains Depressi	ons (F16)
☐ Stratified	Layers (A5) (LRR F	=)		☐ Loamy Gle	eyed Ma	trix (F2)		(LRR H outside of I	MLRA 72 & 73)
1 cm Mud	k (A9) (LRR F, G, I	H)		☐ Depleted N	Matrix (F	- 3)		☐ Reduced Vertic (F18)	
☐ Depleted	Below Dark Surface	e (A11)		□ Redox Dar	rk Surfa	ce (F6)		Red Parent Material	` '
☐ Thick Dar	k Surface (A12)			☐ Depleted [Dark Sui	rface (F7)		Very Shallow Dark S	, ,
☐ Sandy Mi	ucky Mineral (S1)			☐ Redox Dep	pression	ns (F8)		Other (Explain in Rer	narks)
	ucky Peat or Peat (☐ High Plain: (MLRA 72		` ,		3Indicators of hydrophytic	c vegetation and
5 cm Muc	ky Peat or Peat (S3	3) (LRR F)		wetland hydrology must be present, unless disturbed or problematic					
Restrictive	_ayer (if present):							Hydric Soil Present?	
Type:		_	Depth	(inches):				⊠ Yes □ No	
	dric soil indicator F	0:							
HYDROLOG	·v								
	drology Indicators								
_	cators (minimum of		od: cha	ack all that anni	v)			Secondary Indicators (2	or more required)
_	•	one require		• • •				_	
☐ Surface V	` '		_	Salt Crust (B1	,	(D.40)		☐ Surface Soil Cracks	` '
	er Table (A2)			Aquatic Inver				☐ Sparsely Vegetated	
☐ Saturation☐ Water Ma]Hydrogen Sul]Dry-Season Ⅴ				☐ Drainage Patterns (E	res on Living Roots (C3)
	Deposits (B2)			Oxidized Rhiz		. ,	Poots (C3)	(where tilled)	les on Living Roots (C3)
☐ Drift Depo			_	(where not		C3 On Living	110013 (03)	☐ Crayfish Burrows (C	8)
	or Crust (B4)			Presence of F		d Iron (C4)		☐ Saturation Visible on	
☐ Iron Depo				Thin Muck Su	ırface (C	C7)		☐ Geomorphic Position	n (D2)
-	n Visible on Aerial I	magery (B	7) [Other (Explain	n in Ren	narks)			95)
	ained Leaves (B9)	5 , (,					☐ Frost-Heave Hummo	ocks (D7) (LRR F)
Field Obser	vations:			Depth	Desi	crihe Record	ed Data (strea	m gauge, monitoring well,	aerial nhotos, previous
Ticia Obsci	vations.	Yes	No	(inches)			, if available:	in gaage, mormoning wen,	acriai priotos, previous
Surface Wat	er present?		\boxtimes						
Water Table	present?		\boxtimes						
Saturation P	•		\boxtimes						
(includes car	oillary fringe)	_							
	drology Present?	\boxtimes							
	etland hydrology inc		and D	5 are present	1				
	.,,								
1									

Project/Site: Sweetland Wind Project	City/County: _F	City/County: Hand County Sampling Date: 6/2				
Applicant/Owner: Sweetland Wind Farm, LLC			tate: SD			
Investigator(s): T. Beemer, W. Hirst	Section,	Section, Township, Range: S19, T111N, R66W				
Landform (hillslope, terrace, etc.) toeslope	Local relief (conca			Slope (%): 3 %		
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44,4132	227	Long: -98.80	D-1		
Soil Map Unit Name: Tetonka silt loam, 0 to 1 percent slopes	<u> </u>		NWI Class			
Are climate/hydrologic conditions on the site typical for this time of	year? X Yes	□ No	(If no, explain in			
Vegetation Soil Hydrology	Are "Nor	mal Circum	stances" present?	? ⊠ Yes □ No		
Significantly Disturbed? Naturally Problematic?	(If neede	d, explain a	any answers in Re	emarks.)		
SUMMARY OF FINDINGS – Attach site map showing san	nnling noint loca	tione tra	neacte import	ant features etc		
Yes No R Hydrophytic Vegetation Present?	Remarks: Upland sar	mple plot a	djacent to PEM W	<i>1</i> -526.		
Hydric Soil Present?						
Wetland Hydrology Present?						
Is the Sampled Area within a Wetland?						
·						
VEGETATION – Use scientific names of plants		1 P 4		····		
Abso Tree Stratum (Plot size: 30') % Co		Indicator Status	Dominance Tes			
1	<u>%</u>		Number of Domi	inant Species that		
2	<u></u>		(excluding FAC-			
3	<u> </u>		Total Number of	·		
4	<u>%</u>		Species Across			
	<u>%</u> = Total Cove	r	Percent of Domi	inant Species that		
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1.	<u>%</u>		are OBL, FACW			
2.	<u>%</u>					
3.	%		Prevalence Ind	ex Worksheet:		
4	<u></u>		Total % Co	over of: Multiply by:		
5	<u></u>		OBL species	% x 1 =0		
	<u>%</u> = Total Cove	r	FACW species FAC species	${}$ $\begin{array}{ccc} & \times 2 = & 0 \\ & \times 3 = & 0 \end{array}$		
Herb Stratum (Plot size: <u>5'</u>)	0.0/ V	FACIL	FACU species	${}$ % x 4 = 0		
1. <u>Poa pratensis</u> 100 2	0 % Y 	FACU	UPL species	% x 5 = 0		
3	<u></u>		Column Totals:	0% (A)0 (B)		
4.	<u>%</u>		Prevalence Inde	ex = B/A =		
5	%		Hydrophytic Ve	egetation Indicators:		
6	<u></u>		, , ,			
7	<u>%</u>			t for Hydrophytic Vegetation		
8	<u>%</u> <u>%</u>		2 Dominance			
9	%		3 Prevalence			
	0 % = Total Cove	r	4 Morphologi supporting data in	ical Adaptations ¹ (Provide n Remarks or on a separate sheet)		
1	<u>%</u>		☐ Problematic I	Hydrophytic Vegetation ¹ (explain)		
2	<u></u>			ydric soil and wetland hydrology		
0	<u>%</u> = Total Cove	r	must be present	t, unless disturbed or problematic		
Bare Ground in Herb Stratum0 %			Hydrophytic Veg	getation Present? ☐ Yes ☒ No		
Remarks: Hydrophytic vegetation is not present. Photograph C-22	2.					

SOIL Sampling Point: SP-549

Profile Description	n: (Describe	to the d	epth r	eeded to docun	nent the	indicator o	or confirm the	absence of indicators.)			
Depth	Matrix			Re	dox Fea	itures					
(inches) Co	olor (moist)	%		color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-6 1	0YR 3/2	100						Silt Loam			
6-18 1	0YR 3/3	100						Silt Loam			
									_		
¹Type: C=Concenti	ration D=Den	letion R	M=Re	duced Matrix CS	=Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining M=Matrix		
Hydric Soil Indicat								Indicators for Problema			
☐ Histosol (A1)				☐ Sandy Gle		-		☐ 1 cm Muck (A9) (LRF	•		
☐ Histic Epipedon	(A2)			☐ Sandy Red		. ,		☐ Coast Prairie Redox (
☐ Black Histic (A3)				☐ Stripped M				☐ Dark Surface (S7) (LI	. , ,		
☐ Hydrogen Sulfid	•			☐ Loamy Mu	•	•		☐ High Plains Depression			
☐ Stratified Layers)		☐ Loamy Gle	-			(LRR H outside of I	MLRA 72 & 73)		
1 cm Muck (A9)				☐ Depleted M	-			☐ Reduced Vertic (F18)			
☐ Depleted Below				☐ Redox Dar				Red Parent Material ('		
☐ Thick Dark Surfa	ace (A12)			☐ Depleted D	ark Sur	face (F7)		☐ Very Shallow Dark Su	, ,		
☐ Sandy Mucky M	, ,			☐ Redox Dep	ression	s (F8)		Other (Explain in Ren	narks)		
2.5 cm Mucky P								³ Indicators of hydrophytic	c vegetation and		
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H)								wetland hydrology must disturbed or problematic	be present, unless		
Restrictive Layer (if present):							Hydric Soil Present?			
Туре:		_	Dept	h (inches):				☐ Yes ⊠ No			
Domorkov No budrio	a a ail in dia atar	io proce	nt								
Remarks: No hydric	Soli indicator	is prese	ent.								
HADBOLOCA											
HYDROLOGY	v Indicators.										
Wetland Hydrolog	-		ام بام	and all that apply	۸			Casandan Indicators (2	or more required)		
		ne requi						Secondary Indicators (2 or more required) —			
Surface Water (,			Salt Crust (B1	,	(D.40)		Surface Soil Cracks (B6)			
High Water Tabl	le (A2)			Aquatic Invert		. ,		☐ Sparsely Vegetated Concave Surface (B8)			
Saturation (A3)	4)			☐ Hydrogen Sul				☐ Drainage Patterns (E☐ Oxidized Rhizospher	,		
☐ Water Marks (B ² ☐ Sediment Depos	,			☐ Dry-Season W ☐ Oxidized Rhiz		` ,	Poots (C3)	(where tilled)	es on Living Roots (C3)		
☐ Drift Deposits (B				(where not		55 OII LIVILIG I	Roots (C3)	☐ Crayfish Burrows (C8	3)		
☐ Algal Mat or Cru				☐ Presence of R		Iron (C4)		☐ Saturation Visible on			
☐ Iron Deposits (B				 ☐ Thin Muck Su	rface (C	(7)		☐ Geomorphic Position	0 , , ,		
☐ Inundation Visib	•	nagery (I		 ☐ Other (Explair				☐ FAC-Neutral Test (D	` '		
☐ Water-Stained L		-3-) (,					☐ Frost-Heave Hummo	ocks (D7) (LRR F)		
Field Observations	g•			Depth	Desc	rihe Record	ed Data (strear	m gauge, monitoring well,	aerial nhotos, previous		
Tield Observations	J.	Yes	No	(inches)			, if available:	in gauge, monitoring wen, i	acriai priotos, previous		
Surface Water pres	ent?		\boxtimes								
Water Table presen			\boxtimes								
Saturation Present?											
			<u>~</u> 3								
(includes capillary f	1111907										
(includes capillary for Wetland Hydrolog			\boxtimes								
Wetland Hydrolog	y Present?										
	y Present?										

Project/Site: Sweetland Wind Project	City/County: Ha	and Count	Sampling Date: 6/27/2018			
Applicant/Owner: Sweetland Wind Farm, LLC			tate: SD			
Investigator(s): T. Beemer, W. Hirst	Section,	Section, Township, Range: S19, T111N, R66W				
Landform (hillslope, terrace, etc.) toeslope	Local relief (concav			Slope (%): 5 %		
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.4079;		Long: -98.81	<u> </u>		
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 percent s		00	NWI Class	11/1500		
Are climate/hydrologic conditions on the site typical for this time of y		□No	(If no, explain in	1 LIVITO		
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		_	(3, 3 3	,		
Vegetation Soil Hydrology	Are "Norm	nal Circum	stances" present?	? ⊠ Yes ☐ No		
Significantly Disturbed?	(If needed	l, explain a	any answers in Re	emarks.)		
Naturally Problematic?						
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locat	ions, tra	nsects, importa	ant features, etc.		
	emarks: Upland sam	nple plot.				
Hydrophytic Vegetation Present?						
Hydric Soil Present?						
Wetland Hydrology Present?						
Is the Sampled Area within a Wetland?						
VEGETATION – Use scientific names of plants						
Absolu		Indicator	Dominance Tes	st Worksheet:		
Tree Stratum (Plot size: 30') % Cov	'	Status	Number of Domi	inant Species that		
1	<u>%</u> %		are OBL, FACW, or FAC			
3	<u>%</u>		(excluding FAC-	1_(A)		
	%	-	Total Number of			
		,	Species Across	·· ·		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				inant Species that		
	<u></u>		are OBL, FACW	/, or FAC: <u>50%</u> (A/B)		
	<u>%</u>		Prevalence Inde	ex Worksheet:		
	<u>%</u>					
	<u>%</u>		Total % Co	over of: Multiply by: % x 1 = 0		
5	% = Total Cover		FACW species			
Herb Stratum (Plot size: 5')	<u>//</u> = Total Cover		FAC species	% x 3 = 0		
1. Poa pratensis 60	% Y	FACU	FACU species	% x 4 = 0		
2. Alopecurus pratensis 20		FACW	UPL species	x = 0 $x = 0$		
	%		Column Totals:	0% (A)0(B)		
4	<u>%</u>		Prevalence Inde	ex = B/A =		
5	<u>%</u>		Hydrophytic Ve	egetation Indicators:		
6	<u>%</u>		□ 1 Panid Toot	for Hydrophytic Vegetation		
7	<u>%</u>			, , , ,		
	<u>%</u> <u>%</u>		2 Dominance			
	<u>%</u>		☐ 3 Prevalence			
80_			4 Morphologi supporting data ir	ical Adaptations ¹ (Provide n Remarks or on a separate sheet)		
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%		☐ Problematic I	Hydrophytic Vegetation ¹ (explain)		
	%		1 Indicators of hy	ydric soil and wetland hydrology		
0	% = Total Cover			t, unless disturbed or problematic		
Bare Ground in Herb Stratum 20 %			Hydrophytic Veg	getation Present? ☐ Yes 🗵 No		
Remarks: Hydrophytic vegetation is not present. Photograph C-23.						

SOIL Sampling Point: SP-551

Profile Desc	ription: (Describe	to the de	epth n	eeded to docum	ent the	indicator c	or confirm the	absence of indicators.)			
Depth	Matrix			Red	dox Fea	itures					
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-6	10YR 3/2	100						Silt Loam			
6-18	10YR 3/3	100						Silt Loam			
	_										
¹Type: C=C	oncentration, D=De	nletion R	M-Ra	duced Matrix CS	-Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining M-Matrix		
	Indicators: (Applie			<u> </u>			d Carla Crairis	Indicators for Problems			
l <u> </u>						-		_	•		
☐ Histosol (☐ Histic Epi	,			☐ Sandy Gley ☐ Sandy Red				☐ 1 cm Muck (A9) (LRF☐ Coast Prairie Redox (
☐ Black His				☐ Stripped Ma				☐ Dark Surface (S7) (L			
	Sulfide (A4)			Loamy Muc	,	,		☐ High Plains Depressi	•		
	Layers (A5) (LRR F	=)		☐ Loamy Gley				(LRR H outside of I			
	k (A9) (LRR F, G, I			☐ Depleted M		, ,		☐ Reduced Vertic (F18)	•		
	Below Dark Surface			☐ Redox Dark				Red Parent Material (
	k Surface (A12)	3 (7111)		☐ Depleted D		, ,		☐ Very Shallow Dark St	,		
	ucky Mineral (S1)			☐ Redox Dep		, ,		Other (Explain in Ren	narks)		
	ucky Peat or Peat (S2) (LRR	G . H)	·		. ,		³ Indicators of hydrophytic			
	ky Peat or Peat (S3			(MLRA 72		` ,		wetland hydrology must			
	,		,			ŕ		disturbed or problematic			
Restrictive I	_ayer (if present):							Hydric Soil Present?			
Type: Depth (inches):								☐ Yes ⊠ No			
1 7 50.			Ворс								
Remarks: No	hydric soil indicate	r is prese	nt.								
HYDROLOG	Υ										
Wetland Hy	drology Indicators	:									
Primary India	ators (minimum of	one requi	red; ch	neck all that apply	')			Secondary Indicators (2	or more required)		
☐ Surface V	•			☐ Salt Crust (B1	_			_			
_	er Table (A2)			Aquatic Inverte	,	(B13)		☐ Surface Soil Cracks (B6)			
☐ Saturation				☐ Hydrogen Sulf				☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10)			
☐ Water Ma				☐ Dry-Season W				•	res on Living Roots (C3)		
_	Deposits (B2)			Oxidized Rhize		, ,	Roots (C3)	(where tilled)			
☐ Drift Depo				(where not			()	☐ Crayfish Burrows (Ca	3)		
	or Crust (B4)			☐ Presence of R	educed	Iron (C4)		☐ Saturation Visible on	Aerial Imagery (C9)		
☐ Iron Depo				☐ Thin Muck Sur	rface (C	(7)		☐ Geomorphic Position	n (D2)		
	n Visible on Aerial I	magery (E	37)	Other (Explain	in Rem	narks)		☐ FAC-Neutral Test (D	5)		
☐ Water-Sta	ained Leaves (B9)		,					☐ Frost-Heave Hummo	ocks (D7) (LRR F)		
Field Obser	vations:			Depth	Desc	cribe Record	ed Data (strear	n gauge, monitoring well,	aerial photos, previous		
11014 02001	valiono.	Yes	No	(inches)			, if available:	ir gaago, mormoning won,	aonai priotoo, provioao		
Surface Wat	er present?		\boxtimes			,					
Water Table	•		\boxtimes								
Saturation P	•										
(includes car				·							
	drology Present?		\boxtimes								
	hydrology indicato										
inclinates. INC	mydrology maicato	is ale pie	o ∪ III.								
Ĩ											

Project/Site: Sweetland Wind Project	Ci	ty/County: _	Hand Coun	ty Sampling Date: 6/27/2018		
Applicant/Owner: Sweetland Wind Farm, LLC				tate: SD Sampling Point: SP-552		
Investigator(s): T. Beemer, W. Hirst		, Range:S19, T111N, R66W				
Landform (hillslope, terrace, etc.) depression	Loc	al relief (conc		· · · · · · · · · · · · · · · · · · ·		
Subregion (LRR): Northern Great Plains Spring Wheat Re	egion	Lat: 44.406	381	Long: _98.806473		
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 percentage of the second seco	ogion _		.001	NWI Classification: NA		
Are climate/hydrologic conditions on the site typical for this tim			□ No	(If no, explain in Remarks.)		
	, , ,			(-, -, -, -, -, -, -, -, -, -, -, -, -,		
Vegetation Soil Hydrolog	gy	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No		
Significantly Disturbed?		(If neede	ed, explain	any answers in Remarks.)		
Naturally Problematic?						
SUMMARY OF FINDINGS – Attach site map showing	samplin	g point loca	ations, tra	insects, important features, etc.		
Yes No	Remar	ks: Upland sa	ample plot.			
Hydrophytic Vegetation Present? □ ⊠						
Hydric Soil Present?						
Wetland Hydrology Present?						
Is the Sampled Area within a Wetland?						
VEGETATION – Use scientific names of plants						
•	Absolute	Dominant	Indicator	Dominance Test Worksheet:		
	% Cover	Species?	Status			
1	<u>%</u>			Number of Dominant Species that are OBL, FACW, or FAC		
2	<u>%</u>			(excluding FAC-):1 (A)		
3	%			Total Number of Dominant		
4	%			Species Across All Strata: 2 (B)		
Conline/Chruh Ctrotum (Diet size: 45')	0 %	= Total Cove	er	Percent of Dominant Species that		
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1	%			are OBL, FACW, or FAC: 50% (A/B)		
2.						
3.	%			Prevalence Index Worksheet:		
4	%			Total % Cover of: Multiply by:		
5	<u>%</u>			OBL species% x 1 =0		
	0 %	= Total Cove	er	FACW species % x 2 = 0		
Herb Stratum (Plot size: <u>5'</u>)				FAC species% x 3 =0 FACU species		
1. Poa pratensis	60 %	<u>Y</u>	FACU	UPL species		
2. Alopecurus pratensis 3. Salvia sp.*	20 % 10 %	<u>Y</u> N	FACW	Column Totals: 0 % (A) 0 (B)		
3. <u>Salvia sp.*</u> 4	10 % %	<u>IN</u>		Prevalence Index = B/A =		
5	// 0					
6	%			Hydrophytic Vegetation Indicators:		
7	<u>%</u>			☐ 1 Rapid Test for Hydrophytic Vegetation		
8	<u>%</u>			☐ 2 Dominance Test is >50%		
9	<u>%</u>			☐ 3 Prevalence Index is ≤3.01		
10	90 %	= Total Cove	 er	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)		
Woody Vine Stratum (Plot size: 30') 1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)		
2	// 0			¹ Indicators of hydric soil and wetland hydrology		
	0 %	= Total Cove	er	must be present, unless disturbed or problematic		
Bare Ground in Herb Stratum 10 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No		
Remarks: Hydrophytic vegetation is not present. * Salvia spec	cies could	not be identifi	ed past ger	nus, therefore, no indicator status is		
listed. Photograph C-24.				,		

SOIL Sampling Point: SP-552

	ie aeptn r	needed to docum	ent the indi	cator or cor	nfirm the	absence of indicators.)	
Depth Matrix		Red	dox Features	;			
(inches) Color (moist)	% C	Color (moist)	% Ty	ype¹ Lo	oc²	Texture	Remarks
0-6 10YR 3/2 1	00					Silt Loam	
6-1810YR 3/31	00					Silt Loam	
							<u> </u>
Type: C=Concentration, D=Depletion	n RM=Re	duced Matrix CS	=Covered or	Coated San	d Grains	² Location: PL=Pore	Lining M=Matrix
Hydric Soil Indicators: (Applicable					a Graine	Indicators for Problem	
☐ Histosol (A1)		∑ Sandy Gley				1 cm Muck (A9) (LRF	•
☐ Histic Epipedon (A2)		☐ Sandy Red		·¬')		☐ Coast Prairie Redox	
☐ Black Histic (A3)		☐ Stripped M				☐ Dark Surface (S7) (L	
☐ Hydrogen Sulfide (A4)		☐ Loamy Muc	` '	F1)		☐ High Plains Depressi	•
☐ Stratified Layers (A5) (LRR F)		Loamy Gle				(LRR H outside of I	
☐ 1 cm Muck (A9) (LRR F, G, H)		☐ Depleted M	•	-/		☐ Reduced Vertic (F18))
☐ Depleted Below Dark Surface (A1	1)	☐ Redox Darl		6)		☐ Red Parent Material	(TF2)
☐ Thick Dark Surface (A12)	,	☐ Depleted D	•	•		☐ Very Shallow Dark St	urface (TF 12)
Sandy Mucky Mineral (S1)		Redox Dep		. ,		Other (Explain in Rer	marks)
2.5 cm Mucky Peat or Peat (S2) (L	RR G, H)	☐ High Plains	Depression	s (F16)		³ Indicators of hydrophytic	c vegetation and
☐ 5 cm Mucky Peat or Peat (S3) (LR	RR F)	(MLRA 72	& 73 of LRF	R H)		wetland hydrology must disturbed or problematic	be present, unless
Restrictive Layer (if present):						Hydric Soil Present?	
Туре:	Dept	th (inches):				☐ Yes ☐ No	
B							
i Nemana. No munic son mucator is b							
Remarks: No hydric soil indicator is p	resent.						
iveniais. No flydic soli indicator is p	resent.						
	- Cochi.						
HYDROLOGY	resent.						
HYDROLOGY Wetland Hydrology Indicators:		heck all that apply	·)			Secondary Indicators (2	or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re	equired; cl		_			Secondary Indicators (2	
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re	equired; cl	☐ Salt Crust (B1	1)	<u> </u>		☐ Surface Soil Cracks	(B6)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recognition of the primary language) Surface Water (A1) High Water Table (A2)	equired; cl	☐ Salt Crust (B1	– 1) ebrates (B13			☐ Surface Soil Cracks ☐ Sparsely Vegetated	(B6) Concave Surface (B8)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recommend) Surface Water (A1) High Water Table (A2) Saturation (A3)	equired; cl	☐ Salt Crust (B1 ☐ Aquatic Inverte ☐ Hydrogen Sulf	– 1) ebrates (B13 ïide Odor (C1	1)		☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (E	(B6) Concave Surface (B8) 310)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recognition of the primary Indicators (minimum of one recognition of the primary Indicators (Minimum of one recognition of the primary Indicators (Minimum of the primary Indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	equired; cl	Salt Crust (B1 Aquatic Inverte Hydrogen Sulf	- 1) ebrates (B13 fide Odor (C1 /ater Table (0	(1) (C2)	s (C3)	☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (E	(B6) Concave Surface (B8)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recognition of the primary Indicators (minimum of one recognition of the primary Indicators (Minimum of one recognition of the primary Indicators (Maximum of the primary Indicators (Minimum of the primary Indicators (Mi	equired; cl	☐ Salt Crust (B1 ☐ Aquatic Inverte ☐ Hydrogen Sulf	- 1) ebrates (B13 fide Odor (C1 /ater Table (0 ospheres on	(1) (C2)	s (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher	(B6) Concave Surface (B8) B10) res on Living Roots (C3)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recognition of the primary Indicators (minimum of one recognition of the primary Indicators (minimum of one recognition of the primary Indicators (Male Indicators (Mal	equired; cl	Salt Crust (B1 Aquatic Inverte Hydrogen Sult Dry-Season W Oxidized Rhize	1) ebrates (B13 ide Odor (C1 /ater Table (0 ospheres on tilled)	1) C2) Living Roots	s (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled)	(B6) Concave Surface (B8) B10) res on Living Roots (C3)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recovered by the control of the co	equired; cl	□ Salt Crust (B1 □ Aquatic Inverte □ Hydrogen Sulf □ Dry-Season W □ Oxidized Rhize (where not	- 1) ebrates (B13 fide Odor (C1 /ater Table (Cospheres on tilled) educed Iron	1) C2) Living Roots	s (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ca	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recognition of the primary Indicators (minimum of one recognition of the primary Indicators (minimum of one recognition of the primary Indicators (Male Indicators (Mal	equired; cl	Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Dry-Season W Oxidized Rhize (where not Presence of R	-1) ebrates (B13 ride Odor (C1 /ater Table (Cospheres on tilled) educed Iron rface (C7)	C2) Living Roots (C4)	; (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ci Saturation Visible on	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recovered by the control of the co	equired; cl	Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Dry-Season W Oxidized Rhiz (where not Presence of R Thin Muck Su	-1) ebrates (B13 ride Odor (C1 /ater Table (Cospheres on tilled) educed Iron rface (C7)	C2) Living Roots (C4)	s (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ci Saturation Visible on Geomorphic Position	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one research of the content of the con	equired; cl	Salt Crust (B1 Aquatic Inverted Hydrogen Sulfed Dry-Season Well Oxidized Rhized (where noted Presence of Research Thin Muck Sulfed Depth	1) ebrates (B13 fide Odor (C1 /ater Table (Cospheres on tilled) educed Iron rface (C7) in Remarks	C2) Living Roots (C4) Recorded Da	ata (strear	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ci Saturation Visible on Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reconstruction) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Field Observations:	equired; cl	Salt Crust (B1 Aquatic Inverted Hydrogen Sulted Dry-Season Well Oxidized Rhize (where not Presence of Record Thin Muck Sulted Description of their (Explain	1) ebrates (B13 fide Odor (C1 /ater Table (Cospheres on tilled) educed Iron rface (C7) in Remarks	C2) Living Roots (C4)	ata (strear	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (C: □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one research of the content of the con	equired; cl	Salt Crust (B1 Aquatic Inverted Hydrogen Sulfed Dry-Season Well Oxidized Rhized (where noted Presence of Research Thin Muck Sulfed Depth	1) ebrates (B13 fide Odor (C1 /ater Table (Cospheres on tilled) educed Iron rface (C7) in Remarks	C2) Living Roots (C4) Recorded Da	ata (strear	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (C: □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reconstruction) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Field Observations:	equired; cl	Salt Crust (B1 Aquatic Inverted Hydrogen Sulfed Dry-Season Well Oxidized Rhized (where noted Presence of Research Thin Muck Sulfed Depth	1) ebrates (B13 fide Odor (C1 /ater Table (Cospheres on tilled) educed Iron rface (C7) in Remarks	C2) Living Roots (C4) Recorded Da	ata (strear	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (C: □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reconstruction) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Field Observations: Yesurface Water present?	equired; cl	Salt Crust (B1 Aquatic Inverted Hydrogen Sulfed Dry-Season Well Oxidized Rhized (where noted Presence of Research Thin Muck Sulfed Depth	1) ebrates (B13 fide Odor (C1 /ater Table (Cospheres on tilled) educed Iron rface (C7) in Remarks	C2) Living Roots (C4) Recorded Da	ata (strear	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (C: □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reconstruction of the primary Indicators (minimum of one reconstruction of the primary Indicators (minimum of one reconstruction of the primary Indicators (Max) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Field Observations: Yesurface Water present?	equired; cl	Salt Crust (B1 Aquatic Inverted Hydrogen Sulfed Dry-Season Well Oxidized Rhized (where noted Presence of Research Thin Muck Sulfed Depth	1) ebrates (B13 fide Odor (C1 /ater Table (Cospheres on tilled) educed Iron rface (C7) in Remarks	C2) Living Roots (C4) Recorded Da	ata (strear	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (C: □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one research of the primary Indicators (Max) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Field Observations: Yesurface Water present? Water Table present?	equired; cl	Salt Crust (B1 Aquatic Inverted Hydrogen Sulfed Dry-Season Well Oxidized Rhized (where noted Presence of Research Thin Muck Sulfed Depth	1) ebrates (B13 fide Odor (C1 /ater Table (Cospheres on tilled) educed Iron rface (C7) in Remarks	C2) Living Roots (C4) Recorded Da	ata (strear	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (C: □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one research of the primary Indicators (Max) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image (Mater-Stained Leaves (B9)) Field Observations: Yes Surface Water present? Water Table present? Saturation Present? (includes capillary fringe)	equired; cl	Salt Crust (B1 Aquatic Inverted Hydrogen Sulfed Hydrogen Sulfed Presence of Research Thin Muck Sulfed Hydrogen Sulfed Hydrogen Hy	1) ebrates (B13 fide Odor (C1 /ater Table (Cospheres on tilled) educed Iron rface (C7) in Remarks	C2) Living Roots (C4) Recorded Da	ata (strear	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (C: □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recovered by the primary Indicators (minimum of one recovered by the primary Indicators (minimum of one recovered by the primary Indicators (minimum of one recovered by Indicators (Maximum of the primary Indicators (Max	equired; cl	Salt Crust (B1 Aquatic Inverted Hydrogen Sulfed Hydrogen Sulfed Presence of Research Thin Muck Sulfed Hydrogen Sulfed Hydrogen Hy	1) ebrates (B13 fide Odor (C1 /ater Table (Cospheres on tilled) educed Iron rface (C7) in Remarks	C2) Living Roots (C4) Recorded Da	ata (strear	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (C: □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)

Project/Site: Sweetland Wind Project		City/County:	Hand Coun	ity	Sampling Date: 6/27/2018				
Applicant/Owner: Sweetland Wind Farm, LLC	,	-		State: SD Sampling Point: SP-570					
Investigator(s): T. Beemer, W. Hirst		Sectio		, Range: S18,	T111N, R66W				
Landform (hillslope, terrace, etc.) roadside ditch	L	ocal relief (con			01 (01)				
Subregion (LRR): Northern Great Plains Spring Wheat Re	egion	Lat: 44.41	3980	Long: -98.8	04757 Datum: NAD83				
Soil Map Unit Name: Glenham loam, rolling				NWI Cla	ssification: PEM1C				
Are climate/hydrologic conditions on the site typical for this tim	ne of yea	ar? 🛛 Yes	☐ No	(If no, explain	in Remarks.)				
V 0.11		A "A1		. "	10 MY DN				
Vegetation Soil Hydrolog Significantly Disturbed? ☐ ☐ ☐	gy			nstances" presen					
Naturally Problematic?		(If need	ded, explain	any answers in R	temarks.)				
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.									
Yes No				located in PEM V					
Hydrophytic Vegetation Present? □	T C II	iaino. Wollaria	oumpie piet	TOOLICG III I EIVI V					
Hydric Soil Present? □									
Wetland Hydrology Present?									
Is the Sampled Area within a Wetland?									
VEGETATION – Use scientific names of plants									
A	Absolute	e Dominant	Indicator	Dominance Te	est Worksheet:				
(% Cove		Status	Number of Don	minant Species that				
1	%			are OBL, FACW, or FAC					
2		-		(excluding FAC	C-):(A)				
4.	%			Total Number of					
	0 %		/er	Species Across	···				
Sapling/Shrub Stratum (Plot size: 15')				Percent of Don are OBL, FACV	minant Species that W, or FAC: (A/B)				
1	%			4.0 052, 17.0	(702)				
2	<u>%</u>			Prevalence Inc	dex Worksheet:				
3. 4.	%			Total % C	Cover of: Multiply by:				
5.	%			OBL species	% x 1 =0				
<u>-</u>	0 %	= Total Cov	/er	FACW species					
Herb Stratum (Plot size: <u>5'</u>)				FAC species FACU species	% x 3 = 0 % x 4 = 0				
1. <u>Typha latifolia</u>	100 %		OBL	UPL species	${}$ % x 5 = 0				
2	<u>%</u>			Column Totals	s: <u>0</u> % (A) <u>0</u> (B)				
4.	%			Prevalence Inc	dex = B/A =				
5	%			Hydrophytic V	/egetation Indicators:				
6	%			, , ,					
7	%			- '	st for Hydrophytic Vegetation				
8	<u>%</u>				ce Test is >50%				
10.	%				ce Index is ≤3.0 ¹				
	100 %		/er	☐ 4 Morpholog supporting data	gical Adaptations ¹ (Provide in Remarks or on a separate sheet)				
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%			☐ Problemation	C Hydrophytic Vegetation ¹ (explain)				
2	%				hydric soil and wetland hydrology				
-	0 %	= Total Cov	/er	must be preser	nt, unless disturbed or problematic				
Bare Ground in Herb Stratum0 %				Hydrophytic Ve	egetation Present? X Yes No				
Remarks: Rapid test for hydrophytic vegetation is met. Photog	graph C	-25.		1					

SOIL Sampling Point: SP-570

Profile Desc	ription: (Describe	to the depti	n needed to docun	nent the	indicator o	r confirm the	absence of indicators.)	
Depth	Matrix		Re	dox Fea	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 5/1	80	10YR 5/6	20	С	М	Clay Loam	
10-20	10YR 6/1	80	10YR 5/6	20	C	M	Clay Loam	
-			· · ·					
-								 ,
	•							
¹Type: C=Co	oncentration, D=Dep	oletion, RM=I	Reduced Matrix, CS	=Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil	Indicators: (Applic	able to all L	RRs, unless other	wise no	oted.)		Indicators for Problem	atic Hydric Soils³:
☐ Histosol (A1)		☐ Sandy Gle	yed Mat	trix (S4)		1 cm Muck (A9) (LRF	R I, J)
☐ Histic Epi	pedon (A2)		☐ Sandy Red	lox (S5)			☐ Coast Prairie Redox	(A16) (LRR F, G, H)
☐ Black His	` '		☐ Stripped M	,	•		☐ Dark Surface (S7) (L	
☐ Hydrogen			☐ Loamy Mu	-			☐ High Plains Depressi	ons (F16)
	Layers (A5) (LRR F		☐ Loamy Gle				(LRR H outside of I	•
	k (A9) (LRR F, G, F		□ Depleted N □	,	•		Reduced Vertic (F18)	
	Below Dark Surface	e (A11)	☐ Redox Dar		` '		Red Parent Material	
	k Surface (A12)		☐ Depleted □		, ,		☐ Very Shallow Dark St☐ Other (Explain in Rer	, ,
	ucky Mineral (S1)	CO) /I DD C	Redox Dep		` '			
	ucky Peat or Peat (\$ ky Peat or Peat (\$3		H) High Plains (MLRA 72				³ Indicators of hydrophytic wetland hydrology must	
	ky Feat Of Feat (53) (LKK F)	(MEICA 72	u 150	LIKIKIII		disturbed or problematic	
Restrictive I	_ayer (if present):						Hydric Soil Present?	
Type:		De	epth (inches):				⊠ Yes □ No	
Remarks: Hy	dric soil indicator F	3 is met.						
HYDROLOG	i Y							
Wetland Hyd	drology Indicators	:						
Primary India	cators (minimum of o	one required;	check all that apply	<u>/)</u>			Secondary Indicators (2	or more required)
Surface V	Vater (A1)		☐ Salt Crust (B1	1)			☐ Surface Soil Cracks	(B6)
	er Table (A2)		☐ Aquatic Invert	ebrates	(B13)		☐ Sparsely Vegetated	Concave Surface (B8)
	n (A3)		☐ Hydrogen Sul	fide Od	or (C1)		☐ Drainage Patterns (E	310)
☐ Water Ma	` '		☐ Dry-Season V		, ,			res on Living Roots (C3)
	Deposits (B2)		Oxidized Rhiz		es on Living F	Roots (C3)	(where tilled)	٥,
☐ Drift Depo			(where not		l luan (C4)		Crayfish Burrows (C	
_	or Crust (B4)		☐ Presence of R☐ Thin Muck Su		` '		☐ Saturation Visible on	• • • •
☐ Iron Depo	, ,	(DZ)	Other (Explain	,	•		□ Geomorphic Positior □ FAC-Neutral Test (D)	
_	n Visible on Aerial Ir ained Leaves (B9)	magery (B7)	☐ Other (Explain	i iii iXeii	iaiks)		☐ Frost-Heave Hummo	,
	. ,		5 4	1				
Field Obser	vations:	Yes N	Depth o (inches)		cribe Recorde ections, etc.),		m gauge, monitoring well,	aerial photos, previous
Surface Wate	er present?		2					
Water Table	•							
Saturation P	•							
(includes car								
	drology Present?]					
	etland hydrology inc			are met	_			
		22.2.2.7	, , , and					

Project/Site: Sweetland Wind Project	City/County: Hand Co	unty Sampling Date: 6/27/2018	
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-571	
Investigator(s): T. Beemer, W. Hirst	Section, Townsh	nip, Range: S18, T111N, R66W	
Landform (hillslope, terrace, etc.) berm	Local relief (concave, conv	·	
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.414015	Long: _98.805000 Datum: NAD83	
Soil Map Unit Name: Glenham loam, rolling		NWI Classification: NA	
Are climate/hydrologic conditions on the site typical for this time of y	year? ⊠ Yes □ No	· · · · · · · · · · · · · · · · · · ·	
, ,		,	
Vegetation Soil Hydrology	Are "Normal Circ	umstances" present? ☐ Yes ☐ No	
Significantly Disturbed?	(If needed, explai	n any answers in Remarks.)	
		anneste les estent feetenes etc	
SUMMARY OF FINDINGS – Attach site map showing sam			
	emarks: Upland sample plo	t adjacent to W-537.	
Hydrophytic Vegetation Present? □ □ □ □ Hydric Soil Present? □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □			
Wetland Hydrology Present?			
Is the Sampled Area within a Wetland?			
·			
VEGETATION – Use scientific names of plants			
Absolu			
Tree Stratum (Plot size: <u>30'</u>)	ver Species? Status <u>%</u>	Number of Dominant Species that	
2	<u>%</u>	are OBL, FACW, or FAC	
3.	%	- (excluding FAC-):0 (A)	
4	<u>%</u>	Total Number of Dominant Species Across All Strata: 1 (B)	
0_	% = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)		Percent of Dominant Species that are OBL, FACW, or FAC: 0% (A/E	B)
	<u>%</u>	(``	
	<u>%</u>	Prevalence Index Worksheet:	
	<u>%</u>	Total % Cover of: Multiply by:	
	%	OBL species % x 1 =0	
0	% = Total Cover	FACW species% x 2 =0	
Herb Stratum (Plot size: <u>5'</u>)		FAC species% x 3 =0 FACU species% x 4 =0	
1. <u>Poa pratensis</u> 100		UPL species	
2	<u>%</u>	Column Totals: 0 % (A) 0 (B	3)
	<u>%</u>	Prevalence Index = B/A =	
4	<u>%</u>	Hydrophytic Vegetation Indicators:	
6	<u>%</u>	- Hydrophytic Vegetation Indicators:	
7	%	_ ☐ 1 Rapid Test for Hydrophytic Vegetation	
	<u> </u>	_ ☐ 2 Dominance Test is >50%	
	<u>%</u>	- ☐ 3 Prevalence Index is ≤3.0¹	
<u>100</u>	<u>%</u>	4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%	☐ Problematic Hydrophytic Vegetation¹ (explain))
	<u>%</u>	 Indicators of hydric soil and wetland hydrology 	
0	% = Total Cover	must be present, unless disturbed or problematic	
Bare Ground in Herb Stratum0 %		Hydrophytic Vegetation Present? ☐ Yes ☒ No)
Remarks: Hydrophytic vegetation is not present. Photograph C-26.			

SOIL Sampling Point: SP-571

				or committee	absence of indicators.)	
Depth Matrix	Χ	Re	dox Features			
(inches) Color (moist)	%	Color (moist)	% Type ¹	Loc ²	Texture	Remarks
0-8 10YR 3/2	100			<u> </u>	Clay Loam	
8-18 10YR 3/3	100				Clay Loam	
				<u> </u>		
						
						
				·		
¹ Type: C=Concentration, D=D	epletion, RM=	Reduced Matrix, CS	S=Covered or Coate	ed Sand Grains	² Location: PL=Pore L	ining, M=Matrix
Hydric Soil Indicators: (Appl	licable to all	LRRs, unless other	wise noted.)		Indicators for Problemat	ic Hydric Soils³:
☐ Histosol (A1)		☐ Sandy Gle	yed Matrix (S4)		1 cm Muck (A9) (LRR I	l, J)
☐ Histic Epipedon (A2)		☐ Sandy Red	dox (S5)		☐ Coast Prairie Redox (A	16) (LRR F, G, H)
☐ Black Histic (A3)		☐ Stripped M	, ,		☐ Dark Surface (S7) (LRI	
☐ Hydrogen Sulfide (A4)			cky Mineral (F1)		☐ High Plains Depression	ns (F16)
☐ Stratified Layers (A5) (LRR			yed Matrix (F2)		(LRR H outside of MI	LRA /2 & /3)
☐ 1 cm Muck (A9) (LRR F, G ,		☐ Depleted N			☐ Reduced Vertic (F18)☐ Red Parent Material (T	Έο\
Depleted Below Dark Surfa	ce (A11)		k Surface (F6)		☐ Very Shallow Dark Surf	,
☐ Thick Dark Surface (A12)		☐ Depleted L	Dark Surface (F7)		Other (Explain in Rema	, ,
☐ Sandy Mucky Mineral (S1)☐ 2.5 cm Mucky Peat or Peat	(S2) (I PP G		s Depressions (F16	:\		
5 cm Mucky Peat or Peat (S			s Depressions (Fig.))	³ Indicators of hydrophytic wetland hydrology must be	
3 cm whicky real of real (c	33) (LIXIX I)	(. 4 70 01 211111,		disturbed or problematic	e present, unless
Restrictive Layer (if present)	:				Hydric Soil Present?	
Type:	D	epth (inches):			☐ Yes ☒ No	
Remarks: No hydric soil indicate	tor is present.					
LIVEROLOGY						
HYDROLOGY						
Wetland Hydrology Indicator						
Drimon, Indicatora (minimum a		s aback all that apply	Δ.		Coordon Indicators (2 o	ar mare required)
Primary Indicators (minimum o					Secondary Indicators (2 o	
☐ Surface Water (A1)		☐ Salt Crust (B1	1)		☐ Surface Soil Cracks (B	36)
Surface Water (A1) High Water Table (A2)		☐ Salt Crust (B1	1) ebrates (B13)		☐ Surface Soil Cracks (B☐ Sparsely Vegetated Co	36) oncave Surface (B8)
Surface Water (A1) High Water Table (A2) Saturation (A3)		Salt Crust (B1 Aquatic Invert	1) ebrates (B13) fide Odor (C1)		☐ Surface Soil Cracks (B☐ Sparsely Vegetated Co☐ Drainage Patterns (B1	oncave Surface (B8)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V	1) sebrates (B13) fide Odor (C1) Vater Table (C2)	4 Poets (C2)	☐ Surface Soil Cracks (B☐ Sparsely Vegetated Co☐ Drainage Patterns (B1☐ Oxidized Rhizospheres	oncave Surface (B8)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		☐ Salt Crust (B1☐ Aquatic Invert☐ Hydrogen Sul☐ Dry-Season V☐ Oxidized Rhiz	1) tebrates (B13) fide Odor (C1) Vater Table (C2) tospheres on Living	ı Roots (C3)	Surface Soil Cracks (B Sparsely Vegetated Co Drainage Patterns (B1 Oxidized Rhizospheres (where tilled)	36) oncave Surface (B8) 0) s on Living Roots (C3)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		☐ Salt Crust (B1☐ Aquatic Invert☐ Hydrogen Sul☐ Dry-Season V☐ Oxidized Rhiz (where not	1) tebrates (B13) fide Odor (C1) Vater Table (C2) tospheres on Living	g Roots (C3)	Surface Soil Cracks (B Sparsely Vegetated Co Drainage Patterns (B1 Oxidized Rhizospheres (where tilled) Crayfish Burrows (C8)	36) oncave Surface (B8) 0) s on Living Roots (C3)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		☐ Salt Crust (B1☐ Aquatic Invert☐ Hydrogen Sul☐ Dry-Season V☐ Oxidized Rhiz (where not☐ Presence of F	1) tebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4)	Roots (C3)	Surface Soil Cracks (B Sparsely Vegetated Co Drainage Patterns (B1 Oxidized Rhizospheres (where tilled) Crayfish Burrows (C8) Saturation Visible on A	36) concave Surface (B8) 0) s on Living Roots (C3) Aerial Imagery (C9)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	of one required	☐ Salt Crust (B1☐ Aquatic Invert☐ Hydrogen Sul☐ Dry-Season V☐ Oxidized Rhiz (where not	1) tebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) rface (C7)	ı Roots (C3)	Surface Soil Cracks (B Sparsely Vegetated Co Drainage Patterns (B1 Oxidized Rhizospheres (where tilled) Crayfish Burrows (C8)	oncave Surface (B8) 0) s on Living Roots (C3) Aerial Imagery (C9) D2)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	of one required	□ Salt Crust (B1 □ Aquatic Invert □ Hydrogen Sul □ Dry-Season V □ Oxidized Rhiz (where not □ Presence of F □ Thin Muck Su	1) tebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) rface (C7)	g Roots (C3)	Surface Soil Cracks (B Sparsely Vegetated Co Drainage Patterns (B1 Oxidized Rhizospheres (where tilled) Crayfish Burrows (C8) Saturation Visible on A Geomorphic Position (oncave Surface (B8) 0) s on Living Roots (C3) Aerial Imagery (C9) D2)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial	of one required	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain	1) rebrates (B13) fide Odor (C1) Vater Table (C2) rospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks)		Surface Soil Cracks (B Sparsely Vegetated Co Drainage Patterns (B1 Oxidized Rhizospheres (where tilled) Crayfish Burrows (C8) Saturation Visible on A Geomorphic Position (FAC-Neutral Test (D5)	soncave Surface (B8) 0) s on Living Roots (C3) Aerial Imagery (C9) (D2) ks (D7) (LRR F)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Water-Stained Leaves (B9)	of one required	□ Salt Crust (B1 □ Aquatic Invert □ Hydrogen Sul □ Dry-Season V □ Oxidized Rhiz (where not □ Presence of F □ Thin Muck Su □ Other (Explain	1) rebrates (B13) fide Odor (C1) Vater Table (C2) rospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks)	ded Data (strea	Surface Soil Cracks (B Sparsely Vegetated Co Drainage Patterns (B1 Oxidized Rhizospheres (where tilled) Crayfish Burrows (C8) Saturation Visible on A Geomorphic Position (FAC-Neutral Test (D5) Frost-Heave Hummocl	soncave Surface (B8) 0) s on Living Roots (C3) Aerial Imagery (C9) (D2) ks (D7) (LRR F)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Water-Stained Leaves (B9)	of one required I Imagery (B7)	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain	1) rebrates (B13) fide Odor (C1) Vater Table (C2) rospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks) Describe Recor	ded Data (strea	Surface Soil Cracks (B Sparsely Vegetated Co Drainage Patterns (B1 Oxidized Rhizospheres (where tilled) Crayfish Burrows (C8) Saturation Visible on A Geomorphic Position (FAC-Neutral Test (D5) Frost-Heave Hummocl	soncave Surface (B8) 0) s on Living Roots (C3) Aerial Imagery (C9) (D2) ks (D7) (LRR F)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Water-Stained Leaves (B9) Field Observations:	I Imagery (B7)	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain	1) rebrates (B13) fide Odor (C1) Vater Table (C2) rospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks) Describe Recor	ded Data (strea	Surface Soil Cracks (B Sparsely Vegetated Co Drainage Patterns (B1 Oxidized Rhizospheres (where tilled) Crayfish Burrows (C8) Saturation Visible on A Geomorphic Position (FAC-Neutral Test (D5) Frost-Heave Hummocl	soncave Surface (B8) 0) s on Living Roots (C3) Aerial Imagery (C9) (D2) ks (D7) (LRR F)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Water-Stained Leaves (B9) Field Observations: Surface Water present?	I Imagery (B7) Yes C	□ Salt Crust (B1 □ Aquatic Invert □ Hydrogen Sul □ Dry-Season V □ Oxidized Rhiz (where not □ Presence of F □ Thin Muck Su □ Other (Explain Depth (inches)	1) rebrates (B13) fide Odor (C1) Vater Table (C2) rospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks) Describe Recor	ded Data (strea	Surface Soil Cracks (B Sparsely Vegetated Co Drainage Patterns (B1 Oxidized Rhizospheres (where tilled) Crayfish Burrows (C8) Saturation Visible on A Geomorphic Position (FAC-Neutral Test (D5) Frost-Heave Hummocl	soncave Surface (B8) 0) s on Living Roots (C3) Aerial Imagery (C9) (D2) ks (D7) (LRR F)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present?	I Imagery (B7) Yes C	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain Depth (inches)	1) rebrates (B13) fide Odor (C1) Vater Table (C2) rospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks) Describe Recor	ded Data (strea	Surface Soil Cracks (B Sparsely Vegetated Co Drainage Patterns (B1 Oxidized Rhizospheres (where tilled) Crayfish Burrows (C8) Saturation Visible on A Geomorphic Position (FAC-Neutral Test (D5) Frost-Heave Hummocl	soncave Surface (B8) 0) s on Living Roots (C3) Aerial Imagery (C9) (D2) ks (D7) (LRR F)
□ Surface Water (A1) □ High Water Table (A2) □ Saturation (A3) □ Water Marks (B1) □ Sediment Deposits (B2) □ Drift Deposits (B3) □ Algal Mat or Crust (B4) □ Iron Deposits (B5) □ Inundation Visible on Aerial □ Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present?	Yes	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain Depth (inches)	1) rebrates (B13) fide Odor (C1) Vater Table (C2) rospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks) Describe Recor	ded Data (strea	Surface Soil Cracks (B Sparsely Vegetated Co Drainage Patterns (B1 Oxidized Rhizospheres (where tilled) Crayfish Burrows (C8) Saturation Visible on A Geomorphic Position (FAC-Neutral Test (D5) Frost-Heave Hummocl	soncave Surface (B8) 0) s on Living Roots (C3) Aerial Imagery (C9) (D2) ks (D7) (LRR F)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present? (includes capillary fringe)	I Imagery (B7) Yes C C C C C C C C C C C C C C C C C C	□ Salt Crust (B1 □ Aquatic Invert □ Hydrogen Sul □ Dry-Season V □ Oxidized Rhiz (where not □ Presence of F □ Thin Muck Su □ Other (Explain Depth (inches)	1) rebrates (B13) fide Odor (C1) Vater Table (C2) rospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks) Describe Recor	ded Data (strea	Surface Soil Cracks (B Sparsely Vegetated Co Drainage Patterns (B1 Oxidized Rhizospheres (where tilled) Crayfish Burrows (C8) Saturation Visible on A Geomorphic Position (FAC-Neutral Test (D5) Frost-Heave Hummocl	soncave Surface (B8) 0) s on Living Roots (C3) Aerial Imagery (C9) (D2) ks (D7) (LRR F)
□ Surface Water (A1) □ High Water Table (A2) □ Saturation (A3) □ Water Marks (B1) □ Sediment Deposits (B2) □ Drift Deposits (B3) □ Algal Mat or Crust (B4) □ Iron Deposits (B5) □ Inundation Visible on Aerial □ Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present? (includes capillary fringe) Wetland Hydrology Present?	I Imagery (B7) Yes C C C C C C C C C C C C C C C C C C	□ Salt Crust (B1 □ Aquatic Invert □ Hydrogen Sul □ Dry-Season V □ Oxidized Rhiz (where not □ Presence of F □ Thin Muck Su □ Other (Explain Depth (inches)	1) rebrates (B13) fide Odor (C1) Vater Table (C2) rospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks) Describe Recor	ded Data (strea	Surface Soil Cracks (B Sparsely Vegetated Co Drainage Patterns (B1 Oxidized Rhizospheres (where tilled) Crayfish Burrows (C8) Saturation Visible on A Geomorphic Position (FAC-Neutral Test (D5) Frost-Heave Hummocl	soncave Surface (B8) 0) s on Living Roots (C3) Aerial Imagery (C9) (D2) ks (D7) (LRR F)

Project/Site: Sweetland Wind Project	Cit	ty/County: H	land Coun	sampling Date: 6/28/2018
Applicant/Owner: Sweetland Wind Farm, LLC				tate: SD Sampling Point: SP-591
Investigator(s): T. Beemer, W. Hirst		Section,		Range: S24, T111N, R67W
Landform (hillslope, terrace, etc.) toeslope	Loca	 al relief (conca		
Subregion (LRR): Northern Great Plains Spring Wheat R	egion I	_at: 44.4127	711	Long: -98.825603 Datum: NAD83
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 per				NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this tir			□No	(If no, explain in Remarks.)
, ,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			(,,,
Vegetation Soil Hydrolo	ogy	Are "Nor	mal Circun	nstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?		(If neede	d, explain a	any answers in Remarks.)
Naturally Problematic?				
SUMMARY OF FINDINGS – Attach site map showing	g samplin	g point loca	tions, tra	nsects, important features, etc.
Yes No	Remar	ks: Upland sa	mple plot.	
Hydrophytic Vegetation Present?				
Hydric Soil Present?				
Wetland Hydrology Present?				
Is the Sampled Area within a Wetland?				
VEGETATION – Use scientific names of plants				
	Absolute	Dominant	Indicator	Dominance Test Worksheet:
`	% Cover	Species?	Status	Number of Dominant Species that
1 2.	<u>%</u>			are OBL, FACW, or FAC
2. 3.	<u>%</u> %			(excluding FAC-): 0 (A)
4.				Total Number of Dominant
	0 %	= Total Cove	r	Species Across All Strata:1_(B)
Sapling/Shrub Stratum (Plot size: 15')				Percent of Dominant Species that
1	<u>%</u>			are OBL, FACW, or FAC:0%_(A/B)
2	<u>%</u>			Prevalence Index Worksheet:
3	%			
4	<u>%</u>			Total % Cover of: Multiply by: OBL species % x 1 = 0
5	<u>%</u> 0 %	= Total Cove	-	OBL species% x1 =0 FACW species
Herb Stratum (Plot size: 5')	<u> </u>	= Total Cove	!	FAC species% x 3 =0
1. Poa pratensis	80 %	Υ	FACU	FACU species % x 4 = 0
2	%			UPL species % x 5 = 0
3.	%			Column Totals:0% (A)0 (B)
4	<u>%</u>			Prevalence Index = B/A =
5	<u>%</u>			Hydrophytic Vegetation Indicators:
6	<u>%</u>			☐ 1 Rapid Test for Hydrophytic Vegetation
7 8.	<u>%</u>			☐ 2 Dominance Test is >50%
8 9				
10.	%			3 Prevalence Index is ≤3.0¹
Woody Vine Stratum (Plot size: 30')	80 %	= Total Cove	r	4 Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
1	<u>%</u>			☐ Problematic Hydrophytic Vegetation¹ (explain)
2	<u>%</u>			¹ Indicators of hydric soil and wetland hydrology
	0 %	= Total Cove	r	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 20 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photograph	C-27.			

SOIL Sampling Point: SP-591

Profile Desc	ription: (Describe	to the d	epth n	eeded to docun	nent the	indicator o	or confirm the	absence of indicators.)	
Depth	Matrix			Re	dox Fea	tures			
(inches)	Color (moist)	%	C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 3/2	100						Silt Loam	
10-20	10YR 3/3	100						Silt Loam	
								_	
	· 	-							
	-	-							
¹Type: C=Ce	oncentration, D=De	oletion. R	M=Re	duced Matrix. CS	=Cover	ed or Coate	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix
	Indicators: (Applic							Indicators for Problema	
☐ Histosol (☐ Sandy Gle		-		1 cm Muck (A9) (LRF	et .1)
☐ Histic Epi	,			☐ Sandy Red		11X (O 1)		☐ Coast Prairie Redox (
☐ Black His				☐ Stripped M		3)		☐ Dark Surface (S7) (LI	
	Sulfide (A4)			☐ Loamy Mu	•	,		☐ High Plains Depression	•
	Layers (A5) (LRR F	=)		☐ Loamy Gle				(LRR H outside of I	
	k (A9) (LRR F, G, I			☐ Depleted N	-			☐ Reduced Vertic (F18)	
	Below Dark Surface			☐ Redox Dar				Red Parent Material (TF2)
☐ Thick Dar	k Surface (A12)	, ,		☐ Depleted □		. ,		☐ Very Shallow Dark St	ırface (TF 12)
☐ Sandy Mu	ucky Mineral (S1)			☐ Redox Dep	ression	s (F8)		☐ Other (Explain in Ren	narks)
☐ 2.5 cm M	ucky Peat or Peat (S2) (LRR	G , H)	☐ High Plains	s Depres	ssions (F16)		3Indicators of hydrophytic	vegetation and
☐ 5 cm Mud	ky Peat or Peat (S3	3) (LRR F	;)	(MLRA 72	& 73 of	FLRR H)		wetland hydrology must disturbed or problematic	be present, unless
Restrictive I	_ayer (if present):							Hydric Soil Present?	
Туре:		<u> </u>	Dept	h (inches):				☐ Yes ⊠ No	
	hydric soil indicato								
HYDROLOG	iΥ								
Wetland Hye	drology Indicators	:							
Primary India	cators (minimum of	one requi	red; cł	neck all that apply	<u>/)</u>			Secondary Indicators (2	or more required)
☐ Surface V	Vater (A1)			☐ Salt Crust (B1	1)			☐ Surface Soil Cracks	(B6)
☐ High Wat	er Table (A2)			 ☐ Aquatic Invert	,	(B13)		☐ Sparsely Vegetated	` '
☐ Saturation				 □ Hydrogen Sul				☐ Drainage Patterns (B	
☐ Water Ma				☐ Dry-Season V	Vater Ta	ble (C2)		Oxidized Rhizospher	es on Living Roots (C3)
☐ Sediment	Deposits (B2)			Oxidized Rhiz		s on Living	Roots (C3)	(where tilled)	
☐ Drift Depo	osits (B3)			(where not				Crayfish Burrows (C	
☐ Algal Mat	or Crust (B4)			☐ Presence of F		` '		☐ Saturation Visible on	• • • •
☐ Iron Depo				Thin Muck Su				Geomorphic Position	
	n Visible on Aerial I	magery (I	B7)	Other (Explair	ın Rem	narks)		☐ FAC-Neutral Test (D	,
☐ Water-Sta	ained Leaves (B9)							☐ Frost-Heave Hummo	cks (D7) (LRR F)
Field Obser	vations:	Yes	No	Depth (inches)			ed Data (strear , if available:	m gauge, monitoring well,	aerial photos, previous
Surface Wat	er present?		\boxtimes		-	-,,			
Water Table	•		\boxtimes						
Saturation P	•	_		-					
(includes car			\triangle	-					
	mary minge/	_	\boxtimes						
Wetland HW	drology Present?	1 1			1				
	drology Present?	:							
	drology Present? wetland hydrology			present.	1				
				present.					

Project/Site: Sweetland Wind Project	City/County:	City/County: Hand County Sampling Date: 6/28/2018							
Applicant/Owner: Sweetland Wind Farm, LLC			State: SD Sampling Point: SP-592						
Investigator(s): T. Beemer, W. Hirst	Sectio		Range: S13, T1	- 11N, R67W					
Landform (hillslope, terrace, etc.) swale	Local relief (cond			O1 (0/)					
Subregion (LRR): Northern Great Plains Spring Wheat Reg	 gion Lat: 44.42 [.]	7160	Long: -98.832	 553 Datum: NAD83					
Soil Map Unit Name: Water	<u></u>		NWI Classi	ification: PABFh					
Are climate/hydrologic conditions on the site typical for this time	e of year? Xes	□No	(If no, explain in I						
									
Vegetation Soil Hydrology Significantly Disturbed? □ □ □	,		stances" present?						
Naturally Problematic?	(If need	led, explain a	any answers in Rem	narks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.									
Yes No	Remarks: Wetland								
Hydrophytic Vegetation Present?	Remarks. Welland	sample plot i	ocated in FLIVI W-C)40 .					
Hydric Soil Present? □									
Wetland Hydrology Present? □									
Is the Sampled Area within a Wetland? $\ \square$									
VEGETATION – Use scientific names of plants									
•	bsolute Dominant	Indicator	Dominance Test	- Worksheet					
	Cover Species?	Status	Number of Domin						
1	<u>%</u>		are OBL, FACW,						
2	<u>%</u>		(excluding FAC-):	(A)					
3. 4.	<u>%</u>		Total Number of [
· -	0 % = Total Cov	ver	Species Across A						
Sapling/Shrub Stratum (Plot size: 15')			Percent of Dominare OBL, FACW,						
1	<u> </u>		are OBL, FACW,	(A/B)					
2	<u>%</u>		Prevalence Index	x Worksheet:					
3	<u>%</u>		Total % Cov	ver of: Multiply by:					
5.	%		OBL species	% x 1 = 0					
	0 % = Total Cov	ver	FACW species	% x 2 = 0					
Herb Stratum (Plot size: <u>5'</u>)			FACIL appeirs						
1. Persicaria maculosa	60 % Y	FACW	FACU species UPL species	$\phantom{00000000000000000000000000000000000$					
2. <u>Typha latifolia</u>	30 % Y %	OBL_	Column Totals:	0% (A)0 (B)					
3	<u>%</u>		Prevalence Index	x = B/A =					
5	%		Hydrophytic Veg	getation Indicators:					
6	<u>%</u>								
7	<u>%</u>			or Hydrophytic Vegetation					
8	<u>%</u>		2 Dominance						
10.	%		3 Prevalence I						
Woody Vine Stratum (Plot size: 30')	90 % = Total Cov	ver	☐ 4 Morphological Supporting data in	al Adaptations ¹ (Provide Remarks or on a separate sheet)					
1	<u></u>		☐ Problematic H	ydrophytic Vegetation ¹ (explain)					
2.	<u></u>			dric soil and wetland hydrology					
<u>-</u>	0 % = Total Cov	er	must be present,	unless disturbed or problematic					
Bare Ground in Herb Stratum			Hydrophytic Vege	etation Present? ⊠ Yes ☐ No					
Remarks: Rapid test for hydrophytic vegetation is met. Photogram	raph C-28.								

SOIL Sampling Point: SP-592

Profile Desc	ription: (Describe	to the depti	n needed to docun	nent the	e indicator o	r confirm the	absence of indicators.)	
Depth	Matrix		Re	dox Fea	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 5/1	80	10YR 5/6	20	С	М	Clay Loam	
10-20	10YR 6/1	80	10YR 5/6	20	C	M	Clay Loam	
-	-		· · ·		-			
-								
¹Type: C=Co	oncentration, D=Dep	oletion, RM=	Reduced Matrix, CS	S=Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil	ndicators: (Applic	able to all L	RRs, unless other	wise no	oted.)		Indicators for Problem	atic Hydric Soils³:
☐ Histosol (A1)		☐ Sandy Gle	yed Mat	trix (S4)		1 cm Muck (A9) (LRF	R I, J)
☐ Histic Epi	pedon (A2)		☐ Sandy Red	dox (S5))		☐ Coast Prairie Redox	(A16) (LRR F, G, H)
☐ Black His	` '		☐ Stripped M	•	•		☐ Dark Surface (S7) (L	
☐ Hydrogen			☐ Loamy Mu	-			☐ High Plains Depressi	ons (F16)
	Layers (A5) (LRR F		☐ Loamy Gle				(LRR H outside of I	•
	k (A9) (LRR F, G, F		□ Depleted N □	,	•		Reduced Vertic (F18)	
	Below Dark Surface	e (A11)	☐ Redox Dar		` '		Red Parent Material	
	k Surface (A12)		☐ Depleted □				☐ Very Shallow Dark St☐ Other (Explain in Rer	, ,
	ucky Mineral (S1)	CO) /I DD C	Redox Dep		` '			
	ucky Peat or Peat (\$ ky Peat or Peat (\$3		H) High Plains (MLRA 72				³ Indicators of hydrophytic wetland hydrology must	
5 GIT Muc	ky real of real (33) (LKK F)	(MERCA 72		Likikiij		disturbed or problematic	
Restrictive I	_ayer (if present):						Hydric Soil Present?	
Type:		De	epth (inches):				⊠ Yes □ No	
Remarks: Hy	dric soil indicator F	3 is met.						
HYDROLOG	Υ							
Wetland Hyd	drology Indicators:	:						
Primary India	ators (minimum of o	one required;	check all that apply	<u>/)</u>			Secondary Indicators (2	or more required)
Surface V	Vater (A1)		☐ Salt Crust (B1	1)			☐ Surface Soil Cracks	(B6)
	er Table (A2)		☐ Aquatic Invert	ebrates	(B13)		☐ Sparsely Vegetated	Concave Surface (B8)
	n (A3)		☐ Hydrogen Sul	fide Od	or (C1)		☐ Drainage Patterns (E	310)
☐ Water Ma	rks (B1)		☐ Dry-Season V		, ,			res on Living Roots (C3)
	Deposits (B2)		Oxidized Rhiz		es on Living F	Roots (C3)	(where tilled)	0)
☐ Drift Depo			(where not		l lnon (C4)		☐ Crayfish Burrows (C	
_	or Crust (B4)		☐ Presence of R☐ Thin Muck Su		` ,		☐ Saturation Visible on☒ Geomorphic Position	• • • •
☐ Iron Depo	, ,	(DZ)	Other (Explain	•	•		☐ Geomorphic Position ☐ FAC-Neutral Test (D	' '
_	n Visible on Aerial Ir ained Leaves (B9)	magery (B7)	☐ Other (Explain	i iii iXeii	iiaiks)		☐ Frost-Heave Hummo	,
	. ,		5 4					
Field Obser	vations:	Yes N	Depth o (inches)		cribe Recorde ections, etc.),		m gauge, monitoring well,	aerial photos, previous
Surface Wate	er present?]1					
Water Table	present?		0					
Saturation P	•							
(includes cap								
	drology Present?							
	etland hydrology ind			are met				
	, : : - 9, 310		, , , ,	•				

Project/Site: Sweetland Wind Project	Ci	ty/County: _	Hand Coun	ty Sampling Date: 6/28/2018				
Applicant/Owner: Sweetland Wind Farm, LLC				tate: SD Sampling Point: SP-593				
Investigator(s): T. Beemer, W. Hirst		Section	, Township	Range: S13, T111N, R67W				
Landform (hillslope, terrace, etc.) toeslope	Loc	al relief (conc						
Subregion (LRR): Northern Great Plains Spring Wheat		Lat: 44.427		Long: -98.832692 Datum: NAD83				
O TAM THE TAME	Region	44.421	102	NWI Classification: PABFh				
Are climate/hydrologic conditions on the site typical for this to	time of year?	? ⊠ Yes	□No	(If no, explain in Remarks.)				
7 to diffiate/flydrologic conditions on the site typical for this t	unio or your.	<u> </u>	□ 140	(ii no, explain iii recinano.)				
Vegetation Soil Hydrol	logy	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No				
Significantly Disturbed?	ed. explain a	any answers in Remarks.)						
Naturally Problematic?		(,	,,				
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.								
Yes No	Remar	ks: Upland sa	mple plot a	djacent to PEM W-548.				
Hydrophytic Vegetation Present? □				.,				
Hydric Soil Present? □								
Wetland Hydrology Present?								
Is the Sampled Area within a Wetland? $\ \square$								
VEGETATION – Use scientific names of plants	•							
VEGETATION - Ose scientific flames of plants								
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:				
1	<u>%</u>	Ороскоо.	Otatao	Number of Dominant Species that				
2.	%			are OBL, FACW, or FAC (excluding FAC-): 1 (A)				
3	%							
4	<u></u> %			Total Number of Dominant Species Across All Strata:1 (B)				
	0 %	= Total Cove	er	Percent of Dominant Species that				
Sapling/Shrub Stratum (Plot size: 15')	0/			are OBL, FACW, or FAC: 100% (A/B)				
1	<u>%</u> %							
2. 3.	<u> </u>			Prevalence Index Worksheet:				
4.				Total % Cover of: Multiply by:				
5.	%			OBL species % x 1 =0				
	0 %	= Total Cove	er	FACW species% x 2 =0				
Herb Stratum (Plot size: <u>5'</u>)				FAC species% x 3 =0				
1. Phalaris arundinacea	90 %	<u> </u>	FACW	FACU species% x 4 =0 UPL species				
2. <u>Solidago canadensis</u>	20 %	<u>N</u>	<u>FACU</u>	Column Totals: 0 % (A) 0 (B)				
3	<u>%</u>			Prevalence Index = B/A =				
4	<u>%</u> %							
5 6	<u> </u>			Hydrophytic Vegetation Indicators:				
7	%			☐ 1 Rapid Test for Hydrophytic Vegetation				
8.	%			☑ 2 Dominance Test is >50%				
9	<u></u> %			☐ 3 Prevalence Index is ≤3.0¹				
10	<u>%</u>			☐ 4 Morphological Adaptations¹ (Provide				
Wasaka Visas Otastura (Distains 2001)	<u>110 %</u>	= Total Cove	er	supporting data in Remarks or on a separate sheet)				
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)				
2.				¹ Indicators of hydric soil and wetland hydrology				
-	0 %	= Total Cove	er	must be present, unless disturbed or problematic				
Bare Ground in Herb Stratum 0 %				Hydrophytic Vegetation Present? ⊠ Yes ☐ No				
Remarks: Dominance test is met. Photograph C-29.				I				

SOIL Sampling Point: SP-593

Depth	Matrix	to the dep		edox Fe		. commin ule	absence of indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 3/2	100					Silt Loam	
6-10	10YR 3/3	100					Silt Loam	
4		 .					2	
**			=Reduced Matrix, C			d Sand Grains	² Location: PL=Pore	
•		cable to all	LRRs, unless other		•		Indicators for Problem	•
☐ Histosol (A	,		☐ Sandy GI	•	` '		1 cm Muck (A9) (LRI	
☐ Histic Epip			☐ Sandy Re				Coast Prairie Redox	
☐ Black Histi	, ,		☐ Stripped				☐ Dark Surface (S7) (L	,
Hydrogen		-\	☐ Loamy M				☐ High Plains Depressi (LRR H outside of	
	ayers (A5) (LRR F		☐ Loamy G	-			Reduced Vertic (F18	-
	(A9) (LRR F, G, I	•	☐ Depleted	,	•		☐ Red Parent Material	,
	Below Dark Surface	e (ATT)	☐ Redox Da		` ,		☐ Very Shallow Dark S	` '
	Surface (A12)		☐ Depleted ☐ Redox De		, ,		Other (Explain in Rer	, ,
-	cky Mineral (S1) cky Peat or Peat (S2) (I DD 2			ns (F8) essions (F16)		_ 、.	,
	cky Peat of Peat (S	, ,			of LRR H)		³ Indicators of hydrophyti wetland hydrology must	
5 cm wac	ty real or real (Sc) (L IXIX I)	(J. 2		disturbed or problematic	
Restrictive L	ayer (if present):						Hydric Soil Present?	
Type: Co	ompacted	ı	Depth (inches): 10)			☐ Yes ☐ No	
HYDROLOG	′							
Wetland Hyd	rology Indicators	:						
Primary Indica	ators (minimum of	one require	d; check all that app	oly)			Secondary Indicators (2	or more required)
☐ Surface W	ater (A1)		☐ Salt Crust (E	311)			☐ Surface Soil Cracks	(B6)
☐ High Wate	r Table (A2)		Aquatic Inve	rtebrates	s (B13)		☐ Sparsely Vegetated	` '
☐ Saturation	` ,		☐ Hydrogen S		` ,		☐ Drainage Patterns (E	, ,
☐ Water Mar	, ,		☐ Dry-Season				Oxidized Rhizosphe	
☐ Sediment	Deposits (B2)		Oxidized Rh	izospher	res on Living	Roots (C3)	(where tilled)	
☐ Drift Depo	sits (B3)		(where no	t tilled)			☐ Crayfish Burrows (C	8)
☐ Algal Mat	or Crust (B4)		Presence of				Saturation Visible or	
☐ Iron Depos	sits (B5)		Thin Muck S	•	•		Geomorphic Position	
Inundation	Visible on Aerial I	magery (B7	$r_{ m)} \square$ Other (Expla	in in Re	marks)			•
☐ Water-Sta	ined Leaves (B9)						☐ Frost-Heave Hummo	ocks (D7) (LRR F)
Field Observ	ations:	Yes	Depth No (inches)		scribe Record pections, etc.)		m gauge, monitoring well,	aerial photos, previous
Surface Wate	r present?		\boxtimes		,			
Water Table p	•							
Saturation Pro			<u> </u>					
(includes cap			<u> </u>					
	rology Present?		\boxtimes					
rtemarks: We	tland hydrology ind	iicatoi D5 ls	S IIIEL.					

Project/Site: Sweetland Wind Project		City/County:	Hand Coun	ty Sampling Date: 6/28/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-596		
Investigator(s): T. Beemer, W. Hirst		Section	n, Township	, Range: S14, T111N, R67W
Landform (hillslope, terrace, etc.) swale	Lo	cal relief (conc		·
Subregion (LRR): Northern Great Plains Spring Whea		Lat: 44.425		Long: -98.844313 Datum: NAD83
	Region	44.420	1000	NIA((O) ('') ('
Soil Map Unit Name: Glenham loam, undulating Are climate/hydrologic conditions on the site typical for this	time of year	r? X Yes	□ No	(If no, explain in Remarks.)
Are diffrate/flydrologic conditions on the site typical for this	, tillic or year	1: 🔼 103		(ii iio, explain iii recinanos.)
Vegetation Soil Hydr	ology	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?	ed. explain	any answers in Remarks.)		
Naturally Problematic?		(,	,,
SUMMARY OF FINDINGS – Attach site map showi	ing sampli	ng point loc	ations, tra	nsects, important features, etc.
Yes N	No Rema	arks: Wetland s	sample plot	located in PEM W-550.
Hydrophytic Vegetation Present?				
Hydric Soil Present? □ □ □				
Wetland Hydrology Present?				
Is the Sampled Area within a Wetland?				
VEGETATION – Use scientific names of plants				
Parities of Parities of Parities	Absolute	Dominant	Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: 30')	Absolute % Cover	Species?	Status	
1	<u></u> %	<u>.</u>		Number of Dominant Species that are OBL, FACW, or FAC
2	%			(excluding FAC-):
3				Total Number of Dominant
4	%			Species Across All Strata: (B)
	0 %	= Total Cove	er	Percent of Dominant Species that
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1	%			are OBL, FACW, or FAC:(A/B)
2.	<u></u>			
3.				Prevalence Index Worksheet:
4.	0.4			Total % Cover of:Multiply by:
5.	%			OBL species% x 1 =0
	0 %	= Total Cove	er	FACW species% x 2 =0
Herb Stratum (Plot size: <u>5'</u>)				FAC species% x 3 =0 FACU species % x 4 =0
1. Spartina pectinata	<u>100 %</u>	Y	FACW	UPL species
2	%			Column Totals: 0 % (A) 0 (B)
3	%			Prevalence Index = B/A =
4	<u>%</u> <u>%</u>			
5 6				Hydrophytic Vegetation Indicators:
7.	%			□ 1 Rapid Test for Hydrophytic Vegetation
8	<u>%</u>			☐ 2 Dominance Test is >50%
9	%			☐ 3 Prevalence Index is ≤3.0¹
10	<u>%</u>	Tatal Carr		☐ 4 Morphological Adaptations¹ (Provide
Woody Vino Ctratum (Plot size: 20')	<u>100 %</u>	= Total Cove	er	supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)
2.				¹ Indicators of hydric soil and wetland hydrology
-	0 %	= Total Cove	er	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 0 %				Hydrophytic Vegetation Present? ⊠ Yes ☐ No
Remarks: Rapid test for hydrophytic vegetation is met. Ph	otograph C-:	30.		
	5 ,			

SOIL Sampling Point: SP-596

Profile Desc	ription: (Describe	to the dept	h needed to docur	nent the	e indicator o	r confirm the	absence of indicators.)			
Depth	Depth Matrix Redox Features									
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-10	10YR 5/1	80	10YR 5/6	20	С	М	Clay Loam			
10-20	10YR 6/1	80	10YR 5/6	20	C	M	Clay Loam			
-					-					
-										
¹Type: C=Co	oncentration, D=Dep	oletion, RM=	Reduced Matrix, CS	S=Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil	ndicators: (Applic	able to all L	RRs, unless other	wise n	oted.)		Indicators for Problems	atic Hydric Soils³:		
☐ Histosol (A1)		☐ Sandy Gle	yed Ma	trix (S4)		1 cm Muck (A9) (LRF	R I, J)		
☐ Histic Epi	pedon (A2)		☐ Sandy Red	dox (S5))		☐ Coast Prairie Redox ((A16) (LRR F, G, H)		
☐ Black His	` '		☐ Stripped M	,	•		☐ Dark Surface (S7) (LI			
☐ Hydrogen			☐ Loamy Mu	-			☐ High Plains Depressi	ons (F16)		
	Layers (A5) (LRR F		☐ Loamy Gle				(LRR H outside of I	•		
	k (A9) (LRR F, G, F		□ Depleted N □ Depleted N	•	•		Reduced Vertic (F18)			
	Below Dark Surface	e (A11)	Redox Dai		` '		☐ Red Parent Material (☐ Very Shallow Dark St			
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7)							Other (Explain in Ren	, ,		
	ucky Mineral (S1)	CO) /I DD C	Redox Dep		` '					
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) ☐ High Plains Depressions (F16) ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) ☐ (MLRA 72 & 73 of LRR H) ☐ wetland hydrology must be present, unless										
disturbed or problematic										
Restrictive I	_ayer (if present):						Hydric Soil Present?			
Type:		De	epth (inches):				⊠ Yes □ No			
Remarks: Hydric soil indicator F3 is met.										
Remarks: Hy	dric soil indicator F	3 is met.								
HYDROLOG	Υ									
Wetland Hyd	drology Indicators									
Primary India	ators (minimum of	one required:	check all that appl	<u>y)</u>			Secondary Indicators (2	or more required)		
□ Surface V	Vater (A1)		☐ Salt Crust (B1	l1)			Surface Soil Cracks (B6)			
☐ ☐ High Wat	er Table (A2)		☐ Aquatic Inver	tebrates	(B13)		☐ Sparsely Vegetated Concave Surface (B8)			
			☐ Hydrogen Sul				☑ Drainage Patterns (E			
☐ Water Ma	rks (B1)		☐ Dry-Season V	Vater Ta	able (C2)		Oxidized Rhizospher	res on Living Roots (C3)		
☐ Sediment	Deposits (B2)		Oxidized Rhiz		es on Living F	Roots (C3)	(where tilled)			
☐ Drift Depo	osits (B3)		(where not				Crayfish Burrows (Ca			
_	or Crust (B4)		☐ Presence of F		` '		☐ Saturation Visible on	• • • •		
☐ Iron Depo			☐ Thin Muck Su				☐ Geomorphic Position			
_	n Visible on Aerial Ir	magery (B7)	Other (Explain	n in Ren	narks)		☐ FAC-Neutral Test (D	,		
☐ Water-Sta	ained Leaves (B9)						☐ Frost-Heave Hummo	CKS (D7) (LKK F)		
Field Obser	vations:	Yes N	Depth lo (inches)		cribe Recorde ections, etc.),		m gauge, monitoring well,	aerial photos, previous		
Surface Wate	er present?		0							
Water Table	·		_							
Saturation P	•									
(includes car										
	drology Present?]							
	etland hydrology inc			d D5 are	e met.					
		32.3.3711,7	, , , , arr	0 011	- ···					

Project/Site: Sweetland Wind Project	Ci	ty/County: _	Hand Coun	sampling Date: 6/28/2018	
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-59			
Investigator(s): T. Beemer, W. Hirst		Section	, Township	Range: S14, T111N, R67W	
Landform (hillslope, terrace, etc.) toeslope	Loc	al relief (conc			
Subregion (LRR): Northern Great Plains Spring Wheat R	egion	Lat: 44.425	766	Long: -98.844374 Datum: NAD83	
Soil Map Unit Name: Glenham loam, undulating	logion	11.120	700	NWI Classification: NA	
Are climate/hydrologic conditions on the site typical for this tir	me of vear?	? ⊠ Yes	□No	(If no, explain in Remarks.)	
,	, , ,			(-, -, -, -, -, -, -, -, -, -, -, -, -,	
Vegetation Soil Hydrolo	ogy	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No	
Significantly Disturbed?	ed, explain a	any answers in Remarks.)			
, – – –					
SUMMARY OF FINDINGS – Attach site map showing	g samplin	g point loca	ations, tra	nsects, important features, etc.	
Yes No	Remar	ks: Upland sa	mple plot a	djacent to PEM W-550.	
Hydrophytic Vegetation Present?					
Hydric Soil Present?					
Wetland Hydrology Present?					
Is the Sampled Area within a Wetland?					
VEGETATION – Use scientific names of plants					
	Absolute	Dominant	Indicator	Dominance Test Worksheet:	
`	% Cover	Species?	Status	Number of Dominant Species that	
1 2	<u>%</u> %			are OBL, FACW, or FAC	
3.				(excluding FAC-):0_(A)	
4.	%			Total Number of Dominant	
	0 %	= Total Cove	er	Species Across All Strata:1_(B)	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Percent of Dominant Species that are OBL, FACW, or FAC: 0% (A/B)	
1	<u>%</u>			are obt., i Acw, or i Ac.	
2.	<u>%</u>			Prevalence Index Worksheet:	
3.	<u>%</u>			Total % Cover of: Multiply by:	
4 5.	<u>%</u> %			OBL species	
J	0 %	= Total Cove		FACW species	
Herb Stratum (Plot size: 5')		. otal oore		FAC species % x 3 = 0	
1. Poa pratensis	90 %	<u> </u>	FACU	FACU species % x 4 = 0	
2. Solidago canadensis	<u>5 %</u>	<u>N</u>	FACU	UPL species% x 5 =0 Column Totals:0% (A)0 (B)	
3	<u>%</u>				
4	<u>%</u>			Prevalence Index = B/A =	
5	<u>%</u>			Hydrophytic Vegetation Indicators:	
6	<u>%</u> %			☐ 1 Rapid Test for Hydrophytic Vegetation	
8.				2 Dominance Test is >50%	
9.	%			☐ 3 Prevalence Index is ≤3.0¹	
10	<u>%</u>			☐ 4 Morphological Adaptations¹ (Provide	
Woody Vine Stratum (Plot size: 30')	95 %	= Total Cove	er	supporting data in Remarks or on a separate sheet)	
1	<u>%</u>			☐ Problematic Hydrophytic Vegetation¹ (explain)	
2	<u>%</u>			¹ Indicators of hydric soil and wetland hydrology	
	0 %	= Total Cove	er	must be present, unless disturbed or problematic	
Bare Ground in Herb Stratum5 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No	
Remarks: Hydrophytic vegetation is not present. Photograph	C-31.				

SOIL Sampling Point: SP-597

Profile Desc	cription: (Describe	to the de	pth n	eeded to docum	ent the	indicator o	or confirm the	absence of indicators.)		
Depth	Matrix			Red	lox Fea	tures				
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 3/1	100						Silt Loam		
6-12	10YR 3/2	100						Silt Loam		
	.									
		·								
		· ———								
1Type: C-C	oncentration, D=De	oletion PA	/Pa	duced Matrix CS	-Cover	ad or Coated	4 Sand Grains	² Location: PL=Pore	Lining M-Matrix	
	Indicators: (Applie						Janu Olains	Indicators for Problema	-	
l		Jubio 10 u				-		_	•	
☐ Histosol (☐ Histic Ep	,			☐ Sandy Gley ☐ Sandy Red		IIX (34)		☐ 1 cm Muck (A9) (LRF☐ Coast Prairie Redox (
☐ Black His				Stripped Ma		:)		☐ Dark Surface (S7) (LI		
	n Sulfide (A4)			Loamy Muc	,	,		☐ High Plains Depression	•	
	Layers (A5) (LRR F	:\		Loamy Gley	-			(LRR H outside of I		
	ck (A9) (LRR F, G, F			☐ Depleted M				☐ Reduced Vertic (F18)	•	
	Below Dark Surface	•		☐ Redox Dark				Red Parent Material (
— '	rk Surface (A12)	<i>(</i> ((1))		☐ Depleted Dan		` '		☐ Very Shallow Dark Su	,	
	ucky Mineral (S1)			☐ Redox Dep		. ,		Other (Explain in Ren	, ,	
	ucky Peat or Peat (S2) (LRR (G. H)	☐ High Plains		. ,		³ Indicators of hydrophytic		
	cky Peat or Peat (S3			(MLRA 72	•	` ,		wetland hydrology must		
	, (., (=::::,		•		•		disturbed or problematic		
Restrictive	Layer (if present):							Hydric Soil Present?		
Type:(Compacted	_	Deptl	h (inches): 12				☐ Yes		
Remarks: No hydric soil indicator is present.										
ixemaiks. Ivi	o riyunc son mulcato	i is presei	ιι.							
HYDROLOG										
•	drology Indicators							0 1 1 1 7 70		
Primary Indi	cators (minimum of	one requir	ed; ch	eck all that apply	<u>)</u>			Secondary Indicators (2	or more required)	
☐ Surface \	` '		-	☐ Salt Crust (B1	,			☐ Surface Soil Cracks (B6)		
	er Table (A2)			Aquatic Inverte				☐ Sparsely Vegetated Concave Surface (B8)		
☐ Saturatio				Hydrogen Sulf				Drainage Patterns (E		
☐ Water Ma	` '		-	Dry-Season W		` ,			res on Living Roots (C3)	
	t Deposits (B2)		l	Oxidized Rhize		s on Living I	Roots (C3)	(where tilled)	٥١	
☐ Drift Dep			1	(where not to ☐ Presence of R	-	Iron (C4)		☐ Crayfish Burrows (Ca		
	or Crust (B4)			Thin Muck Sur		` '		☐ Geomorphic Position	• • • •	
☐ Iron Depo		(D		Other (Explain				☐ FAC-Neutral Test (D		
· 	n Visible on Aerial I	magery (B	/) l	_ Other (Explain	III IXCIII	iaino)		☐ Frost-Heave Hummo	,	
□ water-St	ained Leaves (B9)									
Field Obser	vations:	Yes	No	Depth (inches)			ed Data (strear , if available:	m gauge, monitoring well,	aerial photos, previous	
Surface Wat	er present?		\boxtimes	•		, ,	,			
Water Table	•									
Saturation P	•	_								
			\boxtimes							
	oillary fringe)		\boxtimes							
	drology Present?	<u> </u>								
Remarks: No	wetland hydrology	indicators	are p	resent.						

Project/Site: Sweetland Wind Project	Ci	ty/County: _	Hand Coun	y Sampling Date: 6/28/20	18	
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-6				
Investigator(s): T. Beemer, W. Hirst		Section		Range: S14, T111N, R67W		
Landform (hillslope, terrace, etc.) swale	Loc	al relief (conc			0 %	
Subregion (LRR): Northern Great Plains Spring Wheat Re	egion	Lat: 44.423	495	Long: -98.858857 Datum: NAD		
Soil Map Unit Name: Glenham loam, undulating	zgion	11.120	400	NWI Classification: PABFh	<u> </u>	
Are climate/hydrologic conditions on the site typical for this tim	ne of vear?	Yes	□No	(If no, explain in Remarks.)		
, , , , , , , , , , , , , , , , , , ,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			(,,,		
Vegetation Soil Hydrolog	gy	Are "No	rmal Circun	stances" present? X Yes No		
Significantly Disturbed?	ed, explain	any answers in Remarks.)				
Naturally Problematic?						
SUMMARY OF FINDINGS – Attach site map showing	samplin	g point loca	ations, tra	nsects, important features, etc.		
Yes No	Remar	ks: Upland sa	mple plot.			
Hydrophytic Vegetation Present?						
Hydric Soil Present?						
Wetland Hydrology Present?						
Is the Sampled Area within a Wetland?						
VEGETATION – Use scientific names of plants						
	Absolute	Dominant	Indicator	Dominance Test Worksheet:		
` —	% Cover	Species?	Status	Number of Dominant Species that		
1 2.	<u>%</u> %			are OBL, FACW, or FAC		
2. 3.	<u> </u>			(excluding FAC-):	<u>)</u> (A)	
4.				Total Number of Dominant	(D)	
	0 %	= Total Cove	er	Species Across All Strata:1	<u>I_</u> (B)	
Sapling/Shrub Stratum (Plot size: 15')				Percent of Dominant Species that	(
1	<u>%</u>			are OBL, FACW, or FAC: 0%	<u>(</u> A/B)	
2	<u>%</u>			Prevalence Index Worksheet:		
3	<u>%</u>			Total 9/ Cover et: Multiply by		
4	<u>%</u>			Total % Cover of: Multiply by OBL species % x 1 =	<u>y. </u>	
5	<u>%</u> 0 %	= Total Cove		· — —	0	
Herb Stratum (Plot size: 5')	0 70	= Total Cove	ž1		0	
1. Poa pratensis	100 %	Υ	FACU		0	
2.	%			· — — — — — — — — — — — — — — — — — — —	<u>0</u>	
3	<u>%</u>			·	<u>0</u> (B)	
4	<u>%</u>			Prevalence Index = B/A =		
5	%			Hydrophytic Vegetation Indicators:		
6	<u>%</u>			☐ 1 Rapid Test for Hydrophytic Vegetation		
7 8	<u>%</u>			2 Dominance Test is >50%		
9.				☐ 3 Prevalence Index is ≤3.0¹		
10.	%			_		
Woody Vine Stratum (Plot size: <u>30'</u>)	<u>100 %</u>	= Total Cove	er	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate s	heet)	
1	<u></u> %			☐ Problematic Hydrophytic Vegetation¹ (ex	plain)	
2	<u>%</u>			¹ Indicators of hydric soil and wetland hydrol		
	0 %	= Total Cove	er	must be present, unless disturbed or problem	matic	
Bare Ground in Herb Stratum0 %				Hydrophytic Vegetation Present? ☐ Yes	⊠ No	
Remarks: Hydrophytic vegetation is not present. Photograph	C-32.					

SOIL Sampling Point: SP-600

Profile Desc	ription: (Describe	to the depti	n needed to docum	ent the ind	licator o	r confirm the	absence of indicators.)		
Depth	Matrix		Red	lox Feature	s				
(inches)	Color (moist)	%	Color (moist)	% T	Гуре¹	Loc ²	Texture	Remarks	
0-12	10YR 3/2	100					Silt Loam		
-									
-									
					 -				
					 .				
-	-				 .				
-									
¹Type: C=Co	oncentration, D=Dep	oletion, RM=	Reduced Matrix, CS	=Covered o	r Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil	ndicators: (Applic	able to all L	RRs, unless other	wise noted	.)		Indicators for Problem	atic Hydric Soils³:	
☐ Histosol (A1)		☐ Sandy Gley	ed Matrix (S4)		1 cm Muck (A9) (LRF	R I, J)	
☐ Histic Epi	pedon (A2)		☐ Sandy Red	ox (S5)			☐ Coast Prairie Redox	(A16) (LRR F, G, H)	
☐ Black His	` '		☐ Stripped Ma	. ,			☐ Dark Surface (S7) (L		
☐ Hydrogen			Loamy Muc				☐ High Plains Depressi	ons (F16)	
	Layers (A5) (LRR F		Loamy Gley		(F2)		(LRR H outside of I	•	
	k (A9) (LRR F, G, F		☐ Depleted M		>		☐ Reduced Vertic (F18)☐ Red Parent Material (
_ ·	Below Dark Surface	e (A11)	☐ Redox Dark	,	,		☐ Very Shallow Dark S	` '	
	k Surface (A12)		☐ Depleted D		. ,		☐ Other (Explain in Rer	, ,	
□ Sandy Mucky Mineral (S1) □ Redox Depressions (F8) □ Other (Explain in Remarks) □ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) □ High Plains Depressions (F16) ³Indicators of hydrophytic vegetation and									
	ky Peat or Peat (S3		(MLRA 72				wetland hydrology must		
	,	, (=:::: ,	`		,		disturbed or problematic		
Restrictive I	_ayer (if present):						Hydric Soil Present?		
Type: C	Compacted	_ De	epth (inches): 12				☐ Yes ☒ No		
Remarks: No hydric soil indicator is present.									
Remarks. No	Tryunc son muicato	i is preserit.							
HYDROLOG	v								
_	drology Indicators:		abaaball that anaba	`			0		
	,	one requirea:	check all that apply	-			Secondary Indicators (2		
☐ Surface V	` '		☐ Salt Crust (B1	,			Surface Soil Cracks (B6)		
	er Table (A2)		☐ Aquatic Inverte				☐ Sparsely Vegetated		
☐ Saturation	` '		☐ Hydrogen Sulf				☐ Drainage Patterns (E	,	
☐ Water Ma	` '		☐ Dry-Season W☐ Oxidized Rhize		. ,	Pooto (C2)	(where tilled)	res on Living Roots (C3)	
☐ Drift Depo	Deposits (B2)		(where not		i Living F	(C3)	☐ Crayfish Burrows (C	8)	
-	or Crust (B4)		☐ Presence of R	-	n (C4)		☐ Saturation Visible on		
☐ Iron Depo			☐ Thin Muck Sur		(-)		☐ Geomorphic Position	• • • •	
	n Visible on Aerial Ir	magery (B7)	☐ Other (Explain		s)		☐ FAC-Neutral Test (D		
<u> </u>	ained Leaves (B9)	-3-7()					☐ Frost-Heave Hummo	ocks (D7) (LRR F)	
Field Obser	vations:		Depth	Describe	Recorde	ed Data (strea	m gauge, monitoring well,	aerial photos, previous	
		Yes N	o (inches)			if available:		, ,,	
Surface Water	er present?		 _						
Water Table	present?		 _						
Saturation P	resent?		 _						
(includes cap	oillary fringe)								
Wetland Hy	drology Present?		3						
Remarks: W	etland hydrology ind	icator D2 is	met.						

Project/Site: Sweetland Wind Project	City/County:	Hand Count	.y	Sampling Date: 6/28/2018
Applicant/Owner: Sweetland Wind Farm, LLC		S	Sampling Point: SP-603	
Investigator(s): T. Beemer, W. Hirst	Section		Range: S11, T	
Landform (hillslope, terrace, etc.) toeslope	Local relief (conc			01 (01)
Subregion (LRR): Northern Great Plains Spring Wheat Region	– _{on Lat: 44.437}	' 162	Long: -98.85	D-1
Soil Map Unit Name: Glenham-Prosper loams, 0 to 2 percent			NWI Class	 -
Are climate/hydrologic conditions on the site typical for this time of		□ No	(If no, explain in	
Vegetation Soil Hydrology	Are "No	rmal Circum	stances" present?	? ⊠ Yes □ No
Significantly Disturbed?	(If neede	ed, explain a	any answers in Re	emarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	ampling point loc	ations tra	neacte import	ant features, etc
Yes No Hydrophytic Vegetation Present? □ ⊠	Remarks: Upland sa	ample plot a	djacent to PEM W	-552.
Hydric Soil Present?				
Wetland Hydrology Present? □ ⊠				
Is the Sampled Area within a Wetland?				
VEGETATION – Use scientific names of plants				
•	naluta Dominant	Indicator	Deminence Tee	nt Waylohaati
	solute Dominant Cover Species?	Indicator Status	Dominance Tes	
1	<u>.</u>		Number of Domi are OBL, FACW	inant Species that
2	<u>%</u>		(excluding FAC-	
3	<u>%</u>		Total Number of	Dominant
4			Species Across	
Sapling/Shrub Stratum (Plot size: 15')	<u>0 %</u> = 10tal Cove	əi	Percent of Domi	inant Species that
1.	<u> </u>		are OBL, FACW	/, or FAC:0%(A/B)
2.	%		Prevalence Inde	ov Workshoot
3	<u></u>			
4	<u></u>		Total % Co	
5	<u>%</u>		OBL species FACW species	${}$ ${$
	0 % = Total Cove	er	FAC species	${}$ ${$
Herb Stratum (Plot size: <u>5'</u>) 1. Poa pratensis 1	00 % Y	FACU	FACU species	% x 4 = 0
2	<u>%</u>	1700	UPL species	% x 5 = <u>0</u>
3.	%		Column Totals:	0% (A)0(B)
4	%		Prevalence Inde	ex = B/A =
5	<u>%</u>		Hydrophytic Ve	egetation Indicators:
6	<u>%</u>		☐ 1 Panid Test	for Hydrophytic Vegetation
7	<u>%</u>		☐ 2 Dominance	, , , ,
8	<u> </u>		_	
10.	%		3 Prevalence	
Woody Vine Stratum (Plot size: 30')	00 % = Total Cove	er	☐ 4 Morphologi supporting data in	ical Adaptations ¹ (Provide n Remarks or on a separate sheet)
1	<u></u>		☐ Problematic I	Hydrophytic Vegetation ¹ (explain)
2	<u>%</u>			ydric soil and wetland hydrology t, unless disturbed or problematic
	<u>0 70</u> = 10tai 00v0	oi.		getation Present? Yes No
Bare Ground in Herb Stratum0 % Remarks: Hydrophytic vegetation is not present. Photograph C-3	33			
Tromands. Hydrophysic vegetation is not present. Photograph C-				

SOIL Sampling Point: SP-603

Profile Desc	ription: (Describe	to the dep	th needed to docum	nent the in	dicator o	or confirm the	absence of indicators.)		
Depth	Matrix		Re	dox Feature	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-12	10YR 3/2	100					Silt Loam		
		. ——							
	-	· —— ·							
-			-						
-	-	· —— ·							
¹Type: C=Co	oncentration, D=De	oletion, RM=	=Reduced Matrix, CS	=Covered	or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless other	wise noted	d.)		Indicators for Problem	atic Hydric Soils ³ :	
☐ Histosol (A1)		☐ Sandy Gley	yed Matrix	(S4)		1 cm Muck (A9) (LR	R I, J)	
☐ Histic Epi	pedon (A2)		☐ Sandy Red	lox (S5)			☐ Coast Prairie Redox	(A16) (LRR F, G, H)	
☐ Black His	tic (A3)		☐ Stripped M	atrix (S6)			☐ Dark Surface (S7) (L	.RR G)	
☐ Hydrogen	Sulfide (A4)		☐ Loamy Mud	cky Mineral	l (F1)		☐ High Plains Depress		
☐ Stratified	Layers (A5) (LRR F	-)	☐ Loamy Gle	yed Matrix	(F2)		_ (LRR H outside of	•	
1 cm Muc	k (A9) (LRR F, G, F	H)	□ Depleted M				Reduced Vertic (F18	,	
•	Below Dark Surface	e (A11)	Redox Dar	,	•		Red Parent Material	• •	
	k Surface (A12)		Depleted D		. ,		☐ Very Shallow Dark S	, ,	
	ucky Mineral (S1)		Redox Dep	,	,		Other (Explain in Re	marks)	
	ucky Peat or Peat (•	, ,		³ Indicators of hydrophyt		
☐ 5 cm Muc	ky Peat or Peat (S3	3) (LRR F)	(WLRA 72	& 73 of LI	KK H)		wetland hydrology must disturbed or problematic		
Restrictive I	_ayer (if present):						Hydric Soil Present?		
Type: C	Compacted	_ [Depth (inches): 12				☐ Yes ⊠ No		
Remarks: No hydric soil indicator is present.									
	,	•							
HYDROLOG	ìΥ								
Wetland Hyd	drology Indicators	:							
Primary India	cators (minimum of	one required	d; check all that apply	<u>/)</u>			Secondary Indicators (2	or more required)	
☐ Surface V	Vater (A1)		☐ Salt Crust (B1	1)			☐ Surface Soil Cracks (B6)		
_	er Table (A2)		☐ Aquatic Invert	,	13)		☐ Sparsely Vegetated Concave Surface (B8)		
☐ Saturation			☐ Hydrogen Suli				☐ Drainage Patterns (I	, ,	
☐ Water Ma			☐ Dry-Season W					res on Living Roots (C3)	
☐ Sediment	Deposits (B2)		Oxidized Rhiz		n Living	Roots (C3)	(where tilled)	· ,	
☐ Drift Depo	osits (B3)		(where not	-			Crayfish Burrows (C		
☐ Algal Mat	or Crust (B4)		☐ Presence of R		n (C4)		☐ Saturation Visible or	• • • •	
☐ Iron Depo			☐ Thin Muck Su				Geomorphic Position		
	n Visible on Aerial I	magery (B7)	Other (Explain	ın Remark	KS)		☐ FAC-Neutral Test (□	,	
☐ Water-Sta	ained Leaves (B9)						☐ Frost-Heave Humm	DCKS (D7) (LKK F)	
Field Obser	vations:	Yes I	Depth No (inches)			ed Data (strear	m gauge, monitoring well,	aerial photos, previous	
Surface Wate	er nresent?		\boxtimes	ii ispecti	J. 10, U.U.)	, ii availabic.			
	•								
Water Table	•		×						
Saturation P			×						
(includes cap			lacktriangle						
	drology Present?								
Remarks: No	wetland hydrology	indicators a	ire present.						

Project/Site: Sweetland Wind Project	Ci	ity/County:	Hand Coun	ty Sampling Date: 10/16/2018
Applicant/Owner: Sweetland Wind Farm, LLC		state: SD Sampling Point: SP-606		
Investigator(s): T. Beemer, W. Hirst		Section	n, Township	, Range:
Landform (hillslope, terrace, etc.) drainage	Loc	al relief (conc		•
Subregion (LRR): Northern Great Plains Spring Wheat I	Region	Lat: 44.382	675	Long: -98.780460 Datum: NAD83
Soil Map Unit Name: Betts-Java loams, steep	rtogion	44.002	.070	NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this t	time of vear?	? X Yes	□No	(If no, explain in Remarks.)
, , , , , , , , , , , , , , , , , , ,				(,,,
Vegetation Soil Hydrol	logy	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?	ed, explain	any answers in Remarks.)		
Naturally Problematic?				
SUMMARY OF FINDINGS – Attach site map showin	ıg samplin	g point loca	ations, tra	nsects, important features, etc.
Yes No		rks: Wetland s	sample plot	located in PEM W-554.
Hydrophytic Vegetation Present?				
Hydric Soil Present?				
Wetland Hydrology Present?				
Is the Sampled Area within a Wetland?	1			
VEGETATION – Use scientific names of plants				
	Absolute	Dominant	Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species that
1 2.	<u>%</u> %			are OBL, FACW, or FAC
3.				(excluding FAC-):(A)
4.	%			Total Number of Dominant
	0 %	= Total Cove	er	Species Across All Strata:(B)
Sapling/Shrub Stratum (Plot size: 15')				Percent of Dominant Species that are OBL, FACW, or FAC: (A/B)
1	<u>%</u>			are OBL, FACW, OFFAC(AVB)
2.	<u>%</u>			Prevalence Index Worksheet:
3	<u>%</u>			Total % Cover of: Multiply by:
4 5.	<u>%</u> %			OBL species
J	0 %	= Total Cove	<u></u>	FACW species
Herb Stratum (Plot size: 5')				FAC species
1. Spartina pectinata	90 %	<u>Y</u>	FACW	FACU species% x 4 =0
2. Xanthium strumarium	<u>5 %</u>	N	_FAC	UPL species% x 5 =0 Column Totals:0% (A)0(B)
3	<u>%</u>			
4	<u></u> %			Prevalence Index = B/A =
5	<u>%</u>			Hydrophytic Vegetation Indicators:
6	<u>%</u> %			
8.				2 Dominance Test is >50%
9.	%			☐ 3 Prevalence Index is ≤3.01
10	<u></u> %			☐ 4 Morphological Adaptations¹ (Provide
Woody Vine Stratum (Plot size: 30')	<u>95 %</u>	= Total Cove	er	supporting data in Remarks or on a separate sheet)
1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)
2	<u>%</u>			¹ Indicators of hydric soil and wetland hydrology
	0 %	= Total Cove	er	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum5 %				Hydrophytic Vegetation Present? ⊠ Yes ☐ No
Remarks: Rapid test for hydrophytic vegetation is met. Phot	tograph C-3	4.		

SOIL Sampling Point: SP-606

	inpulon. (Describe	to the depi	th needed to docui	ment the	indicator c	or confirm the	absence of indicators.)						
Depth Matrix Redox Features													
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks					
0-2	10YR 2/1	100					silty clay loam						
2-8	10YR 2/2	90	10YR 5/4	10	C	M	clay						
8-20	10YR 5/1	60	10YR 2/2	30	<u>C</u>	M	clay						
-			10YR 5/4	10	C	M							
-													
-			·										
-													
¹Type: C=Co	oncentration, D=Dep	oletion, RM=	Reduced Matrix, C	S=Cover	ed or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix					
Hydric Soil I	Indicators: (Applic	able to all	LRRs, unless othe	rwise no	oted.)		Indicators for Problema	atic Hydric Soils³:					
☐ Histosol (A1)		☐ Sandy Gle	eyed Mat	rix (S4)		1 cm Muck (A9) (LRF	R I, J)					
☐ Histic Epi	pedon (A2)		☐ Sandy Re	dox (S5)			☐ Coast Prairie Redox ((A16) (LRR F, G, H)					
☐ Black His	` '		☐ Stripped N	,	,		☐ Dark Surface (S7) (LI						
☐ Hydrogen			Loamy Mu	-	. ,		High Plains Depression	ons (F16)					
	Layers (A5) (LRR F		Loamy Gl	-			(LRR H outside of I	•					
	ck (A9) (LRR F, G, H		□ Depleted I □ Depleted I				☐ Reduced Vertic (F18)☐ Red Parent Material (
	Below Dark Surface	(A11)	☐ Redox Da		. ,		☐ Very Shallow Dark St	• •					
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7)							•						
□ Sandy Mucky Mineral (S1) □ Redox Depressions (F8) □ Other (Explain in Remarks)													
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) ☐ High Plains Depressions (F16) ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) ☐ (MLRA 72 & 73 of LRR H) ☐ wetland hydrology must be present, unless													
disturbed or problematic													
Restrictive I	Layer (if present):						Hydric Soil Present?						
Type:		_ D	epth (inches):				⊠ Yes □ No						
Remarks: Hydric soil indicator F3 and F6 are met.													
Remarks. Hy	runc son mulcator F3	aliu Fo ale	inet.										
LIVERGLOG													
HYDROLOG													
144 41 111													
_	drology Indicators:		le abade all that app	h.)			Secondary Indicators (2	l or more required\					
Primary Indic	drology Indicators: cators (minimum of c		_				Secondary Indicators (2						
Primary Indic	drology Indicators: cators (minimum of c		☐ Salt Crust (B	11)			☐ Surface Soil Cracks	(B6)					
Primary Indic ☐ Surface V ☐ High Wate	drology Indicators: cators (minimum of control (A1) er Table (A2)		☐ Salt Crust (B	11) rtebrates			☐ Surface Soil Cracks ☐ Sparsely Vegetated	(B6) Concave Surface (B8)					
Primary Indic ☐ Surface V ☐ High Wate	drology Indicators: cators (minimum of c Vater (A1) er Table (A2) n (A3)		☐ Salt Crust (B☐ Aquatic Inver☐ Hydrogen Su	11) rtebrates ilfide Odd	or (C1)		☐ Surface Soil Cracks☐ Sparsely Vegetated ☐ Drainage Patterns (E	(B6) Concave Surface (B8) 310)					
Primary Indic Surface V High Wate Saturation Water Ma	drology Indicators: cators (minimum of c Vater (A1) er Table (A2) n (A3) urks (B1)		☐ Salt Crust (B☐ Aquatic Inver☐ Hydrogen Su☐ Dry-Season \	 11) rtebrates ilfide Odd Water Ta	or (C1) ble (C2)	Poots (C2)	☐ Surface Soil Cracks☐ Sparsely Vegetated ☐ Drainage Patterns (E☐ Oxidized Rhizospher	(B6) Concave Surface (B8)					
Primary Indic Surface V High Wate Saturation Water Ma Sediment	drology Indicators: cators (minimum of converted (A1) er Table (A2) in (A3) arks (B1) Deposits (B2)		☐ Salt Crust (B☐ Aquatic Inver☐ Hydrogen Su☐ Dry-Season \☐ Oxidized Rhi:	 11) rtebrates ilfide Odo Water Ta zosphere	or (C1) ble (C2)	Roots (C3)	☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ ☐ Drainage Patterns (E ☐ Oxidized Rhizospher (where tilled)	(B6) Concave Surface (B8) B10) res on Living Roots (C3)					
Primary Indic Surface V High Wate Saturatior Water Ma Sediment Drift Depo	drology Indicators: cators (minimum of converted (A1) er Table (A2) en (A3) arks (B1) de Deposits (B2) posits (B3)		☐ Salt Crust (B☐ Aquatic Inver☐ Hydrogen Su☐ Dry-Season \☐ Oxidized Rhi:	11) rtebrates ilfide Odd Water Ta zosphere t tilled)	or (C1) ble (C2) es on Living	Roots (C3)	☐ Surface Soil Cracks ☐ Sparsely Vegetated (☑ Drainage Patterns (E) ☐ Oxidized Rhizospher (where tilled) ☐ Crayfish Burrows (C&	(B6) Concave Surface (B8) B10) res on Living Roots (C3)					
Primary Indic Surface V High Wate Saturatior Water Ma Sediment Drift Depo	drology Indicators: cators (minimum of or Vater (A1) er Table (A2) in (A3) arks (B1) Deposits (B2) posits (B3) or Crust (B4)		☐ Salt Crust (B☐ Aquatic Inver☐ Hydrogen Su☐ Dry-Season \☐ Oxidized Rhi:	ntebrates ulfide Odd Water Ta zosphere t tilled)	or (C1) ble (C2) es on Living Iron (C4)	Roots (C3)	☐ Surface Soil Cracks ☐ Sparsely Vegetated (☐ Drainage Patterns (E) ☐ Oxidized Rhizospher (where tilled) ☐ Crayfish Burrows (Ct) ☐ Saturation Visible on	(B6) Concave Surface (B8) B10) res on Living Roots (C3) A Aerial Imagery (C9)					
Primary Indic Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat	drology Indicators: cators (minimum of control of contr	one required	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season \ Oxidized Rhi: (where not Thin Muck Si	ntebrates ulfide Odd Water Ta zosphere t tilled) Reduced urface (C	or (C1) ble (C2) es on Living Iron (C4) 7)	Roots (C3)	☐ Surface Soil Cracks ☐ Sparsely Vegetated (☑ Drainage Patterns (E) ☐ Oxidized Rhizospher (where tilled) ☐ Crayfish Burrows (C&	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2)					
Primary Indic Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation	drology Indicators: cators (minimum of or Vater (A1) er Table (A2) in (A3) arks (B1) Deposits (B2) posits (B3) or Crust (B4)	one required	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season \ Oxidized Rhi: (where not Thin Muck Si	ntebrates ulfide Odd Water Ta zosphere t tilled) Reduced urface (C	or (C1) ble (C2) es on Living Iron (C4) 7)	Roots (C3)	□ Surface Soil Cracks □ Sparsely Vegetated □ □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (Ca □ Saturation Visible on □ Geomorphic Position	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) In (D2) 15)					
Primary Indic Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation	cators (minimum of control (Management) Vater (A1) er Table (A2) n (A3) arks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) n Visible on Aerial Interpated Leaves (B9)	one required	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season \ Oxidized Rhi: (where not Thin Muck Si	11) rtebrates ulfide Odd Water Ta zosphere t tilled) Reduced urface (C	or (C1) ble (C2) s on Living Iron (C4) 7) narks)		□ Surface Soil Cracks □ Sparsely Vegetated □ □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (Ca □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)					
Primary Indic Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta	cators (minimum of control (Management) Vater (A1) er Table (A2) n (A3) arks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) n Visible on Aerial Interpated Leaves (B9)	ne required	☐ Salt Crust (B☐ Aquatic Inver☐ Hydrogen Su☐ Dry-Season N☐ Oxidized Rhi:	11) rtebrates ilfide Odd Water Ta zosphere t tilled) Reduced urface (C in in Rem	or (C1) ble (C2) es on Living lron (C4) 7) narks) cribe Record		□ Surface Soil Cracks □ Sparsely Vegetated © □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (Ca □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)					
Primary Indic Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta	drology Indicators: cators (minimum of control of contr	nagery (B7)	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season \ Oxidized Rhi: (where not Presence of I Thin Muck Su Other (Explai	11) rtebrates ilfide Odd Water Ta zosphere t tilled) Reduced urface (C in in Rem	or (C1) ble (C2) es on Living lron (C4) 7) narks) cribe Record	ed Data (strea	□ Surface Soil Cracks □ Sparsely Vegetated □ □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (Ca □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)					
Primary Indic Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Water Water Table	drology Indicators: cators (minimum of or Vater (A1) er Table (A2) in (A3) arks (B1) in Deposits (B2) osits (B3) or Crust (B4) osits (B5) in Visible on Aerial In ained Leaves (B9) vations: er present?	nagery (B7)	☐ Salt Crust (B☐ Aquatic Inver☐ Hydrogen Su☐ Dry-Season V☐ Oxidized Rhi: (where not☐ Presence of ☐ Thin Muck Su☐ Other (Explait	11) rtebrates ilfide Odd Water Ta zosphere t tilled) Reduced urface (C in in Rem	or (C1) ble (C2) es on Living lron (C4) 7) narks) cribe Record	ed Data (strea	□ Surface Soil Cracks □ Sparsely Vegetated □ □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (Ca □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)					
Primary Indic Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Water	drology Indicators: cators (minimum of or Vater (A1) er Table (A2) in (A3) arks (B1) in Deposits (B2) osits (B3) or Crust (B4) osits (B5) in Visible on Aerial In ained Leaves (B9) vations: er present?	nagery (B7)	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season \ Oxidized Rhi: (where not Presence of Thin Muck Su Other (Explain	11) rtebrates ilfide Odd Water Ta zosphere t tilled) Reduced urface (C in in Rem	or (C1) ble (C2) es on Living lron (C4) 7) narks) cribe Record	ed Data (strea	□ Surface Soil Cracks □ Sparsely Vegetated □ □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (Ca □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)					
Primary Indic Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Water Water Table	drology Indicators: cators (minimum of control of contr	nagery (B7)	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season N Oxidized Rhii (where not Thin Muck Si Other (Explain Depth (inches) 0	11) rtebrates ilfide Odd Water Ta zosphere t tilled) Reduced urface (C in in Rem	or (C1) ble (C2) es on Living lron (C4) 7) narks) cribe Record	ed Data (strea	□ Surface Soil Cracks □ Sparsely Vegetated □ □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (Ca □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)					
Primary Indic Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Wate Water Table Saturation Pi (includes cap	drology Indicators: cators (minimum of control of contr	nagery (B7) Yes	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season N Oxidized Rhii (where not Thin Muck Si Other (Explain Depth (inches) 0	11) rtebrates ilfide Odd Water Ta zosphere t tilled) Reduced urface (C in in Rem	or (C1) ble (C2) es on Living lron (C4) 7) harks)	ed Data (strea	□ Surface Soil Cracks □ Sparsely Vegetated □ □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (Ca □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)					
Primary Indic Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Water Water Table Saturation Pr (includes cap Wetland Hyde	drology Indicators: cators (minimum of control of contr	nagery (B7) Yes \times [\times [□ Salt Crust (B □ Aquatic Inver □ Hydrogen Su □ Dry-Season \ □ Oxidized Rhi:	11) rtebrates ilfide Odd Water Ta zosphere t tilled) Reduced urface (C in in Rem	or (C1) ble (C2) es on Living Iron (C4) 7) narks) cribe Record ections, etc.)	ed Data (strea	□ Surface Soil Cracks □ Sparsely Vegetated □ □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (Ca □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)					
Primary Indic Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Water Water Table Saturation Pr (includes cap Wetland Hyde	drology Indicators: cators (minimum of or Vater (A1) er Table (A2) n (A3) arks (B1) c Deposits (B2) posits (B3) or Crust (B4) posits (B5) n Visible on Aerial In cained Leaves (B9) vations: er present? present? present? present? present? present?	nagery (B7) Yes \times [\times [□ Salt Crust (B □ Aquatic Inver □ Hydrogen Su □ Dry-Season \ □ Oxidized Rhi:	11) rtebrates ilfide Odd Water Ta zosphere t tilled) Reduced urface (C in in Rem	or (C1) ble (C2) es on Living Iron (C4) 7) narks) cribe Record ections, etc.)	ed Data (strea	□ Surface Soil Cracks □ Sparsely Vegetated □ □ Drainage Patterns (E □ Oxidized Rhizospher (where tilled) □ Crayfish Burrows (Ca □ Saturation Visible on □ Geomorphic Position □ FAC-Neutral Test (D □ Frost-Heave Hummo	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)					

Project/Site: Sweetland Wind Project	Ci	ty/County:	Hand Coun	ty Sampling Date: 10/16/2018		
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-607				
Investigator(s): T. Beemer, W. Hirst		Section	, Township	, Range: S33, T111N, R66W		
Landform (hillslope, terrace, etc.) toeslope	Loc	al relief (conc		· · · · · · · · · · · · · · · · · · ·		
Subregion (LRR): Northern Great Plains Spring Wheat I	Region	Lat: 44,382	969	Long: -98.780482 Datum: NAD83		
Soil Map Unit Name: Betts-Java loams, steep	rtogion	44.002	500	NWI Classification: NA		
Are climate/hydrologic conditions on the site typical for this t	time of vear	? X Yes	□No	(If no, explain in Remarks.)		
, , , , , , , , , , , , , , , , , , ,				(,,,		
Vegetation Soil Hydrol	logy	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No		
Significantly Disturbed?	ed, explain	any answers in Remarks.)				
Naturally Problematic?						
SUMMARY OF FINDINGS – Attach site map showin	ng samplin	g point loca	ations, tra	nsects, important features, etc.		
Yes No		rks: Upland sa	mple plot a	djacent to PEM W-554.		
Hydrophytic Vegetation Present?						
Hydric Soil Present?						
Wetland Hydrology Present?						
Is the Sampled Area within a Wetland?						
VEGETATION – Use scientific names of plants						
	Absolute	Dominant	Indicator	Dominance Test Worksheet:		
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species that		
1 2.	<u>%</u> %			are OBL, FACW, or FAC		
3.				(excluding FAC-):0 (A)		
4.	<u>%</u>			Total Number of Dominant		
	0 %	= Total Cove	er	Species Across All Strata: 2 (B)		
Sapling/Shrub Stratum (Plot size: 15')				Percent of Dominant Species that are OBL, FACW, or FAC:0%_(A/B)		
1	<u>%</u>			are OBL, I ACW, OFF AC.		
2.	<u>%</u>			Prevalence Index Worksheet:		
3	<u>%</u>			Total % Cover of: Multiply by:		
4 5.	<u>%</u> %			OBL species		
J	0 %	= Total Cove	er	FACW species% x 2 =0		
Herb Stratum (Plot size: 5')				FAC species% x 3 =0		
1. <u>Bromus inermis</u>	50 %	<u> </u>	UPL	FACU species% x 4 =0		
2. Poa pratensis	50 %	<u> </u>	FACU	UPL species% x 5 =0 Column Totals:0% (A)0 (B)		
3	<u>%</u>					
4	<u>%</u>			Prevalence Index = B/A =		
5	<u>%</u>			Hydrophytic Vegetation Indicators:		
6	<u>//</u>			☐ 1 Rapid Test for Hydrophytic Vegetation		
8.	<u>%</u>			☐ 2 Dominance Test is >50%		
9.	%			☐ 3 Prevalence Index is ≤3.01		
10	<u>%</u>			☐ 4 Morphological Adaptations¹ (Provide		
Woody Vine Stratum (Plot size: 30')	<u>100 %</u>	= Total Cove	er	supporting data in Remarks or on a separate sheet)		
1	<u>%</u>			☐ Problematic Hydrophytic Vegetation¹ (explain)		
2	%			¹ Indicators of hydric soil and wetland hydrology		
	0 %	= Total Cove	er	must be present, unless disturbed or problematic		
Bare Ground in Herb Stratum _ 0 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No		
Remarks: Hydrophytic vegetation is not present. Photograp	h C-35.			1		

SOIL Sampling Point: SP-607

Profile Desc	ription: (Describe	to the d	epth n	eeded to docun	nent the	indicator o	or confirm the	absence of indicators.)		
Depth	Matrix			Re	dox Fea	tures				
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 3/2	100						Silt Loam		
6-18	10YR 3/3	100						Silt Loam		
-										
-										
	-									
¹Type: C=Co	oncentration, D=De	pletion, R	M=Re	duced Matrix, CS	=Cover	ed or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil	ndicators: (Appli	cable to a	all LRF	Rs, unless other	wise no	oted.)		Indicators for Problema	atic Hydric Soils³:	
☐ Histosol (A1)			☐ Sandy Gle	yed Mat	rix (S4)		1 cm Muck (A9) (LRF	R I, J)	
☐ Histic Epi	pedon (A2)			☐ Sandy Red	lox (S5)			☐ Coast Prairie Redox ((A16) (LRR F, G, H)	
☐ Black His	tic (A3)			☐ Stripped M	atrix (Se	6)		☐ Dark Surface (S7) (L	RR G)	
	Sulfide (A4)			☐ Loamy Mu				☐ High Plains Depressi		
	Layers (A5) (LRR F			☐ Loamy Gle	-	, ,		(LRR H outside of I	•	
	k (A9) (LRR F, G, I			☐ Depleted N				Reduced Vertic (F18)		
	Below Dark Surface	e (A11)		Redox Dar		, ,		Red Parent Material (,	
	k Surface (A12)			☐ Depleted □		. ,		☐ Very Shallow Dark St	, ,	
-	ucky Mineral (S1)			☐ Redox Dep				Other (Explain in Ren	narks)	
	ucky Peat or Peat (` ,		³ Indicators of hydrophytic		
☐ 5 cm Muc	ky Peat or Peat (S	3) (LRR F)	(MLRA 72	& 73 O	I LKK H)		wetland hydrology must disturbed or problematic		
Restrictive I	_ayer (if present):							Hydric Soil Present?		
Type:		_	Dept	h (inches):				☐ Yes		
Remarks: No hydric soil indicator is present.										
Remarks. No	riyane son malcale	i is prese	TIL.							
HYDROLOG	v									
	trology Indicators									
·	cators (minimum of		rad: ch	seck all that apply	Λ			Secondary Indicators (2	or more required)	
	•	one requi			_			_		
☐ Surface V	` '			Salt Crust (B1	,	(D.40)		☐ Surface Soil Cracks (B6)		
	er Table (A2)			Aquatic Invert				☐ Sparsely Vegetated Concave Surface (B8)		
☐ Saturation☐ Water Ma				☐ Hydrogen Sul ☐ Dry-Season V				☐ Drainage Patterns (E	res on Living Roots (C3)	
_	Deposits (B2)			☐ Dry-Season v		` ,	Booto (C2)	(where tilled)	es on Living Roots (C3)	
☐ Drift Depo				(where not		5 OII LIVING	Roots (C3)	☐ Crayfish Burrows (Ca	3)	
	or Crust (B4)			☐ Presence of F		Iron (C4)		☐ Saturation Visible on		
☐ Iron Depo				 ☐ Thin Muck Su		` '		☐ Geomorphic Position	• • • •	
	n Visible on Aerial I	magery (E		Other (Explair				☐ FAC-Neutral Test (D		
	ained Leaves (B9)		,					☐ Frost-Heave Hummo	ocks (D7) (LRR F)	
Field Obser	. ,			Depth	Door	ribo Dogord	ad Data (atroor	m gauge, monitoring well,	aarial phataa, praviaus	
Field Obser	vations.	Yes	No	(inches)			, if available:	ir gauge, morntoring wen,	aeriai priotos, previous	
Surface Wate	er present?		\boxtimes			,				
Water Table	present?		\boxtimes							
Saturation P	•									
(includes car			الاست							
	drology Present?		\boxtimes							
	wetland hydrology			present						
. tomano. No		idiodioli	- u, o p							
I										

Project/Site: Sweetland Wind Project	City/County: Hand County Sampling Date: 10/16/20				
Applicant/Owner: Sweetland Wind Farm, LLC	State: SD Sampling Point: SP				
Investigator(s): T. Beemer, W. Hirst	Section, Township				
Landform (hillslope, terrace, etc.) swale	Local relief (concave, convex	-			
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.384156	Long: -98.792923 Datum: NAD83			
Soil Map Unit Name: Glenham loam, undulating		NWI Classification: PEM1Ad			
Are climate/hydrologic conditions on the site typical for this time of	year? 🛛 Yes 🗌 No	(If no, explain in Remarks.)			
Vegetation Soil Hydrology	Are "Normal Circun	nstances" present? 🛛 Yes 🔲 No			
Significantly Disturbed? Naturally Problematic?	(If needed, explain a	any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sam	nnling point locations tra	ensects important features etc			
		moode, important reatures, sto.			
Yes No R Hydrophytic Vegetation Present? □ ⊠	emarks: Upland sample plot.				
Hydric Soil Present?					
Wetland Hydrology Present? □ ⊠					
Is the Sampled Area within a Wetland?					
VEGETATION – Use scientific names of plants		_			
Absol	ute Dominant Indicator	Dominance Test Worksheet:			
Tree Stratum (Plot size: 30') % Co					
1	<u>%</u>	Number of Dominant Species that are OBL, FACW, or FAC			
2	<u></u>	(excluding FAC-):0 (A)			
3	<u>%</u>	Total Number of Dominant			
4	% = Total Cover	Species Across All Strata:1 (B)			
Sapling/Shrub Stratum (Plot size: 15')	<u>%</u> = rotal Cover	Percent of Dominant Species that			
1.	%	are OBL, FACW, or FAC:0%_(A/B)			
2.	%	Dravalance Index Weyloheet			
3	<u></u>	Prevalence Index Worksheet:			
4	<u></u>	Total % Cover of: Multiply by:			
5	<u>%</u>	OBL species% x 1 =0 FACW species			
	<u>%</u> = Total Cover	FAC species			
Herb Stratum (Plot size: <u>5'</u>) 1. Bromus inermis 100)% Y UPL	FACU species			
2	<u>%</u>	UPL species% x 5 =0			
3.	%	Column Totals:0% (A)0 (B)			
4.	%	Prevalence Index = B/A =			
5	<u>%</u>	Hydrophytic Vegetation Indicators:			
6	<u>%</u>	☐ 1 Rapid Test for Hydrophytic Vegetation			
7 8.	<u>%</u>	☐ 2 Dominance Test is >50%			
8	<u>%</u>				
10.	%	3 Prevalence Index is ≤3.0¹			
) % = Total Cover	4 Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
1	%	☐ Problematic Hydrophytic Vegetation¹ (explain)			
2	<u>%</u> = Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
Bare Ground in Herb Stratum 0 %	<u> </u>	Hydrophytic Vegetation Present? ☐ Yes ☒ No			
Remarks: Hydrophytic vegetation is not present. Photograph C-36.		<u> </u>			
Tromano. Trydrophylio vogotalion io not present. I notograph 0-50.	•				

SOIL Sampling Point: SP-612

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth	Depth Matrix Redox Features											
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-8	10YR 3/3	100						Clay Loam				
8-20	10YR 3/4	100						Clay Loam				
	_											
		· ——										
¹Type: C=Co	oncentration, D=De	oletion. R	M=Re	duced Matrix, CS:	=Covere	ed or Coate		² Location: PL=Pore	Lining M=Matrix			
	Indicators: (Appli							Indicators for Problem				
☐ Histosol (∑ Sandy Gley		-		1 cm Muck (A9) (LRF	•			
☐ Histic Epi	,			☐ Sandy Red		11X (O-1)		☐ Coast Prairie Redox				
☐ Black His				☐ Stripped Ma		3)		☐ Dark Surface (S7) (L				
_	Sulfide (A4)			☐ Loamy Muc	,	,		☐ High Plains Depressi	•			
	Layers (A5) (LRR F	=)		☐ Loamy Gley				(LRR H outside of I				
	k (A9) (LRR F, G, I			☐ Depleted M				☐ Reduced Vertic (F18))			
	Below Dark Surface			☐ Redox Dark				☐ Red Parent Material	(TF2)			
	k Surface (A12)	,		☐ Depleted D		. ,		☐ Very Shallow Dark St	urface (TF 12)			
	ıcky Mineral (S1)			Redox Dep		. ,		Other (Explain in Rer	marks)			
☐ 2.5 cm M	ucky Peat or Peat (S2) (LRR	G , H)	☐ High Plains	Depres	ssions (F16)		³ Indicators of hydrophytic	c vegetation and			
5 cm Muc	ky Peat or Peat (S3	B) (LRR F)		wetland hydrology must be present, unless disturbed or problematic								
Restrictive I	_ayer (if present):			Hydric Soil Present?								
Type:		_	Dept	h (inches):				☐ Yes ☒ No				
Remarks: No hydric soil indicator is present.												
Nomans. No	Trydric 3011 Indicate	i is piese										
HYDROLOG	Υ											
·	drology Indicators											
Primary India	cators (minimum of	one requi	red; ch	neck all that apply	<u>)</u>			Secondary Indicators (2	or more required)			
☐ Surface V	Vater (A1)			Salt Crust (B1	,			☐ Surface Soil Cracks	(B6)			
	er Table (A2)		l	Aquatic Inverte	ebrates	(B13)		☐ Sparsely Vegetated Concave Surface (B8)				
☐ Saturation				☐ Hydrogen Sulf				☐ Drainage Patterns (E				
☐ Water Ma	` '			□ Dry-Season W		` ,		•	res on Living Roots (C3)			
	Deposits (B2)			Oxidized Rhize		s on Living	Roots (C3)	(where tilled)	0)			
☐ Drift Depo				(where not t		Iron (C4)		☐ Crayfish Burrows (C				
	or Crust (B4)			☐ Presence of R☐ Thin Muck Sur		` ,		☐ Saturation Visible on☑ Geomorphic Position	• • • •			
☐ Iron Depo		···		☐ Other (Explain	•	•		☐ FAC-Neutral Test (D				
	n Visible on Aerial I	magery (E	37) 1	☐ Other (Explain	III IXEII	iaiks)		☐ Frost-Heave Hummo	,			
☐ water-Sta	ained Leaves (B9)				1				JONS (D1) (ENN 1)			
Field Obser	vations:	Yes	No	Depth (inches)			ed Data (strear , if available:	m gauge, monitoring well,	aerial photos, previous			
Surface Wate	er present?		\boxtimes			,						
Water Table	present?		\boxtimes									
Saturation P	•											
(includes cap												
	drology Present?		\boxtimes									
Remarks: Wetland hydrology indicator D2 is met.												

Project/Site: Sweetland Wind Project	City/County: Han	nd County	Sampling Date: 10/16/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD	Sampling Point: SP-615
Investigator(s): T. Beemer, W. Hirst	Section, To		 Г111N, R66W
Landform (hillslope, terrace, etc.) toeslope	Local relief (concave		01 (01)
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.390799	Long: -98.79	
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 percent sl			ssification: PEM1Ad
Are climate/hydrologic conditions on the site typical for this time of y		☐ No (If no, explain in	
Vegetation Soil Hydrology	Are "Norma	al Circumstances" present	:? ⊠ Yes □ No
Significantly Disturbed?	(If needed, e	explain any answers in Re	emarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	nling noint locatio	ons transects import	ant features, etc.
Yes No Re Hydrophytic Vegetation Present? □ ☑	emarks: Upland sampl	ne piot.	
Hydric Soil Present?			
Wetland Hydrology Present? □ ⊠			
Is the Sampled Area within a Wetland?			
VEGETATION – Use scientific names of plants			
Absolu	ute Dominant Inc	dicator Dominance Te	st Worksheet
Tree Stratum (Plot size: <u>30'</u>) % Cov		Status	
1	<u> </u>	are OBL, FACW	ninant Species that V. or FAC
	<u>%</u>	(excluding FAC	
	<u>%</u>	Total Number o	f Dominant
4	% = Total Cover	Species Across	All Strata: 1 (B)
Sapling/Shrub Stratum (Plot size: 15')	<u>70</u> = 10tal 00vel		inant Species that
	<u>%</u>	are OBL, FACW	V, or FAC:0%_ (A/B)
2	<u></u>	Prevalence Ind	lex Worksheet:
	<u> </u>		
	<u>%</u>	Total % C OBL species	<u> </u>
5	% = Total Cover	FACW species	
Herb Stratum (Plot size: 5')	<u> </u>	FAC species	% x 3 = 0
1. Poa pratensis 90	% Y F	FACU FACU species	
	%	UPL species Column Totals:	${}$ \times 5 = ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$
3	<u> </u>		(,
	<u>%</u>	Prevalence Ind	lex = B/A =
	<u>%</u>	Hydrophytic Ve	egetation Indicators:
	<u>%</u>		t for Hydrophytic Vegetation
	<u>%</u>	2 Dominance	, , , ,
	<u>%</u>	☐ 3 Prevalence	
	<u> </u>	_	gical Adaptations ¹ (Provide
Woody Vine Stratum (Plot size: 30')	<u>%</u> = Total Cover	supporting data i	in Remarks or on a separate sheet)
,	<u>%</u>	Problematic	Hydrophytic Vegetation ¹ (explain)
	<u>%</u>		ydric soil and wetland hydrology
0_	<u>%</u> = Total Cover	must be presen	t, unless disturbed or problematic
Bare Ground in Herb Stratum		Hydrophytic Ve	getation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photograph C-37.			

SOIL Sampling Point: SP-615

Profile Desc	ription: (Describe	to the de	oth needed to docu	ment th	e indicator o	r confirm the	absence of indicators.)				
Depth Matrix Redox Features											
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-20	10YR 3/3	100					Clay Loam				
	-										
					. ———						
		· ——			· ——						
					·						
					· ——						
¹Type: C=Co	oncentration, D=Dep	oletion, RM	=Reduced Matrix, CS	S=Cove	red or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix			
Hydric Soil I	ndicators: (Applic	cable to all	LRRs, unless othe	rwise n	oted.)		Indicators for Problems	atic Hydric Soils³:			
☐ Histosol (A1)		☐ Sandy Gle	eyed Ma	trix (S4)		1 cm Muck (A9) (LRF	R I, J)			
☐ Histic Epi	pedon (A2)		☐ Sandy Re	dox (S5))		☐ Coast Prairie Redox ((A16) (LRR F, G, H)			
☐ Black Hist	` '		☐ Stripped N	•	•		☐ Dark Surface (S7) (LI				
☐ Hydrogen			Loamy Mu	-			☐ High Plains Depressi	ons (F16)			
	Layers (A5) (LRR F		Loamy Gl	-			(LRR H outside of I	•			
	k (A9) (LRR F, G, F		☐ Depleted I				☐ Reduced Vertic (F18)☐ Red Parent Material (
	Below Dark Surface	e (A11)	☐ Redox Da		. ,		☐ Very Shallow Dark St	,			
	k Surface (A12) ucky Mineral (S1)		☐ Depleted I		, ,		☐ Other (Explain in Ren	, ,			
	ucky Peat or Peat (\$	S2) (I RR 6	_	•	` '						
	ky Peat or Peat (S3		(MLRA 7				³ Indicators of hydrophytic wetland hydrology must				
disturbed or problematic											
Restrictive L	ayer (if present):						Hydric Soil Present?				
Type:			Depth (inches):				☐ Yes ☐ No				
Remarks: No hydric soil indicator is present.											
Remarks: No	nydric soil indicato	r is presen	i.								
	· · · · · · · · · · · · · · · · · · ·										
HYDROLOG											
_	drology Indicators			,							
Primary India	ators (minimum of o	one require	d; check all that appl	<u>y)</u>			Secondary Indicators (2	• •			
Surface V	` '		Salt Crust (B	,		Surface Soil Cracks (B6)					
☐ High Wate			Aquatic Inver		, ,		☐ Sparsely Vegetated				
Saturation	` '		☐ Hydrogen Su				☐ Drainage Patterns (E	,			
☐ Water Ma	` '		☐ Dry-Season \		. ,	Danta (CO)	(where tilled)	res on Living Roots (C3)			
	Deposits (B2)		Oxidized Rhiz		es on Living i	R001S (U3)	☐ Crayfish Burrows (Ca	3)			
☐ Drift Depo	or Crust (B4)		☐ Presence of	_	d Iron (C4)		☐ Saturation Visible on				
☐ Iron Depo			☐ Thin Muck Su		` ,		☐ Geomorphic Position	• • • •			
	n Visible on Aerial II	magery (B7					☐ FAC-Neutral Test (D				
_	ained Leaves (B9)	3-7(,				☐ Frost-Heave Hummo	ocks (D7) (LRR F)			
Field Observ	vations:		Depth	Des	cribe Record	ed Data (strea	m gauge, monitoring well,	aerial photos, previous			
		Yes	No (inches)	insp	ections, etc.)	, if available:					
Surface Water	er present?		⊠								
Water Table	•										
Saturation Pr	esent?										
(includes cap	oillary fringe)										
Wetland Hyd	drology Present?		\boxtimes								
Remarks: We	Remarks: Wetland hydrology indicators are not met.										

Project/Site: Sweetland Wind Project	C	city/County:	Hand Coun	ty Sampling Date: _10/16/2018		
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point				
Investigator(s): T. Beemer, W. Hirst		Section	n, Township	, Range: S20, T111N, R66W		
Landform (hillslope, terrace, etc.) swale	Lo	 cal relief (cond		· · · · · · · · · · · · · · · · · · ·		
Subregion (LRR): Northern Great Plains Spring Wheat		Lat: 44.404		Long: -98.801614 Datum: NAD83		
C 114	Region	44.404	1000	NAM CI (" "		
Soil Map Unit Name: Glenham-Java loams, rolling Are climate/hydrologic conditions on the site typical for this	time of year	? X Yes	□ No	(If no, explain in Remarks.)		
7 to diffrate/flydrologic doffations of the dite typical for this	time or your	. 🔼 100		(II IIo, explain in Remaine.)		
Vegetation Soil Hydro	ology	Are "No	rmal Circun	nstances" present? ☑ Yes ☐ No		
Significantly Disturbed?	ed. explain	any answers in Remarks.)				
Naturally Problematic?]	(,,	,,		
SUMMARY OF FINDINGS – Attach site map showi	ng sampliı	ng point loc	ations, tra	insects, important features, etc.		
Yes N	o Rema	rks: Wetland s	sample plot	located in PEM W-558.		
Hydrophytic Vegetation Present? □						
Hydric Soil Present?	ם					
Wetland Hydrology Present?]					
Is the Sampled Area within a Wetland?]					
VEGETATION – Use scientific names of plants	•					
VEGETATION - Use scientific findines of plants				T		
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:		
1	<u>%</u>	Ороско.	Otatao	Number of Dominant Species that		
2.	%			are OBL, FACW, or FAC (excluding FAC-): (A)		
3	<u>%</u>					
4	%			Total Number of Dominant Species Across All Strata: (B)		
	0 %	= Total Cove	er	Percent of Dominant Species that		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	0/			are OBL, FACW, or FAC: (A/B)		
1	<u>%</u> <u>%</u>					
3.	<u> </u>			Prevalence Index Worksheet:		
4.	<u></u>			Total % Cover of: Multiply by:		
5.	<u>%</u>			OBL species % x 1 =0		
	0 %	= Total Cove	er	FACW species% x 2 =0		
Herb Stratum (Plot size: 5')				FAC species % x 3 = 0		
1. Spartina pectinata	<u>100 %</u>	<u> </u>	FACW	FACU species% x 4 =0 UPL species		
2	<u></u> %			Column Totals: 0 % (A) 0 (B)		
3	<u>%</u>			Prevalence Index = B/A =		
4	<u>%</u>					
5 6	<u> </u>			Hydrophytic Vegetation Indicators:		
7	<u>%</u>			□ 1 Rapid Test for Hydrophytic Vegetation		
8.	%			☐ 2 Dominance Test is >50%		
9	%			☐ 3 Prevalence Index is ≤3.0¹		
10	<u>%</u>			☐ 4 Morphological Adaptations¹ (Provide		
Was do Vine Otestons (Dist along 00)	<u>100 %</u>	= Total Cove	er	supporting data in Remarks or on a separate sheet)		
Woody Vine Stratum (Plot size: 30') 1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)		
2.				¹ Indicators of hydric soil and wetland hydrology		
-	0 %	= Total Cove	er	must be present, unless disturbed or problematic		
Bare Ground in Herb Stratum 0 %				Hydrophytic Vegetation Present? ⊠ Yes ☐ No		
Remarks: Rapid test for hydrophytic vegetation is met. Pho	otograph C-3	38.		1		
, , , , , , , , , , , , , , , , , , , ,	5 -1					

SOIL Sampling Point: SP-616

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth	Depth Matrix Redox Features											
(inches)	Color (moist)	%	C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-6	10YR 3/2	100						Clay Loam				
6-18	10YR 3/2	95		10YR 4/6	5	C	M	Clay Loam	_			
1= 0.0								21				
	oncentration, D=De	'		· · · · · · · · · · · · · · · · · · ·			d Sand Grains	² Location: PL=Pore	-			
l <u> </u>	Indicators: (Appli	cable to a	II LKK			-		Indicators for Problema	•			
☐ Histosol (,			☐ Sandy Gle	-			1 cm Muck (A9) (LRR				
☐ Histic Epi				☐ Sandy Red				Coast Prairie Redox (
☐ Black His	` '			☐ Stripped M	,	,		☐ Dark Surface (S7) (LI	•			
	Sulfide (A4)	_		Loamy Mu				☐ High Plains Depression (LRR H outside of N				
	Layers (A5) (LRR F			Loamy Gle	-			_ `	•			
	k (A9) (LRR F, G, I			☐ Depleted N				☐ Reduced Vertic (F18)☐ Red Parent Material (
	Below Dark Surface	e (A11)		⊠ Redox Dai		, ,		☐ Very Shallow Dark St	,			
	k Surface (A12)			Depleted [. ,		Other (Explain in Ren	, ,			
	ucky Mineral (S1)	00) /I DD /	.	Redox Dep		` '						
	ucky Peat or Peat (☐ High Plain		` ,		³ Indicators of hydrophytic				
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be present, unless disturbed or problematic												
Restrictive Layer (if present): Hydric Soil Present?												
Type:	, (,-		Denth	n (inches):				⊠ Yes □ No				
Турс.			Бери	T (ITICTICS).								
	Remarks: Hydric soil indicator F6 is met.											
HYDROLOG	iΥ											
Wetland Hy	drology Indicators	:										
Primary India	cators (minimum of	one require	ed; ch	eck all that appl	y)			Secondary Indicators (2	or more required)			
☐ Surface V	Vater (A1)		Г	☐ Salt Crust (B1	11)			☐ Surface Soil Cracks	(B6)			
_	er Table (A2)		_	Aquatic Inver	,	(B13)		☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8)				
☐ Saturation				☐ Hydrogen Sul				☐ Drainage Patterns (B	, ,			
☐ Water Ma				☐ Dry-Season V				☐ Oxidized Rhizospher				
_	Deposits (B2)			Oxidized Rhiz		, ,	Roots (C3)	(where tilled)	g · · · · · · (- ·)			
☐ Drift Depo			_	(where not		3	(,	☐ Crayfish Burrows (C8	3)			
	or Crust (B4)			☐ Presence of F	Reduced	d Iron (C4)		☐ Saturation Visible on	Aerial Imagery (C9)			
☐ Iron Depo				☐ Thin Muck Su	ırface (C	C7)		☐ Geomorphic Position	(D2)			
	n Visible on Aerial I	magery (B	7) [Other (Explain	n in Ren	narks)			5)			
☐ Water-Sta	ained Leaves (B9)		,					☐ Frost-Heave Hummo	cks (D7) (LRR F)			
Field Obser	vations:	.,		Depth	Des	cribe Record	ed Data (strea	m gauge, monitoring well, a	aerial photos, previous			
		Yes	No	(inches)	insp	ections, etc.)	, if available:					
Surface Wat	er present?		\boxtimes									
Water Table	present?		\boxtimes									
Saturation P	resent?		\boxtimes									
(includes cap	oillary fringe)											
Wetland Hy	drology Present?	\boxtimes										
Remarks: Wetland hydrology indicators B10, D2 and D5 are met.												

Project/Site: Sweetland Wind Project	Cit	ty/County: _	Hand Coun	Sampling Date: 10/16/2018		
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-61				
Investigator(s): T. Beemer, W. Hirst		Section		Range: S20, T111N, R66W		
Landform (hillslope, terrace, etc.) toeslope	Loca	 al relief (conca				
Subregion (LRR): Northern Great Plains Spring Wheat R	egion L	_at: 44.404	534	Long: -98.801618 Datum: NAD83		
Soil Map Unit Name: Glenham-Java loams, rolling	togion		001	NWI Classification: NA		
Are climate/hydrologic conditions on the site typical for this tir	me of vear?	⊠ Yes	□No	(If no, explain in Remarks.)		
, ,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			(,		
Vegetation Soil Hydrolo	ogy	Are "Nor	mal Circun	nstances" present? 🛛 Yes 🔲 No		
Significantly Disturbed?		(If neede	ed, explain a	any answers in Remarks.)		
Naturally Problematic?						
SUMMARY OF FINDINGS – Attach site map showing	g samplin	g point loca	tions, tra	nsects, important features, etc.		
Yes No	Remark	ks: Upland sa	mple plot a	djacent to PEM W-558.		
Hydrophytic Vegetation Present?						
Hydric Soil Present?						
Wetland Hydrology Present?						
Is the Sampled Area within a Wetland?						
VEGETATION – Use scientific names of plants						
•	Absolute	Dominant	Indicator	Dominance Test Worksheet:		
	% Cover	Species?	Status			
1	<u>%</u>			Number of Dominant Species that are OBL, FACW, or FAC		
2	<u>%</u>			(excluding FAC-): 0 (A)		
3.	<u>%</u>			Total Number of Dominant		
4	<u>%</u> 0 %	= Total Cove		Species Across All Strata:1_(B)		
Sapling/Shrub Stratum (Plot size: 15')	<u> </u>	= Total Cove	:I	Percent of Dominant Species that		
1	%			are OBL, FACW, or FAC: 0% (A/B)		
2.	%			Drawnlance Index Westerheet		
3	%			Prevalence Index Worksheet:		
4	<u>%</u>			Total % Cover of: Multiply by:		
5	%			OBL species% x 1 =0		
	0 %	= Total Cove	r	FACW species% x 2 =0 FAC species		
Herb Stratum (Plot size: <u>5'</u>)	CF 0/	V	LIDI	FACU species		
Bromus inermis Poa pratensis	65 % 15 %	<u>Y</u> N	<u>UPL</u> FACU	UPL species % x 5 =0		
Poa pratensis Spartina pectinata	10 %	N N	FACW	Column Totals: <u>0</u> % (A) <u>0</u> (B)		
4. Trifolium repens	5 %	N	FACU	Prevalence Index = B/A =		
5	%			Hydrophytic Vegetation Indicators:		
6	<u>%</u>					
7	<u>%</u>			☐ 1 Rapid Test for Hydrophytic Vegetation		
8	<u>%</u>			☐ 2 Dominance Test is >50%		
9	<u>%</u> %			☐ 3 Prevalence Index is ≤3.0 ¹		
10 (Plut size 201)	95 %	= Total Cove	r	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)		
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)		
2.				¹ Indicators of hydric soil and wetland hydrology		
	0 %	= Total Cove	r	must be present, unless disturbed or problematic		
Bare Ground in Herb Stratum5 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No		
Remarks: Hydrophytic vegetation is not present. Photograph	n C-39.					

SOIL Sampling Point: SP-617

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth	Matrix			Red	dox Fea	tures					
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-8	10YR 3/2	100						Clay Loam			
8-20	10YR 3/3	100						Clay Loam			
	_										
¹Type: C=Cd	oncentration, D=De	nletion RI	M-Red	duced Matrix CS	=Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining M-Matrix		
	Indicators: (Applie	<u> </u>		· · · · · · · · · · · · · · · · · · ·				Indicators for Problems			
☐ Histosol (☐ Sandy Gley		-		1 cm Muck (A9) (LRF	•		
☐ Histosof (,			☐ Sandy Red				☐ Coast Prairie Redox (
☐ Black His				☐ Stripped Ma				☐ Dark Surface (S7) (L			
_	Sulfide (A4)			☐ Loamy Muc	,	,		☐ High Plains Depressi	•		
	Layers (A5) (LRR F	=)		Loamy Gle				(LRR H outside of I			
	k (A9) (LRR F, G, I			☐ Depleted M	-	, ,		☐ Reduced Vertic (F18)			
	Below Dark Surface			☐ Redox Dark				Red Parent Material	(TF2)		
	k Surface (A12)	` '		☐ Depleted D		, ,		☐ Very Shallow Dark St	urface (TF 12)		
	ıcky Mineral (S1)			Redox Dep		. ,		Other (Explain in Ren	narks)		
☐ 2.5 cm M	ucky Peat or Peat (S2) (LRR	G , H)	☐ High Plains	Depres	ssions (F16)		³ Indicators of hydrophytic	c vegetation and		
☐ 5 cm Muc	ky Peat or Peat (S3	3) (LRR F)		wetland hydrology must be present, unless disturbed or problematic							
Restrictive I	_ayer (if present):							Hydric Soil Present?			
Type:											
Remarks: No hydric soil indicator is present.											
HYDROLOG											
_	drology Indicators										
Primary India	cators (minimum of	one requir	ed; ch	eck all that apply	<u>')</u>			Secondary Indicators (2	or more required)		
Surface V	` '		-	Salt Crust (B1	,			Surface Soil Cracks	` '		
	er Table (A2)			Aquatic Inverte				☐ Sparsely Vegetated Concave Surface (B8)			
Saturation				☐ Hydrogen Sulf				☐ Drainage Patterns (E			
☐ Water Ma	` '			☐ Dry-Season W		, ,	. (00)	☐ Oxidized Rhizospher (where tilled)	res on Living Roots (C3)		
	Deposits (B2)		l	Oxidized Rhize (where not	ospnere tillad)	es on Living	Roots (C3)	☐ Crayfish Burrows (Ca	8)		
☐ Drift Depo			1	☐ Presence of R	-	Iron (C4)		☐ Saturation Visible on			
	or Crust (B4)			☐ Thin Muck Su		` ,		☐ Geomorphic Position	• • • •		
☐ Iron Depo	n Visible on Aerial I	mageny (F		☐ Other (Explain	•	•		☐ FAC-Neutral Test (D			
	ained Leaves (B9)	magery (L	,,,					☐ Frost-Heave Hummo	,		
	. ,			Donth	1_						
Field Obser	vations:	Yes	No	Depth (inches)			ed Data (strear , if available:	m gauge, monitoring well,	aerial photos, previous		
Surface Wate	er present?		\boxtimes								
Water Table	present?		\boxtimes								
Saturation P	•		\boxtimes								
(includes car			لاحا	-							
	drology Present?		\boxtimes								
Remarks: Wetland hydrology indicators are not present.											
1											

Project/Site: Sweetland Wind Project	Ci	ty/County: _	Hand Coun	Sampling Date: 10/16/2018		
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point:				
Investigator(s): T. Beemer, W. Hirst		Section		Range: S20, T111N, R66W		
Landform (hillslope, terrace, etc.) toeslope	Loc	al relief (conc				
Subregion (LRR): Northern Great Plains Spring Wheat Re	egion	Lat: 44,402	410	Long: -98.801110 Datum: NAD83		
Soil Map Unit Name: Glenham-Java loams, rolling	ogion	44.402	710	NWI Classification: NA		
Are climate/hydrologic conditions on the site typical for this tim	ne of vear?	Yes	□No	(If no, explain in Remarks.)		
, ,	,	_	_			
Vegetation Soil Hydrolog	gy	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No		
Significantly Disturbed? Naturally Problematic?		(If neede	ed, explain	any answers in Remarks.)		
, – – –			_			
SUMMARY OF FINDINGS – Attach site map showing	samplin	g point loca	ations, tra	nsects, important features, etc.		
Yes No	Remar	ks: Upland sa	mple plot.			
Hydrophytic Vegetation Present?						
Hydric Soil Present?						
Wetland Hydrology Present?						
Is the Sampled Area within a Wetland?						
VEGETATION – Use scientific names of plants						
	Absolute	Dominant	Indicator	Dominance Test Worksheet:		
` —	% Cover	Species?	Status	Number of Dominant Species that		
1 2	<u>%</u> %			are OBL, FACW, or FAC		
3.	//			(excluding FAC-):0 (A)		
4.	<u>%</u>			Total Number of Dominant		
	0 %	= Total Cove	er	Species Across All Strata:1 (B)		
Sapling/Shrub Stratum (Plot size: 15')				Percent of Dominant Species that are OBL, FACW, or FAC:0%_(A/B)		
1	<u>%</u>			are obt., racw, or rac.		
2.	<u>%</u>			Prevalence Index Worksheet:		
3.	<u>%</u>			Total % Cover of: Multiply by:		
4	<u>%</u>			OBL species		
J	0 %	= Total Cove	er	FACW species % x 2 = 0		
Herb Stratum (Plot size: <u>5'</u>)				FAC species% x 3 =0		
1. Bromus inermis	100 %	<u> </u>	UPL	FACU species% x 4 =0		
2	<u>%</u>			UPL species% x 5 =0 Column Totals:0% (A)0 (B)		
3	<u>%</u>					
4	<u>%</u>			Prevalence Index = B/A =		
5	<u>%</u>			Hydrophytic Vegetation Indicators:		
6 7	<u> </u>			☐ 1 Rapid Test for Hydrophytic Vegetation		
8.	%			☐ 2 Dominance Test is >50%		
9	%			☐ 3 Prevalence Index is ≤3.0¹		
10	<u>%</u>			☐ 4 Morphological Adaptations¹ (Provide		
Woody Vine Stratum (Plot size: 30')	<u>100 %</u>	= Total Cove	er	supporting data in Remarks or on a separate sheet)		
1	<u>%</u>			☐ Problematic Hydrophytic Vegetation¹ (explain)		
2	<u>%</u>			¹ Indicators of hydric soil and wetland hydrology		
	0 %	= Total Cove	er	must be present, unless disturbed or problematic		
Bare Ground in Herb Stratum0 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No		
Remarks: Hydrophytic vegetation is not present. Photograph	C-40.					

SOIL Sampling Point: SP-619

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth	Matrix			Red	dox Fea	tures					
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-8	10YR 3/2	100						Clay Loam			
8-20	10YR 3/3	100						Clay Loam			
	_										
¹Type: C=Cd	oncentration, D=De	nletion RI	M-Red	duced Matrix CS	=Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining M-Matrix		
	Indicators: (Applie	<u> </u>		· · · · · · · · · · · · · · · · · · ·				Indicators for Problems			
☐ Histosol (☐ Sandy Gley		-		1 cm Muck (A9) (LRF	•		
☐ Histosof (,			☐ Sandy Red				☐ Coast Prairie Redox (
☐ Black His				☐ Stripped Ma				☐ Dark Surface (S7) (L			
_	Sulfide (A4)			☐ Loamy Muc	,	,		☐ High Plains Depressi	•		
	Layers (A5) (LRR F	=)		Loamy Gle				(LRR H outside of I			
	k (A9) (LRR F, G, I			☐ Depleted M	-	, ,		☐ Reduced Vertic (F18)			
	Below Dark Surface			☐ Redox Dark				Red Parent Material	(TF2)		
	k Surface (A12)	` '		☐ Depleted D		, ,		☐ Very Shallow Dark St	urface (TF 12)		
	ıcky Mineral (S1)			☐ Redox Dep		. ,		Other (Explain in Ren	narks)		
☐ 2.5 cm M	ucky Peat or Peat (S2) (LRR	G , H)	☐ High Plains	Depres	ssions (F16)		³ Indicators of hydrophytic	c vegetation and		
☐ 5 cm Muc	ky Peat or Peat (S3	3) (LRR F)		wetland hydrology must be present, unless disturbed or problematic							
Restrictive I	_ayer (if present):							Hydric Soil Present?			
Type:											
Remarks: No hydric soil indicator is present.											
HYDROLOG											
_	drology Indicators										
Primary India	cators (minimum of	one requir	ed; ch	eck all that apply	<u>')</u>			Secondary Indicators (2	or more required)		
Surface V	` '		-	Salt Crust (B1	,			Surface Soil Cracks	` '		
	er Table (A2)			Aquatic Inverte				☐ Sparsely Vegetated Concave Surface (B8)			
Saturation				☐ Hydrogen Sulf				☐ Drainage Patterns (E			
☐ Water Ma	` '			☐ Dry-Season W		, ,	. (00)	☐ Oxidized Rhizospher (where tilled)	res on Living Roots (C3)		
	Deposits (B2)		l	Oxidized Rhize (where not	ospnere tillad)	es on Living	Roots (C3)	☐ Crayfish Burrows (Ca	8)		
☐ Drift Depo			1	☐ Presence of R	-	Iron (C4)		☐ Saturation Visible on			
	or Crust (B4)			☐ Thin Muck Su		` ,		☐ Geomorphic Position	• • • •		
☐ Iron Depo	n Visible on Aerial I	mageny (F		☐ Other (Explain	•	•		☐ FAC-Neutral Test (D			
	ained Leaves (B9)	magery (L	,,,					☐ Frost-Heave Hummo	,		
	. ,			Donth	1_						
Field Obser	vations:	Yes	No	Depth (inches)			ed Data (strear , if available:	m gauge, monitoring well,	aerial photos, previous		
Surface Wate	er present?		\boxtimes								
Water Table	present?		\boxtimes								
Saturation P	•		\boxtimes								
(includes car			لاحا	-							
	drology Present?		\boxtimes								
Remarks: Wetland hydrology indicators are not present.											
1											

Project/Site: Sweetland Wind Project	City/County: Hand	County Sampling D	nty Sampling Date: 10/16/2018		
Applicant/Owner: Sweetland Wind Farm, LLC			ing Point: SP-621		
Investigator(s): T. Beemer, W. Hirst	Section, Tow	 /nship, Range: S29, T111N, R66W	<i></i>		
Landform (hillslope, terrace, etc.) toeslope	Local relief (concave, o		Slope (%): 3 %		
Subregion (LRR): Northern Great Plains Spring Wheat Region	n Lat: 44.397585	Long: -98.800258	Datum: NAD83		
Soil Map Unit Name: Tetonka silt loam, 0 to 1 percent slopes			PEM1C		
Are climate/hydrologic conditions on the site typical for this time of	fyear? 🛛 Yes 🗆	No (If no, explain in Remarks.)			
Vegetation Soil Hydrology	Are "Normal (Circumstances" present? ☐ Yes	☐ No		
Significantly Disturbed?	(If needed, ex	plain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sar	mpling point location	s transects important feature	es etc		
Yes No If Hydrophytic Vegetation Present?	Remarks: Upland sample	piot.			
Hydric Soil Present?					
Wetland Hydrology Present? □ ⊠					
Is the Sampled Area within a Wetland?					
VEGETATION – Use scientific names of plants					
Absorbance	olute Dominant India	cator Dominance Test Workshee			
Tree Stratum (Plot size: 30') % C		atus			
1	<u> </u>	Number of Dominant Specie are OBL, FACW, or FAC	s that		
2	<u> </u>	(excluding FAC-):	0_(A)		
3	<u>%</u>	Total Number of Dominant			
4	<u>%</u>) % = Total Cover	Species Across All Strata:	1_(B)		
Sapling/Shrub Stratum (Plot size: 15')	<u> </u>	Percent of Dominant Species	s that		
1.	<u> </u>	are OBL, FACW, or FAC:	0%_(A/B)		
2.	<u>%</u>	- Dravalance Index Werkeha			
3	<u> </u>	Prevalence Index Workshe	et:		
4	<u>%</u>	Total % Cover of:	Multiply by:		
5	<u>%</u>				
) % = Total Cover		% x3 = 0		
Herb Stratum (Plot size: <u>5'</u>) 1. Bromus inermis 10	00 % Y UF		% x 4 = 0		
2	<u>%</u>	UPL species	% x 5 = <u>0</u>		
3.	%	Column Totals: 0	% (A) <u>0</u> (B)		
4	%	Prevalence Index = B/A =			
5	<u>%</u>	Hydrophytic Vegetation Inc	dicators:		
6	<u>%</u>	 1 Rapid Test for Hydroph	vtic Vegetation		
7	<u>%</u>	2 Dominance Test is >50	, ,		
8	%				
10.	<u>%</u>	3 Prevalence Index is ≤3.			
Woody Vine Stratum (Plot size: 30')	00 % = Total Cover	☐ 4 Morphological Adaptation Supporting data in Remarks or	on a separate sheet)		
1	<u> </u>	Problematic Hydrophytic	Vegetation ¹ (explain)		
2	<u>%</u>	Indicators of hydric soil and must be present, unless distraction			
	<u> </u>	Hydrophytic Vegetation Pres			
Bare Ground in Herb Stratum 0 % Remarks: Hydrophytic vegetation is not present. Photograph C-4	1				
remains. Hydrophyllo vegetallott is flot present. Priotograph C-4	1.				

SOIL Sampling Point: SP-621

Profile Desc	ription: (Describe	to the de	pth needed to do	cument th	e indicator o	r confirm the	absence of indicators.)					
Depth	Depth Matrix Redox Features											
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks				
0-8	10YR 3/2	100					Clay Loam					
8-20	10YR 3/3	100					Clay Loam					
-	_	-		_								
-												
	-	-			- ——							
¹Type: C=Co	oncentration, D=De	pletion, RN	M=Reduced Matrix,	CS=Cove	red or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix				
Hydric Soil I	ndicators: (Applie	cable to a	II LRRs, unless ot	herwise n	oted.)		Indicators for Problems	atic Hydric Soils³:				
☐ Histosol (A1)		☐ Sandy	Gleyed Ma	atrix (S4)		1 cm Muck (A9) (LRF	R I, J)				
☐ Histic Epi	pedon (A2)		☐ Sandy				☐ Coast Prairie Redox (. , ,				
☐ Black His	` '		☐ Strippe	•	•		Dark Surface (S7) (L					
Hydrogen			Loamy				High Plains Depressi	ons (F16)				
	Layers (A5) (LRR F		Loamy				(LRR H outside of I	•				
	k (A9) (LRR F, G, F		☐ Deplete				Red Parent Material (
	Below Dark Surface k Surface (A12)	e (A11)	☐ Redox ☐ Deplete				☐ Very Shallow Dark St	` '				
	ucky Mineral (S1)		☐ Deplete		, ,		Other (Explain in Ren	, ,				
	ucky Peat or Peat (S2) (I RR (essions (F16)		³ Indicators of hydrophytic					
	ky Peat or Peat (S3			72 & 73			wetland hydrology must					
	disturbed or problematic											
Restrictive I	_ayer (if present):						Hydric Soil Present?					
Type: Depth (inches): No												
Remarks: No hydric soil indicator is present.												
Remarks. No	Tryunc son mulcato	ıı ıs presei	н.									
HYDROLOG	v											
_	drology Indicators ators (minimum of		ed: check all that a	nnly)			Secondary Indicators (2	or more required)				
	•	one requir					_					
Surface V	` '		☐ Salt Crust	` ,	- (D40)		☐ Surface Soil Cracks (B6)☐ Sparsely Vegetated Concave Surface (B8)					
☐ High Wate			☐ Aquatic In ☐ Hydrogen		, ,		☐ Sparsely Vegetated ☐ Drainage Patterns (E					
☐ Water Ma	` '		☐ Dry-Seaso				_ •	res on Living Roots (C3)				
	Deposits (B2)		Oxidized F		. ,	Roots (C3)	(where tilled)	es on Living Roots (CS)				
☐ Drift Depo				not tilled)	oo on Eiving	(00)	☐ Crayfish Burrows (Ca	8)				
	or Crust (B4)		☐ Presence	of Reduce	d Iron (C4)		☐ Saturation Visible on	Aerial Imagery (C9)				
☐ Iron Depo			☐ Thin Muck	Surface (C7)		☐ Geomorphic Position	n (D2)				
	n Visible on Aerial I	magery (B	7) Dther (Exp	olain in Re	marks)		☐ FAC-Neutral Test (D	,				
☐ Water-Sta	ained Leaves (B9)						☐ Frost-Heave Hummo	ocks (D7) (LRR F)				
Field Observ	vations:	Voc	Depth (inches)				m gauge, monitoring well,	aerial photos, previous				
		Yes	No (inches)	insp	pections, etc.)	, if available:						
Surface Wate	·			_								
Water Table	•			_								
Saturation P			⊠	_								
(includes cap	ollary fringe)	_										
				1								
	drology Present?		\boxtimes									
Wetland Hyd	drology Present? etland hydrology ind											
Wetland Hyd												

Project/Site: Sweetland Wind Project	Ci	ty/County: H	Hand Coun	ty Sampling Date: 10/16/2018		
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-62				
Investigator(s): T. Beemer, W. Hirst		Section	, Township	, Range: S29, T111N, R66W		
Landform (hillslope, terrace, etc.) toeslope	Loc	al relief (conc		·		
Subregion (LRR): Northern Great Plains Spring Wheat R	egion	Lat: 44.395	976	Long: -98.799820 Datum: NAD83		
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 per		11.000	010	NWI Classification: NA		
Are climate/hydrologic conditions on the site typical for this til			П №	(If no, explain in Remarks.)		
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			(,,,		
Vegetation Soil Hydrold	ogy	Are "Noi	mal Circun	nstances" present? 🛛 Yes 🔲 No		
Significantly Disturbed?		(If neede	ed, explain	any answers in Remarks.)		
Naturally Problematic?						
SUMMARY OF FINDINGS – Attach site map showing	g samplin	g point loca	tions, tra	nsects, important features, etc.		
Yes No	Remar	ks: Upland sa	mple plot a	djacent to PEM W-561.		
Hydrophytic Vegetation Present?						
Hydric Soil Present?						
Wetland Hydrology Present?						
Is the Sampled Area within a Wetland?						
VEGETATION – Use scientific names of plants						
	Absolute	Dominant	Indicator	Dominance Test Worksheet:		
Tree Stratum (Plot size: <u>30'</u>)	% Cover	Species?	Status	Number of Dominant Species that		
1 2.	<u>%</u> %			are OBL, FACW, or FAC		
2. 3.	<u></u>			(excluding FAC-): 0 (A)		
4.	<u>%</u>			Total Number of Dominant		
	0 %	= Total Cove	r	Species Across All Strata:1_(B)		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Percent of Dominant Species that		
1	<u>%</u>			are OBL, FACW, or FAC:0%_(A/B)		
2	<u>%</u>			Prevalence Index Worksheet:		
3.	<u>%</u>			Total % Cover of: Multiply by:		
4 5.	<u>%</u> %			OBL species		
J	0 %	= Total Cove	r	FACW species		
Herb Stratum (Plot size: <u>5'</u>)		- 10tal 0010	•	FAC species% x 3 =0		
1. Bromus inermis	<u>100 %</u>	<u>Y</u>	UPL	FACU species % x 4 =0		
2	<u>%</u>			UPL species% x 5 =0 Column Totals:0% (A)0 (B)		
3	<u>%</u>					
4	<u>%</u>			Prevalence Index = B/A =		
5	<u>%</u>			Hydrophytic Vegetation Indicators:		
6 7	<u>%</u> %			☐ 1 Rapid Test for Hydrophytic Vegetation		
8.	// 0			☐ 2 Dominance Test is >50%		
9.	%			☐ 3 Prevalence Index is ≤3.0¹		
10	<u>%</u>			☐ 4 Morphological Adaptations¹ (Provide		
Woody Vine Stratum (Plot size: 30')	<u>100 %</u>	= Total Cove	r	supporting data in Remarks or on a separate sheet)		
1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)		
2	%			¹ Indicators of hydric soil and wetland hydrology		
	0 %	= Total Cove	er	must be present, unless disturbed or problematic		
Bare Ground in Herb Stratum0 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No		
Remarks: Hydrophytic vegetation is not present. Photograph	n C-42.					

SOIL Sampling Point: SP-623

Profile Desc	ription: (Describe	to the d	epth n	eeded to docum	ent the	indicator o	r confirm the	absence of indicators.)		
Depth	Matrix			Red	dox Fea	atures				
(inches)	Color (moist)	%	C	color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	10YR 3/2	100						Clay Loam		
8-20	10YR 3/3	100						Clay Loam		
		-								
-										
	oncentration, D=De			<u> </u>			d Sand Grains	² Location: PL=Pore		
Hydric Soil I	ndicators: (Applic	cable to a	III LRF			-		Indicators for Problems	•	
Histosol (,			Sandy Gley		, ,		1 cm Muck (A9) (LRF		
Histic Epi				Sandy Red				Coast Prairie Redox	. , ,	
	Black Histic (A3) ☐ Stripped Matrix (S6)							Dark Surface (S7) (L		
Hydrogen				Loamy Muc	-			☐ High Plains Depressi (LRR H outside of I	ons (F16)	
	Layers (A5) (LRR F			Loamy Gle				•	•	
	k (A9) (LRR F, G, F			☐ Depleted M				☐ Reduced Vertic (F18) ☐ Red Parent Material (
	Below Dark Surface	e (A11)		☐ Redox Darl		, ,		☐ Very Shallow Dark St	,	
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)								☐ Other (Explain in Ren	, ,	
	icky Mineral (S1)	CO) /I DD	С П/			` '				
	ucky Peat or Peat (\$3 ky Peat or Peat (\$3			☐ High Plains (MLRA 72				³ Indicators of hydrophytic wetland hydrology must		
5 cm wac	ky real of real (33	o) (LKK F)	(WENA 12	u 150	· Lixix III)		disturbed or problematic		
Restrictive I	ayer (if present):							Hydric Soil Present?		
Type: Depth (inches):								☐ Yes ☐ No		
Туре.		_	Бері	ii (iiiciies).						
Remarks: No	hydric soil indicato	r is prese	nt.							
HYDROLOG	Y									
Wetland Hyd	Irology Indicators	:								
_	ators (minimum of		red; ch	neck all that apply)			Secondary Indicators (2	or more required)	
☐ Surface V	/ater (A1)	-		☐ Salt Crust (B1	_ 1)			Surface Soil Cracks (B6)		
☐ High Wat	` '			Aquatic Inverte	,	(B13)		☐ Sparsely Vegetated Concave Surface (B8)		
☐ Saturation				☐ Hydrogen Sulf				☐ Drainage Patterns (E		
☐ Water Ma	` '			☐ Dry-Season W				_ •	res on Living Roots (C3)	
	Deposits (B2)			Oxidized Rhize		` ,	Roots (C3)	(where tilled)	55 5 <u>=</u> g . (55)	
☐ Drift Depo				(where not			(,	☐ Crayfish Burrows (Ca	3)	
	or Crust (B4)			☐ Presence of R	educed	I Iron (C4)		☐ Saturation Visible on	Aerial Imagery (C9)	
☐ Iron Depo				☐ Thin Muck Sur	face (C	(7)		☐ Geomorphic Position	n (D2)	
	n Visible on Aerial I	magery (E	37)	Other (Explain	in Ren	narks)		☐ FAC-Neutral Test (D	5)	
☐ Water-Sta	nined Leaves (B9)		,					☐ Frost-Heave Hummo	ocks (D7) (LRR F)	
Field Observ	vations:			Depth	Desc	cribe Record	ed Data (strear	n gauge, monitoring well,	aerial photos, previous	
Ticia Observ	rations.	Yes	No	(inches)			, if available:	ir gaage, morntoning wen,	acriai priotos, provious	
Surface Wate	er present?		\boxtimes		'	,				
Water Table	•		\boxtimes							
Saturation P										
(includes cap		Ш								
	drology Present?		\boxtimes							
	etland hydrology inc			present	1					
. to.manto. vvi			2 1100	r . 000. III						

Project/Site: Sweetland Wind Project	Ci	ty/County:	land Coun	Sampling Date: 10/16/2018
Applicant/Owner: Sweetland Wind Farm, LLC				tate: SD Sampling Point: SP-634
Investigator(s): T. Beemer, W. Hirst		Section,		Range: S33, T111N, R66W
Landform (hillslope, terrace, etc.) pothole	Loc	al relief (conca		·
Subregion (LRR): Northern Great Plains Spring Wheat R		Lat: 44.3730		Long: _98.779054 Datum: NAD83
- Trotal of Cart I tame opining tritoat it	region	44.3730	J3 4	NAM OL 10 10 10
Soil Map Unit Name: Glenham-Java loams, rolling Are climate/hydrologic conditions on the site typical for this tir	me of vear?	Yes	□No	NWI Classification: NA (If no, explain in Remarks.)
The difficulty dividegle definations on the dice typical for this th	ine or year.	△ 100		(ii no, explain iii remano.)
Vegetation Soil Hydrolo	ogy	Are "Nor	mal Circun	nstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?		(If neede	d. explain a	any answers in Remarks.)
Naturally Problematic?		(-,,	,
SUMMARY OF FINDINGS – Attach site map showing	g samplin	g point loca	tions, tra	nsects, important features, etc.
Yes No	Remar	ks: Wetland sa	ample plot	located in PEM W-566.
Hydrophytic Vegetation Present? ☐				
Hydric Soil Present? □				
Wetland Hydrology Present?				
Is the Sampled Area within a Wetland?				
VEGETATION – Use scientific names of plants				
VEGETATION - 03e scientific flames of plants				
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1	<u>%</u>			Number of Dominant Species that
2.	%			are OBL, FACW, or FAC (excluding FAC-): (A)
3	<u>%</u>			Total Number of Dominant
4	<u></u> %			Species Across All Strata: (B)
	0 %	= Total Cove	r	Percent of Dominant Species that
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	0/			are OBL, FACW, or FAC: (A/B)
1	<u>%</u> %			
2. 3.				Prevalence Index Worksheet:
4.	<u>%</u>			Total % Cover of: Multiply by:
5.	%			OBL species% x 1 =0
	0 %	= Total Cove	r	FACW species% x 2 =0
Herb Stratum (Plot size: <u>5'</u>)				FAC species% x 3 =0 FACU species
1. Eleocharis obtusa	<u>35 %</u>	<u>Y</u>	OBL	UPL species
2. <u>Spartina pectinata</u>	<u>25 %</u>	<u>Y</u>	FACW	Column Totals: 0 % (A) 0 (B)
3. Alisma gramineum	<u>5 %</u>	<u>N</u>	OBL	Prevalence Index = B/A =
4 5	<u>%</u> %			
6.	// 0			Hydrophytic Vegetation Indicators:
7.	%			□ 1 Rapid Test for Hydrophytic Vegetation
8	<u></u> %			☐ 2 Dominance Test is >50%
9	%			☐ 3 Prevalence Index is ≤3.0¹
10	<u>%</u>	= Total Cove		☐ 4 Morphological Adaptations¹ (Provide
Woody Vine Stratum (Plot size: 30')	<u>65 %</u>	= Total Cove	ſ	supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: 30') 1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)
2.	%			¹ Indicators of hydric soil and wetland hydrology
	0 %	= Total Cove	r	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 35 %				Hydrophytic Vegetation Present? ⊠ Yes ☐ No
Remarks: Rapid test for hydrophytic vegetation is met. Photo	ograph C-43	3.		
-				

SOIL Sampling Point: SP-634

Profile Desc	ription: (Describe	to the dept	h needed to docun	nent the	e indicator o	r confirm the	absence of indicators.)		
Depth	Matrix		Re	dox Fea	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-1	10YR 2/1	100					clay		
1-6	10YR 2/1	90	10YR 6/4	10	C	M	clay		
6-20	10YR 6/1		10YR 2/1	20	<u>C</u>	M	clay		
			10YR 6/4	10	C	M			
-									
-	-		·						
-									
¹Type: C=Co	oncentration, D=Dep	oletion, RM=	Reduced Matrix, CS	=Cove	red or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil	ndicators: (Applic	able to all l	_RRs, unless other	wise n	oted.)		Indicators for Problem	atic Hydric Soils³:	
☐ Histosol (A1)		☐ Sandy Gle	yed Ma	trix (S4)		1 cm Muck (A9) (LRF	R I, J)	
☐ Histic Epi	pedon (A2)		☐ Sandy Red	lox (S5))		☐ Coast Prairie Redox	(A16) (LRR F, G, H)	
☐ Black His	` '		☐ Stripped M	,	,		☐ Dark Surface (S7) (L		
☐ Hydrogen			Loamy Mu	-	, ,		☐ High Plains Depressi	ons (F16)	
	Layers (A5) (LRR F		Loamy Gle	-			(LRR H outside of I	•	
	k (A9) (LRR F, G, F		□ Depleted N □ Depleted N				☐ Reduced Vertic (F18)☐ Red Parent Material (
	Below Dark Surface	e (A11)	⊠ Redox Dar				☐ Very Shallow Dark Si	• •	
	k Surface (A12)		☐ Depleted D☐ Redox Dep				Other (Explain in Rer		
	ucky Mineral (S1)	22) (I PP C			` '				
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) ☐ High Plains Depressions (F16) ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) ☐ High Plains Depressions (F16) ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) ☐ High Plains Depressions (F16) ☐ wetland hydrology must be present, unless									
disturbed or problematic									
Restrictive I	_ayer (if present):						Hydric Soil Present?		
Type:		_ D	epth (inches):				⊠ Yes □ No		
- · · · ·									
Remarks: Hy	dric soil indicators F	-3 and F6 ar	e met.						
HYDROLOG									
_	drology Indicators:			,			0 1 1 1 7		
Primary India	cators (minimum of c	one required	; check all that apply	<u>/)</u>			Secondary Indicators (2		
Surface V	` '		Salt Crust (B1	,			Surface Soil Cracks (B6)		
	er Table (A2)		Aquatic Invert				☐ Sparsely Vegetated Concave Surface (B8)		
⊠ Saturation	` '		☐ Hydrogen Sul				☐ Drainage Patterns (E	,	
☐ Water Ma	` '		☐ Dry-Season V			(00)	Oxidized Rhizosphei (where tilled)	res on Living Roots (C3)	
	Deposits (B2)		Oxidized Rhiz (where not		es on Living i	Roots (C3)	☐ Crayfish Burrows (C	8)	
☐ Drift Depo			☐ Presence of F	•	d Iron (C4)		☐ Saturation Visible on		
☐ Algai Wat	or Crust (B4)		☐ Thin Muck Su		` '		☐ Geomorphic Position	• • • •	
	n Visible on Aerial Ir	magery (B7)	Other (Explain	,	•			' '	
_	ained Leaves (B9)	nagory (Dr)	_ ` ` '		,		☐ Frost-Heave Hummo	ocks (D7) (LRR F)	
Field Obser	vations:		Depth	Des	cribe Record	ed Data (strea	ım gauge, monitoring well,	aerial photos, previous	
11010 01001		Yes N	lo (inches)		ections, etc.)		gaage,eege,	acriai priotoc, providuo	
Surface Water	er present?		11						
Water Table	present?		0						
Saturation P	resent?		0						
(includes cap	oillary fringe)								
Wetland Hy	drology Present?								
Remarks: We	etland hydrology ind	licators A1,	A2, A3, D2, and D5	are met	 i.				
i .									

Project/Site: Sweetland Wind Project	Ci	ty/County: H	Hand Coun	ty Sampling Date: 10/16/2018
Applicant/Owner: Sweetland Wind Farm, LLC				state: SD Sampling Point: SP-635
Investigator(s): T. Beemer, W. Hirst		Section	, Township	, Range: S33, T111N, R66W
Landform (hillslope, terrace, etc.) toeslope	Loc	— al relief (conca		•
Subregion (LRR): Northern Great Plains Spring Wheat Ro	egion	Lat: 44.372	942	Long: -98.778920 Datum: NAD83
Soil Map Unit Name: Glenham-Java loams, rolling	ogion	44.072	U-12	NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this tin	me of vear?	Yes ⊠	□No	(If no, explain in Remarks.)
, , , , , , , , , , , , , , , , , , ,	, , ,			(-, -, -, -, -, -, -, -, -, -, -, -, -,
Vegetation Soil Hydrolog	gy	Are "Nor	rmal Circun	nstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?		(If neede	ed, explain	any answers in Remarks.)
, – – –				
SUMMARY OF FINDINGS – Attach site map showing	samplin	g point loca	ations, tra	insects, important features, etc.
Yes No	Remar	ks: Upland sa	mple plot a	djacent to PEM W-566.
Hydrophytic Vegetation Present?				
Hydric Soil Present?				
Wetland Hydrology Present?				
Is the Sampled Area within a Wetland?				
VEGETATION – Use scientific names of plants				
	Absolute	Dominant	Indicator	Dominance Test Worksheet:
` —	% Cover	Species?	Status	Number of Dominant Species that
1 2	<u>%</u> %			are OBL, FACW, or FAC
3.				(excluding FAC-):0(A)
4.	%			Total Number of Dominant
	0 %	= Total Cove	er	Species Across All Strata:1 (B)
Sapling/Shrub Stratum (Plot size: 15')				Percent of Dominant Species that are OBL, FACW, or FAC:0%_(A/B)
1	%			are obt., racw, or rac.
2.	<u>%</u>			Prevalence Index Worksheet:
3.	<u>%</u>			Total % Cover of: Multiply by:
4 5.	<u>%</u> <u>%</u>			OBL species
J	0 %	= Total Cove	er	FACW species
Herb Stratum (Plot size: 5')	<u> </u>			FAC species % x 3 = 0
1. Poa pratensis	90 %	<u>Y</u>	FACU	FACU species% x 4 =0
2	<u>%</u>			UPL species% x 5 =0 Column Totals:0% (A)0(B)
3	<u>%</u>			(,
4	<u>%</u>			Prevalence Index = B/A =
5	<u>%</u>			Hydrophytic Vegetation Indicators:
6	<u>%</u> %			☐ 1 Rapid Test for Hydrophytic Vegetation
8.	// 0			☐ 2 Dominance Test is >50%
9.	%			☐ 3 Prevalence Index is ≤3.0¹
10	<u>%</u>			☐ 4 Morphological Adaptations¹ (Provide
Woody Vine Stratum (Plot size: 30')	90 %	= Total Cove	er	supporting data in Remarks or on a separate sheet)
1	<u>%</u>			☐ Problematic Hydrophytic Vegetation¹ (explain)
2	%			¹ Indicators of hydric soil and wetland hydrology
	0 %	= Total Cove	er	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum				Hydrophytic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photograph	C-44.			

SOIL Sampling Point: SP-635

Profile Desc	ription: (Describe	to the d	epth n	eeded to docum	nent the	indicator o	or confirm the	absence of indicators.)		
Depth	Matrix			Red	dox Fea	tures				
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	10YR 3/2	100						Clay Loam		
8-20	10YR 3/3	100						Clay Loam		
	· 							_		
	-									
¹Type: C=Co	oncentration, D=De	pletion. R	M=Red	duced Matrix, CS	=Cover	ed or Coate	Sand Grains	² Location: PL=Pore	Lining M=Matrix	
	Indicators: (Appli							Indicators for Problema		
☐ Histosol (∑ Sandy Gley		-		1 cm Muck (A9) (LRF	•	
, — ·	,			☐ Sandy Red				☐ Coast Prairie Redox (
-	☐ Histic Epipedon (A2) ☐ Sandy Redox (S5) ☐ Black Histic (A3) ☐ Stripped Matrix (S6)							☐ Dark Surface (S7) (LI		
	Sulfide (A4)			☐ Loamy Mu	•	,		☐ High Plains Depression	•	
	Layers (A5) (LRR F	=)		☐ Loamy Gle				(LRR H outside of I		
	ck (A9) (LRR F, G, I			☐ Depleted M	-	, ,		☐ Reduced Vertic (F18)		
	Below Dark Surface			☐ Redox Dar				☐ Red Parent Material ((TF2)	
☐ Thick Dar	k Surface (A12)	,		☐ Depleted D		, ,		☐ Very Shallow Dark St	urface (TF 12)	
☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)								Other (Explain in Ren	narks)	
☐ 2.5 cm M	ucky Peat or Peat (S2) (LRR	G , H)	☐ High Plains	Depres	ssions (F16)		³ Indicators of hydrophytic	c vegetation and	
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H)								wetland hydrology must be present, unless disturbed or problematic		
Restrictive I	_ayer (if present):							Hydric Soil Present?		
Type:	Type: Depth (inches):							☐ Yes ☒ No		
Damenton No	. In a substantial of the afficiency		1							
Nomano. 140	hydric soil indicato	110 p1000								
HYDROLOG	iΥ									
_	drology Indicators									
Primary India	cators (minimum of	one requi	red; ch	eck all that apply	<u>/)</u>			Secondary Indicators (2	or more required)	
☐ Surface V	` '			☐ Salt Crust (B1	,			☐ Surface Soil Cracks (B6)		
	er Table (A2)			Aquatic Invert				☐ Sparsely Vegetated Concave Surface (B8)		
☐ Saturation				Hydrogen Sulf				Drainage Patterns (E		
☐ Water Ma	` '			Dry-Season W		, ,			res on Living Roots (C3)	
	Deposits (B2)			Oxidized Rhiz		s on Living	Roots (C3)	(where tilled)	٥١	
☐ Drift Depo				(where not ☐ Presence of R		Iron (C4)		☐ Crayfish Burrows (Ca		
	or Crust (B4)			☐ Presence of R		, ,		☐ Geomorphic Position	• • • •	
☐ Iron Depo		· · · /F		☐ Other (Explair	•	•		☐ FAC-Neutral Test (D		
	n Visible on Aerial I	magery (E	37) 1	Other (Explain	i iii ixeii	iaiks)		☐ Frost-Heave Hummo	,	
☐ water-Sta	ained Leaves (B9)				1				JONS (DT) (ETTICT)	
Field Obser	vations:	Yes	No	Depth (inches)			ed Data (strear , if available:	m gauge, monitoring well, a	aerial photos, previous	
Surface Wat	er present?		\boxtimes			,				
Water Table	present?		\boxtimes							
Saturation P	•									
(includes car		ш								
	drology Present?		\boxtimes							
	etland hydrology inc			met						
. Komana. W	charla frydrology llit	aioutoro a								

Project/Site: Sweetland Wind Project	City/County: Hand	County Sampling Date: 10/16/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-651
Investigator(s): T. Beemer, W. Hirst	Section, Tow	nship, Range: S9, T110N, R66W
Landform (hillslope, terrace, etc.) <u>depression</u>	Local relief (concave, c	onvex, none): <u>concave</u> Slope (%): <u>3 %</u>
Subregion (LRR): Northern Great Plains Spring Wheat R	legion Lat: 44.354788	Long: -98.775955 Datum: NAD83
·		NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this t year?		No (If no, explain in Remarks)
Vegetation Soil Hydrolo	gy Are "Normal	Circumstances" present? 🛛 Yes 🔲 No
Significantly Disturbed? Naturally Problematic?		(If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locati	ons, transects, important features, etc.
Yes No Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Is the Sampled Area within a Wetland? □	Remarks: Wetland samp	ole plot located in PEM W-005.
VEGETATION – Use scientific names of plants		
Tree Stratum (Plot size: 30')		ndicator Status Dominance Test Worksheet:
1	%	Number of Dominant Species that
2.	<u></u> %	are OBL, FACW, or FAC (excluding FAC-): (A)
3	<u></u> %	Total Number of Dominant
4	<u></u>	Species Across All Strata: 2 (B)
Conding (Chapter Chapters (Diet aires 451)	0 % = Total Cover	Percent of Dominant Species that
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1	<u></u>	are OBL, FACW, or FAC: 100% (A/B)
2.	 %	Dravialance Index Medichests
3.		Prevalence Index Worksheet:
4.	0.1	Total % Cover of: Multiply by:
5	<u></u> %	OBL species% x 1 =0
	0 % = Total Cover	FACW species% x 2 =0 FAC species
Herb Stratum (Plot size: <u>5'</u>)		FACU species
1. <u>Schoenoplectus fluviatilis</u>		OBL UPL species
2. Xanthium strumarium	<u>25 %</u> Y	FAC Column Totals: 0 % (A) 0 (B)
3. Hordeum jubatum	5 % N I	FACW Prevalence Index = B/A =
4. Rumex crispus 5.	<u>2 % </u>	FAC History business middle 2017
5 6	 %	Hydrophytic Vegetation Indicators:
7.	<u></u> %	☐ 1 Rapid Test for Hydrophytic Vegetation
8	<u></u> %	
9	<u>%</u>	3 Prevalence Index is ≤3.0¹
10	<u>%</u> = Total Cover	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>)	•	☐ Problematic Hydrophytic Vegetation¹ (explain)
1 2	<u>%</u>	1 Indicators of hydric soil and wetland hydrology
Z		must be present, unless disturbed or problematic
Bare Ground in Herb Stratum _ 0 %		Hydrophytic Vegetation Present? ⊠ Yes ☐ No
Remarks: Dominance test is met. Photograph C-45.		1

SOIL Sampling Point: SP-651

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix			R	edox Fe	eatures					
(inches)	Color (moist)	%	C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-20	10YR 2/1	95		10YR 4/4	5	C	M	silty clay loam	gravel		
								- 1	_		
				_					_		
					-						
									_		
¹Type: C=Co	ncentration, D=De	oletion, R	M=Rec	duced Matrix, C	S=Cove	ered or Coate	d Sand Grain	s ² Location: PL=Po	ore Lining, M=Matrix		
Hydric Soil I	ndicators: (Appli	cable to a	III LRR	ts, unless othe	erwise r	noted.)		Indicators for Proble	matic Hydric Soils ³ :		
☐ Histosol (A				☐ Sandy Gl				☐ 1 cm Muck (A9) (L	PDI I\		
☐ Histic Epip	,			☐ Sandy G	-				ox (A16) (LRR F, G, H)		
					•	,		☐ Dark Surface (S7)			
☐ Black Hist	, ,			Stripped I					· ·		
Hydrogen				☐ Loamy M				☐ High Plains Depre	of MLRA 72 & 73)		
	ayers (A5) (LRR F			Loamy G	-			•	•		
	(A9) (LRR F, G, F			☐ Depleted	,	,		Reduced Vertic (F	,		
	Below Dark Surface	e (A11)		□ Redox Da		` '		Red Parent Materi	` '		
	Surface (A12)			☐ Depleted		, ,		☐ Very Shallow Dark			
☐ Sandy Mu	cky Mineral (S1)			☐ Redox De	epressio	ns (F8)		Other (Explain in F	temarks)		
☐ 2.5 cm Mu	cky Peat or Peat (S2) (LRR	G, H)	☐ High Plaiı	ns Depr	essions (F16)	1	3Indicators of hydroph	vtic vegetation and		
☐ 5 cm Mucl	y Peat or Peat (S3	3) (LRR F)	(MLRA 7	2 & 73	of LRR H)		wetland hydrology mu			
								disturbed or problema	tic		
Restrictive L	ayer (if present):							Hydric Soil Present?)		
Type:			Denth	n (inches):				⊠ Yes □ No			
HYDROLOG	<u> </u>										
-	rology Indicators										
Primary Indic	ators (minimum of	one requi	red; ch	eck all that app	oly)			Secondary Indicators	(2 or more required)		
☐ Surface W	ater (A1)		Г	☐ Salt Crust (B	311)			☐ Surface Soil Cracks (B6)			
☐ High Wate	` '			 ☐ Aquatic Inve		s (B13)		☐ Sparsely Vegetated Concave Surface (B8)			
☐ Saturation	, ,			☐ Hydrogen Si		, ,		☐ Sparsery vegetated Concave Surface (Bo)			
☐ Water Mai	` '		_	☐ Dry-Season		, ,		 ☑ Drainage Patterns (B10) ☑ Oxidized Rhizospheres on Living Roots (C3) 			
	` '					٠, ,	Doots (C2)	(where tilled)	ieles on Living Noois (Co		
	Deposits (B2)		L	Oxidized Rh (where no			Roots (C3)	☐ Crayfish Burrows	(C8)		
☐ Drift Depo	, ,		г	☐ Presence of				•	` '		
☐ Algal Mat								☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2)			
☐ Iron Depo	, ,		-	Thin Muck S				·	, ,		
	Visible on Aerial I	magery (E	37) L	Other (Expla	ıın ın Re	emarks)		☐ FAC-Neutral Test	` ,		
☐ Water-Sta	ined Leaves (B9)							☐ Frost-Heave Hum	mocks (D7) (LRR F)		
Field Observ	ations:			Depth	De	scribe Record	led Data (stre	am gauge, monitoring we	ell, aerial photos, previous		
		Yes	No	(inches)		pections, etc.)		ani gaage, memering ne	, aa. p, p		
Surface Water	r present?		\boxtimes			,					
	•	_									
Water Table											
Saturation Pr			\boxtimes								
(includes cap		_	_								
Wetland Hyd	rology Present?		\boxtimes								
Remarks: We	tland hydrology inc	licators R	10. D2	, and D5 are nr	esent.			<u> </u>			
	,	D	-,	, 20 alo pi							

Project/Site: Sweetland Wind Project	City/County: Hand County	Sampling Date: 10/16/2018
Applicant/Owner: Sweetland Wind Farm, LLC	Sta	te: SD Sampling Point: SP-652
Investigator(s): T. Beemer, W. Hirst		lange: _ S9, T110N, R66W
Landform (hillslope, terrace, etc.) terrace	Local relief (concave, convex, n	none): <u>none</u> Slope (%): <u>0 %</u>
Subregion (LRR): Northern Great Plains Spring Wheat R	egion Lat: <u>44.354836</u>	Long: <u>-98.775943</u> Datum: <u>NAD83</u>
Soil Map Unit Name: Betts-Java loams, steep		NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this tyear?	me of Yes No	(If no, explain in Remarks)
Vegetation Soil Hydrolo	gy Are "Normal Circum	stances" present? ☑ Yes ☐ No
Significantly Disturbed?	(If need	ed, explain any answers in Remarks)
Naturally Problematic?	,	
SUMMARY OF FINDINGS – Attach site map showin	1	
Yes No Hydrophytic Vegetation Present? □ □	Remarks: Upland confirmation p	lot adjacent to PEM W-005.
Hydrophytic Vegetation Present? □ □ □ Hydric Soil Present? □ □ □		
Wetland Hydrology Present?		
Is the Sampled Area within a Wetland?		
VEGETATION – Use scientific names of plants		
	Absolute Dominant Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: 30')	% Cover Species? Status	Number of Dominant Species that
1	<u> </u>	are OBL, FACW, or FAC
2.	<u> </u>	(excluding FAC-): 0 (A)
3	<u>%</u>	Total Number of Dominant
4	0 % = Total Cover	Species Across All Strata: 3 (B)
Sapling/Shrub Stratum (Plot size: 15')		Percent of Dominant Species that
1	<u>%</u>	are OBL, FACW, or FAC:0%_(A/B)
2.		Prevalence Index Worksheet:
3	<u> </u>	
4	<u> </u>	Total % Cover of:Multiply by:
5	<u>%</u>	OBL species% x 1 =0 FACW species
	0 % = Total Cover	FAC species
Herb Stratum (Plot size: <u>5'</u>)	50.0/ V 50.0H	FACU species % x 4 =0
Bromus arvensis Schedonorus arundinaceus	50 % Y FACU 30 % Y FACU	UPL species% x 5 =0
3. Bromus inermis	20 % Y UPL	Column Totals:0 % (A)0 (B)
4. Cirsium arvense	%	Prevalence Index = B/A =
5.	%	Hydrophytic Vegetation Indicators:
6	<u></u> %	☐ 1 Rapid Test for Hydrophytic Vegetation
7. 8.	<u>%</u>	☐ 2 Dominance Test is >50%
8 9	<u>%</u>	
10.	%	3 Prevalence Index is ≤3.0¹
	<u>100 %</u> = Total Cover	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>) 1.	%	☐ Problematic Hydrophytic Vegetation¹ (explain)
1	<u>%</u>	¹ Indicators of hydric soil and wetland hydrology
	0 % = Total Cover	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 0 %		Hydrophytic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photograph	C-46.	

SOIL Sampling Point: SP-652

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

(inches) 0-20	Color (moist) 10YR 2/1	0/	1 10	edox Features				
0-20	10YR 2/1	%	Color (moist)	% Type	Loc ²	Texture	Remarks	
		100				silty clay loam	organic material/	
							gravel	
Type: C=Conc	centration D=Denl	etion RM	=Reduced Matrix, C	S=Covered or Co	ated Sand Grain	s ² l ocation: Pl =Po	 ore Lining, M=Matrix	
••			LRRs, unless othe		ated Garia Grain		ematic Hydric Soils ³ :	
•	`	ible to all	•	,			•	
☐ Histosol (A1)	,			eyed Matrix (S4)		1 cm Muck (A9) (L		
☐ Histic Epiped			☐ Sandy Re				ox (A16) (LRR F, G, H)	
☐ Black Histic (. ,		☐ Stripped N			☐ Dark Surface (S7)	,	
☐ Hydrogen Su	yers (A5) (LRR F)			ucky Mineral (F1)		☐ High Plains Depre	of MLRA 72 & 73)	
			☐ Depleted I	eyed Matrix (F2)		☐ Reduced Vertic (F		
	A9) (LRR F, G, H) low Dark Surface		•	rk Surface (F6)		☐ Red Parent Materi		
☐ Thick Dark S		(A11)		Dark Surface (F0)		☐ Very Shallow Dark	` '	
☐ Sandy Mucky				pressions (F8)	1	☐ Other (Explain in F		
	ky Peat or Peat (S2	2) (I PP 6	_	is Depressions (F6)	16)	_ ` .	,	
	Peat or Peat (S3)			2 & 73 of LRR H	,	³ Indicators of hydroph wetland hydrology mu		
_ c ciii iiidoky	1 641 61 1 641 (66)	(=::::)	•	,		disturbed or problema		
Restrictive Lay	er (if present):					Hydric Soil Present?)	
Type:	, , ,	,	Depth (inches):			☐ Yes ⊠ No		
YDROLOGY								
Wetland Hydro	ology Indicators:							
Primary Indicato	ors (minimum of or	ne require	d; check all that appl	l <u>y)</u>		Secondary Indicators	(2 or more required)	
☐ Surface Wate	ter (A1)		☐ Salt Crust (B	11)		☐ Surface Soil Crac	ks (B6)	
☐ High Water 1	` '		☐ Aquatic Inver	•		☐ Sparsely Vegetated Concave Surface (B8)		
	` '		☐ Hydrogen Su	, ,		☐ Drainage Patterns		
-				Water Table (C2)				
☐ Saturation (A	s (B1)					I I Oxidized Rhizosp	heres on Living Roots (C3	
☐ Saturation (A☐ Water Marks				zospheres on Liv	ng Roots (C3)	(where tilled)	heres on Living Roots (C3	
☐ Saturation (A☐ Water Marks☐ Sediment De	eposits (B2)			zospheres on Livit tilled)	ng Roots (C3)		,	
☐ Saturation (A☐ Water Marks☐ Sediment De☐ Drift Deposits	eposits (B2) ts (B3)		Oxidized Rhiz		. ,	(where tilled) Crayfish Burrows	,	
☐ Saturation (A☐ Water Marks☐ Sediment De☐ Drift Deposits☐ Algal Mat or	eposits (B2) ts (B3) Crust (B4)		Oxidized Rhiz	t tilled) Reduced Iron (C4	. ,	(where tilled) Crayfish Burrows	(C8) on Aerial Imagery (C9)	
☐ Saturation (A☐ Water Marks☐ Sediment De☐ Drift Deposits☐ Algal Mat or☐ Iron Deposits	eposits (B2) ts (B3) Crust (B4)	agery (B7	Oxidized Rhiz (where not Presence of I Thin Muck Su	t tilled) Reduced Iron (C4 urface (C7)	. ,	(where tilled) ☐ Crayfish Burrows ☐ Saturation Visible	(C8) on Aerial Imagery (C9) tion (D2)	
☐ Saturation (A☐ Water Marks☐ Sediment De☐ Drift Deposits☐ Algal Mat or☐ Iron Deposits	eposits (B2) ts (B3) Crust (B4) s (B5) /isible on Aerial Im	agery (B7	Oxidized Rhiz (where not Presence of I Thin Muck Su	t tilled) Reduced Iron (C4 urface (C7)	. ,	(where tilled) ☐ Crayfish Burrows ☐ Saturation Visible ☐ Geomorphic Posit	(C8) on Aerial Imagery (C9) tion (D2) (D5)	
☐ Saturation (A☐ Water Marks☐ Sediment De☐ Drift Deposite☐ Algal Mat or☐ Iron Deposite☐ Inundation V☐ Water-Staine	eposits (B2) ts (B3) Crust (B4) s (B5) /isible on Aerial Imed Leaves (B9)		Oxidized Rhiz (where not Presence of I Thin Muck St Other (Explain	t tilled) Reduced Iron (C4 urface (C7) in in Remarks))	(where tilled) ☐ Crayfish Burrows ☐ Saturation Visible ☐ Geomorphic Posi ☐ FAC-Neutral Test ☐ Frost-Heave Hum	(C8) on Aerial Imagery (C9) tion (D2) (D5) mocks (D7) (LRR F)	
□ Saturation (A □ Water Marks □ Sediment De □ Drift Deposite □ Algal Mat or □ Iron Deposite □ Inundation V □ Water-Staine	eposits (B2) ts (B3) Crust (B4) s (B5) /isible on Aerial Imed Leaves (B9)		Oxidized Rhiz (where not Presence of I Thin Muck St) Other (Explain	t tilled) Reduced Iron (C4 urface (C7) in in Remarks) Describe Red)	(where tilled) ☐ Crayfish Burrows ☐ Saturation Visible ☐ Geomorphic Posi ☐ FAC-Neutral Test ☐ Frost-Heave Hum	(C8) on Aerial Imagery (C9) tion (D2) (D5)	
☐ Saturation (A☐ Water Marks☐ Sediment De☐ Drift Deposits☐ Algal Mat or☐ Iron Deposits☐ Inundation V☐ Water-Staine	eposits (B2) ts (B3) Crust (B4) s (B5) /isible on Aerial Imed Leaves (B9) tions:		Oxidized Rhiz (where not Presence of I Thin Muck St Other (Explain	t tilled) Reduced Iron (C4 urface (C7) in in Remarks) Describe Red	orded Data (stre	(where tilled) ☐ Crayfish Burrows ☐ Saturation Visible ☐ Geomorphic Posi ☐ FAC-Neutral Test ☐ Frost-Heave Hum	(C8) on Aerial Imagery (C9) tion (D2) (D5) mocks (D7) (LRR F)	
☐ Saturation (A☐ Water Marks☐ Sediment De☐ Drift Deposits☐ Algal Mat or☐ Iron Deposits☐ Inundation V	eposits (B2) ts (B3) Crust (B4) s (B5) /isible on Aerial Im ed Leaves (B9) tions:	Yes	Oxidized Rhiz (where not presence of I Thin Muck St Other (Explai	t tilled) Reduced Iron (C4 urface (C7) in in Remarks) Describe Red	orded Data (stre	(where tilled) ☐ Crayfish Burrows ☐ Saturation Visible ☐ Geomorphic Posi ☐ FAC-Neutral Test ☐ Frost-Heave Hum	(C8) on Aerial Imagery (C9) tion (D2) (D5) mocks (D7) (LRR F)	
☐ Saturation (A☐ Water Marks☐ Sediment De☐ Drift Deposits☐ Algal Mat or☐ Iron Deposits☐ Inundation V☐ Water-Staine Field Observation	eposits (B2) ts (B3) Crust (B4) s (B5) /isible on Aerial Imed Leaves (B9) tions: present?	Yes	Oxidized Rhiz (where not presence of I Thin Muck St) Other (Explain Depth No (inches)	t tilled) Reduced Iron (C4 urface (C7) in in Remarks) Describe Red	orded Data (stre	(where tilled) ☐ Crayfish Burrows ☐ Saturation Visible ☐ Geomorphic Posi ☐ FAC-Neutral Test ☐ Frost-Heave Hum	(C8) on Aerial Imagery (C9) tion (D2) (D5) mocks (D7) (LRR F)	
☐ Saturation (A☐ Water Marks☐ Sediment De☐ Drift Deposits☐ Algal Mat or☐ Iron Deposits☐ Inundation V☐ Water-Staine Field Observati Surface Water p	eposits (B2) is (B3) Crust (B4) s (B5) /isible on Aerial Imed Leaves (B9) tions: present? esent?	Yes	Oxidized Rhiz (where not where not Presence of I Thin Muck St) Other (Explain Depth (inches)	t tilled) Reduced Iron (C4 urface (C7) in in Remarks) Describe Red	orded Data (stre	(where tilled) ☐ Crayfish Burrows ☐ Saturation Visible ☐ Geomorphic Posi ☐ FAC-Neutral Test ☐ Frost-Heave Hum	(C8) on Aerial Imagery (C9) tion (D2) (D5) mocks (D7) (LRR F)	
☐ Saturation (A☐ Water Marks☐ Sediment De☐ Drift Deposits☐ Algal Mat or☐ Iron Deposits☐ Inundation V☐ Water-Staine Field Observati Surface Water p Water Table presented Description Presented Description Presented Description (A)	eposits (B2) is (B3) Crust (B4) s (B5) //isible on Aerial Imed Leaves (B9) tions: present? esent? eary fringe)	Yes	Oxidized Rhiz (where not where not Presence of I Thin Muck St) Other (Explain Depth (inches)	t tilled) Reduced Iron (C4 urface (C7) in in Remarks) Describe Red	orded Data (stre	(where tilled) ☐ Crayfish Burrows ☐ Saturation Visible ☐ Geomorphic Posi ☐ FAC-Neutral Test ☐ Frost-Heave Hum	(C8) on Aerial Imagery (C9) tion (D2) (D5) mocks (D7) (LRR F)	
☐ Saturation (A☐ Water Marks☐ Sediment De☐ Drift Deposits☐ Algal Mat or☐ Iron Deposits☐ Inundation V☐ Water-Staine Field Observati Surface Water p Water Table pre Saturation Prese (includes capilla Wetland Hydro	eposits (B2) ts (B3) Crust (B4) s (B5) /isible on Aerial Imed Leaves (B9) tions: present? esent? eary fringe) plogy Present?	Yes	Oxidized Rhiz (where not where not Presence of I Thin Muck St) Other (Explain Depth (inches) I	t tilled) Reduced Iron (C4 urface (C7) in in Remarks) Describe Red	orded Data (stre	(where tilled) ☐ Crayfish Burrows ☐ Saturation Visible ☐ Geomorphic Posi ☐ FAC-Neutral Test ☐ Frost-Heave Hum	on Aerial Imagery (C9) tion (D2) (D5) mocks (D7) (LRR F)	
☐ Saturation (A☐ Water Marks☐ Sediment De☐ Drift Deposits☐ Algal Mat or☐ Iron Deposits☐ Inundation V☐ Water-Staine Field Observati Surface Water p Water Table pre Saturation Prese (includes capilla Wetland Hydro	eposits (B2) is (B3) Crust (B4) s (B5) //isible on Aerial Imed Leaves (B9) tions: present? esent? eary fringe)	Yes	Oxidized Rhiz (where not where not Presence of I Thin Muck St) Other (Explain Depth (inches) I	t tilled) Reduced Iron (C4 urface (C7) in in Remarks) Describe Red	orded Data (stre	(where tilled) ☐ Crayfish Burrows ☐ Saturation Visible ☐ Geomorphic Posi ☐ FAC-Neutral Test ☐ Frost-Heave Hum	(C8) on Aerial Imagery (C9) tion (D2) (D5) mocks (D7) (LRR F)	

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Project	City/County:	Hand Count	y Sampling Date: 10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC			tate: SD Sampling Point: SP-658
Investigator(s): T. Beemer, W. Hirst	Sectio		Range: S10, T110N, R66W
Landform (hillslope, terrace, etc.) drainage	Local relief (con		\frac{1}{2}
Subregion (LRR): Northern Great Plains Spring Wheat Regi	_ ion Lat: 44.35	3970	Long: -98.746007 Datum: NAD83
Soil Map Unit Name: Betts-Java loams, steep	44.00	0010	NWI Classification: PEM1A
Are climate/hydrologic conditions on the site typical for this time	of year? X Yes	□ No	(If no, explain in Remarks.)
, , ,	, _	_	,
Vegetation Soil Hydrology	Are "No	ormal Circum	stances" present? 🛛 Yes 🔲 No
Significantly Disturbed?	(If need	led, explain a	any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing s	ampling point loc	ations, tra	nsects, important features, etc.
Yes No	Remarks: Wetland	sample plot l	ocated in PEM W-579.
Hydrophytic Vegetation Present? □ □ Hydric Soil Present? □ □			
Hydric Soil Present? Wetland Hydrology Present? □			
Is the Sampled Area within a Wetland?			
is the campion Area within a Wettand:			
VEGETATION – Use scientific names of plants			
	solute Dominant	Indicator	Dominance Test Worksheet:
` —	Cover Species?	Status	Number of Dominant Species that
1	<u>%</u>		are OBL, FACW, or FAC
3.	<u>%</u>		(excluding FAC-):(A)
4.	%		Total Number of Dominant Species Across All Strata: (B)
_	0 % = Total Cov	er	···
Sapling/Shrub Stratum (Plot size: <u>15'</u>)			Percent of Dominant Species that are OBL, FACW, or FAC: (A/B)
1	<u>%</u>		(**2)
2	<u>%</u>		Prevalence Index Worksheet:
3. 4.	<u>%</u>		Total % Cover of: Multiply by:
5	<u>%</u>		OBL species % x 1 = 0
	0 % = Total Cov	er	FACW species % x 2 = 0
Herb Stratum (Plot size: <u>5'</u>)			FAC species% x 3 =0
	<u>50 %</u> Y	FACW	FACU species
	45 % Y	FACW	Column Totals: 0 % (A) 0 (B)
3. <u>Typha angustifolia</u>	<u>5 %</u> N	OBL	Prevalence Index = B/A =
4	<u>%</u>		
6	%		Hydrophytic Vegetation Indicators:
7	%		□ 1 Rapid Test for Hydrophytic Vegetation
8	<u> </u>		☐ 2 Dominance Test is >50%
9	<u>%</u>		☐ 3 Prevalence Index is ≤3.0¹
10	<u>%</u>		☐ 4 Morphological Adaptations¹ (Provide
Woody Vine Stratum (Plot size: 30')	100 70 = 10tai 00v	OI .	supporting data in Remarks or on a separate sheet)
1	<u> </u>		☐ Problematic Hydrophytic Vegetation¹ (explain)
2	<u> </u>		¹ Indicators of hydric soil and wetland hydrology
-	0 % = Total Cov	er	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 0 %			Hydrophytic Vegetation Present? ⊠ Yes ☐ No
Remarks: Rapid test for hydrophytic vegetation is met. Photogra	aph C-47.		

SOIL Sampling Point: SP-658

Profile Desc	ription: (Describe	to the depth	needed to docum	ent the i	ndicator o	r confirm the	absence of indicators.)			
Depth	Matrix		Red	ox Featu	ıres					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-20	10YR 2/1	100					mucky clay			
-										
-										
	-									
¹Type: C=C	oncentration, D=Dep	oletion, RM=R	Reduced Matrix, CS=	-Covered	d or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil	Indicators: (Applic	able to all L	RRs, unless otherw	ise not	ed.)		Indicators for Problema	atic Hydric Soils³:		
☐ Histosol (A1)		☐ Sandy Gley	ed Matrix	k (S4)		1 cm Muck (A9) (LRF	R I, J)		
☐ Histic Epi			☐ Sandy Redo				☐ Coast Prairie Redox (
	Black Histic (A3) Stripped Matrix (S6)						Dark Surface (S7) (LI	,		
	☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1)						☐ High Plains Depression ☐ High Plains Depression ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
	☐ Stratified Layers (A5) (LRR F) ☐ Loamy Gleyed Matrix (F2)						_ `	•		
	k (A9) (LRR F, G, F		☐ Depleted Ma				☐ Reduced Vertic (F18)☐ Red Parent Material (
☐ Depleted Below Dark Surface (A11) ☐ Redox Dark Surface (F6)							☐ Very Shallow Dark St			
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)							☐ Other (Explain in Ren			
	ucky Peat or Peat (\$	S2) (I RR G I					• •	,		
	ky Peat or Peat (S3	, ,	(MLRA 72				³ Indicators of hydrophytic wetland hydrology must			
	my roat or roat (oo	, (=)	•		,		disturbed or problematic			
Restrictive	_ayer (if present):						Hydric Soil Present?			
Type:		De	pth (inches):				⊠ Yes □ No			
Remarks: Hy	dric soil indicator F	ı is met.								
HYDROLOG	Υ									
Wetland Hy	drology Indicators:	:								
Primary India	cators (minimum of o	one required;	check all that apply)	_			Secondary Indicators (2	or more required)		
Surface V	Vater (A1)		☐ Salt Crust (B11)			☐ Surface Soil Cracks (B6)			
	er Table (A2)		☐ Aquatic Inverte	brates (E	313)		☐ Sparsely Vegetated Concave Surface (B8)			
			☐ Hydrogen Sulfi	de Odor	(C1)		☐ Drainage Patterns (E			
☐ Water Ma	ırks (B1)		☐ Dry-Season Wa	ater Tab	le (C2)		Oxidized Rhizospher	res on Living Roots (C3)		
☐ Sediment	Deposits (B2)		Oxidized Rhizo	•	on Living F	Roots (C3)	(where tilled)			
☐ Drift Depo			(where not t	•	(O.1)		☐ Crayfish Burrows (C8			
_	or Crust (B4)		☐ Presence of Re		. ,		☐ Saturation Visible on	5 , ()		
☐ Iron Depo		(- -)	☐ Thin Muck Surf				Geomorphic Position	, ,		
_	n Visible on Aerial Ir	magery (B7)	☐ Other (Explain	ın Kema	rks)			,		
☐ Water-Sta	ained Leaves (B9)			1				CKS (D7) (LKK F)		
Field Obser	vations:	Yes No	Depth (inches)			ed Data (strea , if available:	m gauge, monitoring well,	aerial photos, previous		
Surface Wat	er nresent?			mopec	o. 13, 6 10.)	, 11 avallable.				
	•									
Water Table Saturation P	•									
(includes car			J							
	drology Present?		1							
				ro mat						
Remarks: W	enanu nyurology ind	iicators AT, A	2, A3, D2, and D5 a	ie iliet.						

Project/Site: Sweetland Wind Project	Ci	ty/County: H	Hand Coun	Sampling Date: 10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC		tate: SD Sampling Point: SP-659		
Investigator(s): T. Beemer, W. Hirst		Section		Range: S10, T110N, R66W
Landform (hillslope, terrace, etc.) hillslope	Loc	al relief (conc		· · · · · · · · · · · · · · · · · · ·
Subregion (LRR): Northern Great Plains Spring Wheat R		Lat: 44.353		Long: -98.745979 Datum: NAD83
Soil Map Unit Name: Betts-Java loams, steep	logion	44.000	004	NWI Classification: PEM1A
Are climate/hydrologic conditions on the site typical for this til	me of vear?	? ⊠ Yes	□No	(If no, explain in Remarks.)
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			(,,,
Vegetation Soil Hydrolo	ogy	Are "Noi	rmal Circun	nstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?		(If neede	ed, explain	any answers in Remarks.)
Naturally Problematic?				
SUMMARY OF FINDINGS – Attach site map showing	g samplin	g point loca	ations, tra	nsects, important features, etc.
Yes No	Remar	ks: Upland sa	mple plot a	djacent to PEM W-579.
Hydrophytic Vegetation Present?				
Hydric Soil Present?				
Wetland Hydrology Present?				
Is the Sampled Area within a Wetland?				
VEGETATION – Use scientific names of plants				
	Absolute	Dominant	Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: <u>30'</u>)	% Cover	Species?	Status	Number of Dominant Species that
1 2.	<u>%</u> %			are OBL, FACW, or FAC
2. 3.				(excluding FAC-):0 (A)
4.	<u>%</u>			Total Number of Dominant
	0 %	= Total Cove	er	Species Across All Strata:1(B)
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Percent of Dominant Species that
1	<u>%</u>			are OBL, FACW, or FAC:0%_(A/B)
2	<u></u>			Prevalence Index Worksheet:
3	<u>%</u>			Total % Cover of: Multiply by:
4 5.	<u>%</u>			OBL species
5	<u>%</u> 0 %	= Total Cove		FACW species
Herb Stratum (Plot size: 5')	0 70	- 10tal 00v0	,,	FAC species
1. Poa pratensis	100 %	Υ	FACU	FACU species% x 4 =0
2	%			UPL species% x 5 =0 Column Totals: 0 % (A) 0 (B)
3	<u>%</u>			
4	<u>%</u>			Prevalence Index = B/A =
5	<u>%</u>			Hydrophytic Vegetation Indicators:
6	<u>%</u> %			☐ 1 Rapid Test for Hydrophytic Vegetation
7 8	<u> </u>			2 Dominance Test is >50%
9.	%			☐ 3 Prevalence Index is ≤3.0¹
10	<u>%</u>			
Woody Vine Stratum (Plot size: 30')	<u>100 %</u>	= Total Cove	er	4 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
1	<u>%</u>			☐ Problematic Hydrophytic Vegetation¹ (explain)
2	<u>%</u>			¹ Indicators of hydric soil and wetland hydrology
	0 %	= Total Cove	er	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum0 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photograph	n C-48.			

SOIL Sampling Point: SP-659

Profile Desc	ription: (Describe	to the de	epth n	eeded to docum	ent the	indicator o	r confirm the	absence of indicators.)			
Depth	Matrix			Red	dox Fea	atures					
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-8	10YR 2/2	100						Clay Loam			
8-20	10YR 3/3	100						Clay Loam			
	-								_		
-											
1Tyrnay C. Co	naontration D. Da	nlation Di	M Do	duand Matrix, CC	Cover	ad ar Castas	L Cond Croins	21 agotion, DL Dara	Lining M Matrix		
	ncentration, D=De						I Sanu Grains	² Location: PL=Pore			
l <u> </u>		cable to a	III LIXI			-			•		
☐ Histosol (,			☐ Sandy Gley		. ,		1 cm Muck (A9) (LRF			
☐ Histic Epi☐ Black His				☐ Sandy Red☐ Stripped Ma				☐ Coast Prairie Redox (☐ Dark Surface (S7) (LI	, , , , ,		
☐ Hydrogen	` '			Loamy Muc	•	•		☐ High Plains Depression			
	Layers (A5) (LRR F	=)		☐ Loamy Gle	-			(LRR H outside of I	/ILRA 72 & 73)		
	k (A9) (LRR F, G, I			☐ Depleted M				Reduced Vertic (F18)	•		
	Below Dark Surface			☐ Redox Dark				Red Parent Material (
	k Surface (A12)	(, , , , ,		☐ Depleted D		. ,		☐ Very Shallow Dark St	ırface (TF 12)		
	ıcky Mineral (S1)			☐ Redox Dep		. ,		Other (Explain in Ren	narks)		
	ucky Peat or Peat (S2) (LRR	G , H)	 ☐ High Plains	Depre	ssions (F16)		³ Indicators of hydrophytic	vegetation and		
5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H)								wetland hydrology must			
								disturbed or problematic			
Restrictive Layer (if present):							Hydric Soil Present?				
Type:	Type: Depth (inches):							☐ Yes ⊠ No			
Remarks: No	hydric soil indicato	r is prese	nt.								
	,										
HYDROLOG	Υ										
	drology Indicators	•									
_	ators (minimum of		red: ch	neck all that apply	·)			Secondary Indicators (2	or more required)		
☐ Surface V	•			☐ Salt Crust (B1	_			<u> </u>			
☐ High Wate	` '			☐ Sait Crust (B1	,	(B12)		☐ Surface Soil Cracks (B6)			
☐ Saturation				☐ Hydrogen Sulf		, ,		☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10)			
☐ Water Ma	` '			☐ Pry-Season W				Oxidized Rhizospher	,		
	Deposits (B2)			Oxidized Rhize		` ,	Roots (C3)	(where tilled)	oo on Elving Rooto (Oo)		
☐ Drift Depo				(where not		50 011 E11111g 1	(00)	☐ Crayfish Burrows (C8	3)		
	or Crust (B4)			☐ Presence of R	educed	I Iron (C4)		☐ Saturation Visible on	Aerial Imagery (C9)		
☐ Iron Depo			1	Thin Muck Sur	rface (C	(7)		☐ Geomorphic Position	(D2)		
	n Visible on Aerial I	magery (E	37) l	Other (Explain	in Ren	narks)		☐ FAC-Neutral Test (D	5)		
☐ Water-Sta	ained Leaves (B9)							☐ Frost-Heave Hummo	cks (D7) (LRR F)		
Field Observ	vations:			Depth	Desc	cribe Record	ed Data (strear	n gauge, monitoring well,	aerial photos, previous		
		Yes	No	(inches)	insp	ections, etc.)	, if available:		, , , ,		
Surface Water	er present?		\boxtimes								
Water Table	present?		\boxtimes								
Saturation Pr	resent?		\boxtimes								
(includes cap	oillary fringe)	_									
Wetland Hyd	drology Present?		\boxtimes								
Remarks: We	etland hydrology inc	dicators a	re not	met.							

Project/Site: Sweetland Wind Project		City/County:	Hand Coun	ty	Sampling Date: 10/17/2018	
Applicant/Owner: Sweetland Wind Farm, LLC	:	State: SD Sampling Point: SP-660				
Investigator(s): T. Beemer, W. Hirst		Sectio		, Range: S5, T	 110N, R66W	
Landform (hillslope, terrace, etc.) drainage		Local relief (con			OI (8()	
Subregion (LRR): Northern Great Plains Spr	ing Wheat Region	Lat: 44.36	4107	Long: -98.79	93791 Datum: NAD83	
Soil Map Unit Name: Glenham-Java loams,				NWI Clas	ssification: PEM1Cd	
Are climate/hydrologic conditions on the site typi		year? 🛛 Yes	☐ No	(If no, explain i	n Remarks.)	
Vegetation Soil Significantly Disturbed?	Hydrology			nstances" present		
Naturally Problematic?		(If need	ded, explain	any answers in R	emarks.)	
SUMMARY OF FINDINGS – Attach site ma	p showing sam	npling point lo	ations, tra	ınsects, import	tant features, etc.	
		emarks: Wetland				
		emarks. Wedanu	sample plut	located in FLIVI V	7-360.	
_						
Wetland Hydrology Present?	⊠ □					
Is the Sampled Area within a Wetland?	⊠ □					
VEGETATION – Use scientific names of p	lants					
	Absol	ute Dominant	Indicator	Dominance Te	est Worksheet	
Tree Stratum (Plot size: 30')	% Co		Status			
1.		<u>%</u>		are OBL, FACV	ninant Species that V, or FAC	
2.		<u>%</u>		(excluding FAC	:-):(A)	
3 4.		<u>%</u>		Total Number of		
4.		% = Total Cov	/er	Species Across	s All Strata:(B)	
Sapling/Shrub Stratum (Plot size: 15')					ninant Species that	
1.		<u></u>		are OBL, FACV	V, or FAC:(A/B)	
2		<u></u>		Prevalence Inc	dex Worksheet:	
3.		<u>%</u>		Total % C	Cover of: Multiply by:	
45.		<u>%</u> %		OBL species	% x1 = 0	
5		<u>%</u> = Total Cov	/er	FACW species		
Herb Stratum (Plot size: <u>5'</u>)				FAC species	% x 3 =0	
1. <u>Spartina pectinata</u>		<u>Y</u>	FACW	FACU species		
2		<u> </u>		UPL species Column Totals	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	
3		<u>%</u>		Prevalence Inc		
4		<u>%</u>				
56.		<u>%</u>		Hydrophytic V	egetation Indicators:	
7		<u>%</u>			t for Hydrophytic Vegetation	
8.		%		☐ 2 Dominanc	e Test is >50%	
9		<u>%</u>		☐ 3 Prevalenc	e Index is ≤3.0¹	
10		<u>%</u>		☐ 4 Morpholod	gical Adaptations ¹ (Provide	
Woody Vine Stratum (Plot size: 30')	100)% = Total Cov	/er	supporting data	in Remarks or on a separate sheet)	
1		%		☐ Problematic	Hydrophytic Vegetation ¹ (explain)	
2.		%		1 Indicators of h	nydric soil and wetland hydrology	
	0	<u>%</u> = Total Cov	/er	must be presen	nt, unless disturbed or problematic	
Bare Ground in Herb Stratum 0 %				Hydrophytic Ve	getation Present? X Yes No	
Remarks: Rapid test for hydrophytic vegetation i	s met. Photograph	n C-49.				
The state of the s	e ·o.og.api					

SOIL Sampling Point: SP-660

Profile Desc	ription: (Describe	to the de	epth n	eeded to docum	ent the	indicator o	or confirm the	absence of indicators.)			
Depth	Matrix			Red	dox Fea	tures					
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-20	10YR 2/1	100						mucky clay			
¹Type: C=Co	ncentration, D=De	pletion, RI	M=Red	duced Matrix, CS	=Covere	ed or Coated		² Location: PL=Pore	Lining, M=Matrix		
	ndicators: (Appli	<u> </u>		· · · · · · · · · · · · · · · · · · ·				Indicators for Problem			
☐ Histosol (A				∑ Sandy Gley		-		☐ 1 cm Muck (A9) (LR	•		
☐ Histosor (/	,			☐ Sandy Red		IIX (O4)		☐ Coast Prairie Redox			
☐ Black Hist				☐ Stripped M		3)		☐ Dark Surface (S7) (L			
☐ Hydrogen	` '			□ Chipped Will □ Loamy Much Much Much Much Much Much Much Much	•	,		☐ High Plains Depress	•		
	_ayers (A5) (LRR F	=)		Loamy Gle				(LRR H outside of			
	k (A9) (LRR F, G, I			☐ Depleted M	-	, ,		☐ Reduced Vertic (F18	3)		
	Below Dark Surface			☐ Redox Darl				☐ Red Parent Material	(TF2)		
_ ·	Surface (A12)	` /		☐ Depleted D		, ,		☐ Very Shallow Dark S	Surface (TF 12)		
☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)								Other (Explain in Re	marks)		
☐ 2.5 cm Mu	icky Peat or Peat (S2) (LRR	G , H)	☐ High Plains	Depres	sions (F16)		³ Indicators of hydrophyt	ic vegetation and		
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H)								wetland hydrology must be present, unless			
Postrictive I	over (if present).							disturbed or problematic	<u> </u>		
	ayer (if present):							Hydric Soil Present?			
Type:		_	Deptl	n (inches):				⊠ Yes □ No			
Remarks: Hy	dric soil indicator F	1 is met.									
,											
HYDROLOG	Y										
Wetland Hyd	rology Indicators	:									
Primary Indic	ators (minimum of	one requir	ed; ch	eck all that apply	<u>')</u>			Secondary Indicators (2	2 or more required)		
☐ Surface W	ater (A1)		1	☐ Salt Crust (B1	1)			☐ Surface Soil Cracks (B6)			
☐ High Wate	` '		-	☐ Aquatic Invert	,	(B13)		☐ Sparsely Vegetated Concave Surface (B8)			
☐ Saturation				☐ Hydrogen Sulf				☐ Sparsely vegetated Concave Surface (B6) ☐ Drainage Patterns (B10)			
☐ Water Mai				Dry-Season W				-	eres on Living Roots (C3)		
_	Deposits (B2)			Oxidized Rhiz		` '	Roots (C3)	(where tilled)	5 (-1)		
☐ Drift Depo				(where not		· ·	. ,	☐ Crayfish Burrows (C			
☐ Algal Mat				Presence of R		` '		Saturation Visible of	• • • •		
☐ Iron Depo				Thin Muck Su	•	•		☐ Geomorphic Positio			
☐ Inundation	Visible on Aerial I	magery (E	37) [Other (Explain	in Rem	arks)		FAC-Neutral Test (,		
☐ Water-Sta	ined Leaves (B9)							☐ Frost-Heave Humm	ocks (D7) (LRR F)		
Field Observ	ations:	V	N.I.	Depth				m gauge, monitoring well,	aerial photos, previous		
		Yes	No	(inches)	inspe	ections, etc.)	, if available:				
Surface Water	r present?		\boxtimes								
Water Table	oresent?		\boxtimes								
Saturation Pr	esent?		\boxtimes								
(includes cap	illary fringe)										
Wetland Hyd	rology Present?	\boxtimes									
Remarks: We	tland hydrology inc		10, D2	, and D5 are met	i.						
	, 		,								
I											

Project/Site: Sweetland Wind Project	City/County: Hand C	county Sampling Date: 10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-661
Investigator(s): T. Beemer, W. Hirst	Section, Towns	
Landform (hillslope, terrace, etc.) toeslope	Local relief (concave, co	
Subregion (LRR): Northern Great Plains Spring Wheat Regio	n Lat: 44.364096	Long: -98.793736 Datum: NAD83
Soil Map Unit Name: Glenham-Java loams, rolling		NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this time o	of year? ⊠ Yes □ I	
Vegetation Soil Hydrology	Are "Normal Ci	rcumstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?	(If needed, expl	ain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	mpling point locations	transacts important features etc
Yes No Hydrophytic Vegetation Present? □ ⊠	Remarks: Upland sample p	lot adjacent to PEM W-580.
Hydric Soil Present?		
Wetland Hydrology Present? □ ⊠		
Is the Sampled Area within a Wetland?		
VEGETATION – Use scientific names of plants		_
•	olute Dominant Indica	tor Dominance Test Worksheet:
	Cover Species? Statu	IS
1	<u>%</u>	Number of Dominant Species that are OBL, FACW, or FAC
2	<u> </u>	(excluding FAC-):0 (A)
3	<u>%</u>	Total Number of Dominant
4	<u>%</u> 0 % = Total Cover	Species Across All Strata: 1 (B)
Sapling/Shrub Stratum (Plot size: 15')	<u> </u>	Percent of Dominant Species that
1	%	are OBL, FACW, or FAC: 0% (A/B)
2	<u> </u>	Prevalence Index Worksheet:
3	<u>%</u>	_
4	<u>%</u>	Total % Cover of: Multiply by:
5		OBL species% x 1 =0 FACW species % x 2 =0
Herb Stratum (Plot size: 5')	O % = Total Cover	FAC species
`	00 % Y UPL	FACU species
2	%	
3	%	Column Totals:0% (A)0 (B)
4	<u>%</u>	Prevalence Index = B/A =
5	<u>%</u>	Hydrophytic Vegetation Indicators:
6	<u>%</u>	☐ 1 Rapid Test for Hydrophytic Vegetation
7	<u>%</u>	
9.	%	— ☐ 3 Prevalence Index is ≤3.0¹
10	<u> </u>	☐ 4 Morphological Adaptations¹ (Provide
	00 % = Total Cover	supporting data in Remarks or on a separate sheet)
1	%	Problematic Hydrophytic Vegetation ¹ (explain)
2	<u>%</u>	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 0 %		Hydrophytic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photograph C-5	0.	
, ,		

SOIL Sampling Point: SP-661

Profile Desc	ription: (Describe	to the d	epth n	eeded to docun	nent the	indicator o	or confirm the	absence of indicators.)			
Depth	Matrix			Re	dox Fea	itures					
(inches)	Color (moist)	%	C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-8	10YR 2/2	100						Clay Loam			
8-20	10YR 3/3	100	_					Clay Loam			
	· -										
-											
¹Type: C=Co	oncentration, D=De	pletion, R	M=Re	duced Matrix, CS	S=Cover	ed or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil	Indicators: (Appli	cable to a	all LRF			-		Indicators for Problems	atic Hydric Soils ³ :		
☐ Histosol (,			☐ Sandy Gle	-			☐ 1 cm Muck (A9) (LRF			
Histic Epi				Sandy Red				Coast Prairie Redox			
☐ Black His	` '			☐ Stripped M	•	,		☐ Dark Surface (S7) (L	•		
	Sulfide (A4)			☐ Loamy Mu				☐ High Plains Depressi			
	Layers (A5) (LRR F			Loamy Gle	-	, ,		(LRR H outside of I	•		
	k (A9) (LRR F, G, I			☐ Depleted N				Reduced Vertic (F18)			
	Below Dark Surface	e (A11)		☐ Redox Dar		` '		Red Parent Material (,		
	k Surface (A12)			Depleted D		, ,		☐ Very Shallow Dark St	, ,		
-	ucky Mineral (S1)			☐ Redox Dep		` '		Other (Explain in Ren	narks)		
	ucky Peat or Peat (•	` ,		³ Indicators of hydrophytic			
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H)								wetland hydrology must be present, unless disturbed or problematic			
Restrictive I	_ayer (if present):							Hydric Soil Present?			
								☐ Yes ☐ No			
Type:			рерт	n (inches):							
Remarks: No	hydric soil indicato	r is prese	nt.								
	•										
HYDROLOG	iΥ										
Wetland Hyd	drology Indicators	:									
· ·	cators (minimum of		red; ch	neck all that apply	/)			Secondary Indicators (2	or more required)		
☐ Surface V	Vater (A1)	-		☐ Salt Crust (B1	1)			<u> </u>			
_	er Table (A2)			☐ Aquatic Invert	,	(B13)		☐ Surface Soil Cracks (B6)			
☐ Saturation				☐ Hydrogen Sul				☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10)			
☐ Water Ma				☐ Pry-Season V					res on Living Roots (C3)		
_	Deposits (B2)			Oxidized Rhiz		, ,	Roots (C3)	(where tilled)	co on Living Roots (CO)		
☐ Drift Depo			'	(where not		oo on Eiving	110010 (00)	☐ Crayfish Burrows (Ca	3)		
	or Crust (B4)			☐ Presence of F	Reduced	Iron (C4)		☐ Saturation Visible on	Aerial Imagery (C9)		
☐ Iron Depo				☐ Thin Muck Su	rface (C	7)		☐ Geomorphic Position	• • • •		
	n Visible on Aerial I	magery (E	37)	Other (Explain	n in Rem	narks)		☐ FAC-Neutral Test (D			
	ained Leaves (B9)		,					☐ Frost-Heave Hummo	ocks (D7) (LRR F)		
	. ,			Depth	Door	riba Dagard	lad Data (atraca	m aquan monitoring well	acrial phatas, provinus		
Field Obser	vations:	Yes	No	(inches)			ied Data (streat), if available:	m gauge, monitoring well,	aeriai priotos, previous		
Surface Wate	er present?		\boxtimes			2, 2.0.)	.,				
Water Table	•										
Saturation P	•	_									
			\boxtimes	<u> </u>							
(includes cap			\square								
	drology Present?	<u>.</u>									
Remarks: W	etland hydrology ind	dicators a	re not	met.							
1											

Project/Site: Sweetland Wind Project	City/County: Hand (County Sampling Date: 10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-663
Investigator(s): T. Beemer, W. Hirst	Section, Town	nship, Range: S4, T110N, R66W
Landform (hillslope, terrace, etc.) toeslope	Local relief (concave, co	
Subregion (LRR): Northern Great Plains Spring Wheat Region	n Lat: 44.362340	Long: -98.781045 Datum: NAD83
Soil Map Unit Name: Tetonka silt loam, 0 to 1 percent slopes		NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this time o		
Vegetation Soil Hydrology	Are "Normal C	ircumstances" present?
Significantly Disturbed?	(If needed, exp	lain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	mpling point locations	transects, important features, etc.
	Remarks: Upland sample p	
Hydrophytic Vegetation Present?	Remarks. Opiano sample p	лот.
Hydric Soil Present?		
Wetland Hydrology Present? □ ☑		
Is the Sampled Area within a Wetland?		
VEGETATION – Use scientific names of plants		
•	olute Dominant Indica	ator Dominance Test Worksheet:
	over Species? Stat	us
1	<u></u>	Number of Dominant Species that are OBL, FACW, or FAC
2	<u></u>	(excluding FAC-): 0_(A)
3	<u>%</u>	Total Number of Dominant
4	<u>%</u> 0 % = Total Cover	Species Across All Strata:1_(B)
Sapling/Shrub Stratum (Plot size: 15')	<u> </u>	Percent of Dominant Species that
1.	%	are OBL, FACW, or FAC: 0% (A/B)
2.	%	Prevalence Index Worksheet:
3	<u></u>	
4	<u></u>	Total % Cover of: Multiply by:
5	<u>%</u>	OBL species% x 1 =0 FACW species % x 2 =0
	0 % = Total Cover	FAC species
Herb Stratum (Plot size: <u>5'</u>) 1. Bromus inermis 10	00% Y UP	FACIL species % v.4 = 0
2.	<u>%</u>	UPL species% x 5 =0
3.	%	Column Totals:0% (A)0 (B)
4	%	Prevalence Index = B/A =
5	<u> </u>	— Hydrophytic Vegetation Indicators:
6	<u>%</u>	1 Rapid Test for Hydrophytic Vegetation
7	<u>%</u>	2 Dominance Test is >50%
8	<u>%</u>	— ☐ 3 Prevalence Index is ≤3.0¹
10.	%	
Woody Vine Stratum (Plot size: 30')	00 % = Total Cover	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
1	<u> </u>	☐ Problematic Hydrophytic Vegetation¹ (explain)
2	<u>%</u> <u>O %</u> = Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
	<u> </u>	Hydrophytic Vegetation Present? ☐ Yes ☒ No
Bare Ground in Herb Stratum0 % Remarks: Hydrophytic vegetation is not present. Photograph C-5	1	
Tremains. Hydrophylic vegetallori is not present. Photograph C-5	1.	

SOIL Sampling Point: SP-663

Profile Desc	ription: (Describe	to the dep	oth needed to doc	ument th	e indicator o	or confirm the	absence of indicators.)			
Depth Matrix Redox Features										
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-8	10YR 2/2	100					Clay Loam			
8-20	10YR 3/3	100					Clay Loam			
-	-						·			
-		· ——		-						
-	-			-	- ——					
							·			
¹Type: C=C	oncentration, D=De	oletion, RM	=Reduced Matrix, 0	CS=Cove	red or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless oth	erwise n	oted.)		Indicators for Problema	ntic Hydric Soils ³ :		
☐ Histosol (A1)		☐ Sandy G	leyed Ma	atrix (S4)		1 cm Muck (A9) (LRR	I, J)		
☐ Histic Epi	pedon (A2)		☐ Sandy R	edox (S5	5)		□ Coast Prairie Redox (A16) (LRR F, G, H)		
☐ Black His	, ,		☐ Stripped	•	•		☐ Dark Surface (S7) (LF	RR G)		
	Sulfide (A4)		☐ Loamy M	-			☐ High Plains Depression			
	Layers (A5) (LRR F		Loamy G	-			(LRR H outside of M	/ILRA 72 & 73)		
	k (A9) (LRR F, G, F		Depleted				Reduced Vertic (F18)	TC0)		
	Below Dark Surface	e (A11)	☐ Redox D		` '		☐ Red Parent Material (☐ Very Shallow Dark Su			
	k Surface (A12)		☐ Depleted		, ,		Other (Explain in Rem			
	ucky Mineral (S1)	20) / DD 6	Redox D				• •	,		
	ucky Peat or Peat (ky Peat or Peat (S3				essions (F16) of LRR H)		³ Indicators of hydrophytic wetland hydrology must i			
S cili ivide	ky real of real (30	o) (LKK F)	(MERA	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	or Entering		disturbed or problematic	be present, unless		
Restrictive	_ayer (if present):						Hydric Soil Present?			
Type: Depth (inches):							☐ Yes ☐ No			
Domorko, Ne	hydric soil indicato	r io nrocont								
Nomans. No	Trydric 3011 Iridicato	i is piesein	•							
HADBOLOG	· · · · · · · · · · · · · · · · · · ·									
HYDROLOG		-								
_	drology Indicators cators (minimum of		d: check all that an	nlu)			Socondary Indicators (2	or more required)		
	•	one require	-				Secondary Indicators (2 or more required)			
Surface V	` '		☐ Salt Crust (I	,	- (D40)		☐ Surface Soil Cracks (B6)☐ Sparsely Vegetated Concave Surface (B8)			
	er Table (A2)		☐ Aquatic Inve							
☐ Saturation☐ Water Ma			☐ Hydrogen S ☐ Dry-Season				☐ Drainage Patterns (B☐ Oxidized Rhizospher			
	Deposits (B2)		Oxidized R		` '	Poots (C3)	(where tilled)	es on Living Roots (C3)		
☐ Drift Depo			(where n		C3 OII LIVING	110013 (03)	☐ Crayfish Burrows (C8	3)		
	or Crust (B4)		☐ Presence of		d Iron (C4)		☐ Saturation Visible on	•		
☐ Iron Depo	` '		☐ Thin Muck \$	Surface (C7)		☐ Geomorphic Position	(D2)		
-	n Visible on Aerial I	magery (B7) Dther (Expl	ain in Rei	marks)		☐ FAC-Neutral Test (D	5)		
☐ Water-Sta	ained Leaves (B9)		,				☐ Frost-Heave Hummo	cks (D7) (LRR F)		
Field Obser	vations:	Yes	Depth				ım gauge, monitoring well, a	aerial photos, previous		
		_	No (inches)	insp	pections, etc.)	, if available:				
Surface Wat	•			-						
Water Table	•			-						
Saturation P				-						
(includes cap										
Wetland Hy	drology Present?									
Remarks: W	etland hydrology inc	licators are	not met.							

Project/Site: Sweetland Wind Project	City/County: Hand Coun	ty Sampling Date: 10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-664
Investigator(s): T. Beemer, W. Hirst		, Range: S4, T110N, R66W
Landform (hillslope, terrace, etc.) swale	Local relief (concave, conve	
Subregion (LRR): Northern Great Plains Spring Wheat Regi	on Lat: 44.363204	Long: -98.778882 Datum: NAD83
Soil Map Unit Name: Oahe-Delmont loams, 2 to 6 percent s		NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this time		(If no, explain in Remarks.)
Vegetation Soil Hydrology Significantly Disturbed? ☐ ☐ ☐	Are "Normal Circur	nstances" present? 🛛 Yes 🔲 No
Naturally Problematic?	(If needed, explain	any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing s	ampling point locations, tra	ansects, important features, etc.
Yes No	Remarks: Upland sample plot.	
Hydrophytic Vegetation Present?	Remarks. Opiano sample piot.	
Hydric Soil Present? □		
Wetland Hydrology Present? □ ⊠		
Is the Sampled Area within a Wetland?		
VEGETATION – Use scientific names of plants		
•	solute Dominant Indicator	Dominance Test Worksheet:
	Cover Species? Status	Number of Dominant Species that
1	<u>%</u>	are OBL, FACW, or FAC
2	<u>%</u>	(excluding FAC-):1_(A)
3	<u>%</u>	Total Number of Dominant
	0 % = Total Cover	Species Across All Strata: 1 (B)
Sapling/Shrub Stratum (Plot size: <u>15'</u>)		Percent of Dominant Species that
1	<u></u>	are OBL, FACW, or FAC:100%_ (A/B)
2	<u></u>	Prevalence Index Worksheet:
3	<u>%</u>	Total % Cover of: Multiply by:
4	<u>%</u>	OBL species
J	0 % = Total Cover	FACW species% x 2 =0
Herb Stratum (Plot size: <u>5'</u>)		FAC species% x 3 =0
1. Echinochloa crus-galli	100 % Y FAC	FACU species% x 4 =0 UPL species
2	<u></u>	Column Totals:
3	<u>%</u>	Prevalence Index = B/A =
4	<u>%</u>	
5	<u>%</u>	Hydrophytic Vegetation Indicators:
7	%	☐ 1 Rapid Test for Hydrophytic Vegetation
8	<u></u>	
9	<u>%</u>	☐ 3 Prevalence Index is ≤3.01
10	<u>%</u> 100 % = Total Cover	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>)	0/	☐ Problematic Hydrophytic Vegetation¹ (explain)
1	<u>%</u>	¹ Indicators of hydric soil and wetland hydrology
<u> </u>	0 % = Total Cover	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 0 %		Hydrophytic Vegetation Present? ⊠ Yes ☐ No
Remarks: Dominance test is met. Photograph C-52.		1

SOIL Sampling Point: SP-664

Profile Desc	ription: (Describe	to the de	epth nee	eded to docum	ent the	indicator o	r confirm the	absence of indicators.)			
Depth	Matrix			Red	dox Fea	tures					
(inches)	Color (moist)	%	Col	or (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-12	10YR 2/2	100						Clay			
12-20	10YR 3/2	100						Clay			
	- · 	-									
		-						_			
-		-									
-											
¹Type: C=Cd	oncentration, D=Dep	pletion, RI	M=Redu	ced Matrix, CS	=Covere	ed or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil	Indicators: (Applic	cable to a	II LRRs	, unless other	wise no	ted.)		Indicators for Problem	atic Hydric Soils ³ :		
☐ Histosol (,			☐ Sandy Gley		rix (S4)		1 cm Muck (A9) (LRI	R I, J)		
☐ Histic Epi				Sandy Red				Coast Prairie Redox	. , ,		
☐ Black His	` '			☐ Stripped M	•	•		☐ Dark Surface (S7) (L			
	Sulfide (A4)			Loamy Muc	-			☐ High Plains Depressi (LRR H outside of	ons (F16)		
	Layers (A5) (LRR F			☐ Loamy Gle				Reduced Vertic (F18	•		
	ck (A9) (LRR F, G, F Below Dark Surface			☐ Depleted M☐ Redox Darl				☐ Red Parent Material	,		
	k Surface (A12)	∌ (A 1 1)		☐ Depleted D		. ,		☐ Very Shallow Dark S	,		
	ucky Mineral (S1)			Redox Dep		. ,		☐ Other (Explain in Rer	, ,		
	ucky Peat or Peat (\$	S2) (LRR	G . H)	☐ High Plains		` '		³ Indicators of hydrophyti			
	ky Peat or Peat (S3			(MLRA 72				wetland hydrology must			
								disturbed or problemation			
Restrictive I	Layer (if present):							Hydric Soil Present?			
Type:		_	Depth ((inches):				☐ Yes ☒ No			
Pomarke: No	hydric soil indicato	r ic procor	nt								
ixemaiks. Ive	Tryunc son malcato	i is preser	iit.								
HYDROLOG	······································										
	drology Indicators										
_	cators (minimum of		ed: che	ck all that apply	·)			Secondary Indicators (2	2 or more required)		
☐ Surface V	•			Salt Crust (B1	-			<u></u>			
	er Table (A2)			Aquatic Invert	,	(B13)		☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8)			
☐ Saturation				Hydrogen Sulf		• •		☐ Drainage Patterns (F			
☐ Water Ma	` '			Dry-Season W				_	res on Living Roots (C3)		
	Deposits (B2)			Oxidized Rhiz		. ,	Roots (C3)	(where tilled)	3 ()		
☐ Drift Depo				(where not	tilled)		, ,	☐ Crayfish Burrows (C	8)		
☐ Algal Mat	or Crust (B4)		_	Presence of R		` ,		☐ Saturation Visible or	• • • •		
☐ Iron Depo	osits (B5)			Thin Muck Su				Geomorphic Position			
☐ Inundatio	n Visible on Aerial II	magery (B	37)	Other (Explain	in Rem	arks)		☐ FAC-Neutral Test (□	,		
	ained Leaves (B9)							☐ Frost-Heave Hummo	ocks (D7) (LRR F)		
☐ Water-Sta	anied 200100 (B0)			·	_	riba Basarda	ed Data (stream	m gauge monitoring well	aerial photos, previous		
☐ Water-Sta	. ,	Yes	No	Depth (inches)				in gaage, monitoring wen,	acriai priotoc, providuo		
Field Obser	vations:	Yes	No ⊠	Depth (inches)			, if available:	n gaage, mentering well,	ac.ia. p.10100, p.011000		
Field Observ	vations: er present?			•				m gaage, memering wen,	acria. priotoc, providuo		
Field Observance Water Table	vations: er present? present?			•				n gaage, monitoring won,	301.a. p. 10100, p. 01.000		
Field Observation Programmer Surface Water Table Saturation Programmer Surface	vations: er present? present? resent?			•				n gaage, monitoring won,	201.a. p. 1010, p. 0.1020		
Field Obsert Surface Water Water Table Saturation Policincludes cap	er present? present? resent? present? present?		⊠ <u>-</u> ⊠ <u>-</u> ⊠ <u>-</u>	•				in gaage, mountaining won,	301.a. p. 000, p. 01.000		
Field Obsert Surface Water Water Table Saturation Pr (includes cap	er present? present? resent? resent? pillary fringe) drology Present?			•				in gaage, mountaining won,	30.a. p. 0.00, p. 0.1000		
Field Obsert Surface Water Water Table Saturation Pr (includes cap	er present? present? resent? present? present?			•				in gaage, monitoring won,	30.13.1 p. 10100, p. 01.1000		
Field Obsert Surface Water Water Table Saturation Pr (includes cap	er present? present? resent? resent? pillary fringe) drology Present?			•				m gaage, mountaining won,			

Project/Site: Sweetland Wind Project	City/County: Hand Co	ounty Sampling Date: 10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-666
Investigator(s): T. Beemer, W. Hirst	Section, Towns	· · · · · · · · · · · · · · · · · · ·
Landform (hillslope, terrace, etc.) toeslope	Local relief (concave, con	
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.367701	Long: -98.802809 Datum: NAD83
Soil Map Unit Name: Tetonka silt loam, 0 to 1 percent slopes		NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this time of	year? ⊠ Yes □ N	
Vegetation Soil Hydrology	Are "Normal Circ	cumstances" present? 🛛 Yes 🔲 No
Significantly Disturbed? Naturally Problematic?	(If needed, expla	in any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	nling point locations	transects important features etc
Yes No R Hydrophytic Vegetation Present? □ ⊠	emarks: Upland sample plo	JT.
Hydric Soil Present?		
Wetland Hydrology Present? □ ⊠		
Is the Sampled Area within a Wetland?		
VEGETATION – Use scientific names of plants		
Absol	ute Dominant Indicate	or Dominance Test Worksheet:
Tree Stratum (Plot size: 30') % Co		S
1	%	Number of Dominant Species that are OBL, FACW, or FAC
2	<u>%</u>	(excluding FAC-): 0 (A)
3	<u>%</u>	Total Number of Dominant
4	<u>%</u> % = Total Cover	— Species Across All Strata: <u>1</u> (B)
Sapling/Shrub Stratum (Plot size: 15')	<u>%</u> = rotal Cover	Percent of Dominant Species that
1.	%	are OBL, FACW, or FAC:0%_(A/B)
2.	%	- Dravalance Index Werksheet
3	%	Prevalence Index Worksheet:
4	<u>%</u>	
5	<u>%</u>	OBL species% x1 =0 FACW species % x2 =0
	<u>%</u> = Total Cover	FAC species
Herb Stratum (Plot size: <u>5'</u>) 1. Bromus inermis 100)% Y UPL	FACII species % v.4 = 0
2	<u>%</u>	
3.	%	Column Totals: 0 % (A) 0 (B)
4.	%	Prevalence Index = B/A =
5	<u> </u>	Hydrophytic Vegetation Indicators:
6	<u>%</u>	_
7	<u>%</u>	_
8	%	
10.	%	— 3 Prevalence Index is ≤3.0¹
) % = Total Cover	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
1	<u>%</u>	☐ Problematic Hydrophytic Vegetation¹ (explain)
2	% = Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
<u> </u>	76 = Total Cover	Hydrophytic Vegetation Present? ☐ Yes ☒ No
Bare Ground in Herb Stratum0 %		Trydrophytic vegetation Flesetit: [] Tes [] NO
Remarks: Hydrophytic vegetation is not present. Photograph C-53		

SOIL Sampling Point: SP-666

Profile Desc	ription: (Describe	to the de	epth n	eeded to docum	nent the	indicator o	or confirm the	absence of indicators.)			
Depth	Matrix			Re	dox Fea	itures					
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-8	10YR 3/2	100						Clay Loam			
8-20	10YR 3/3	100						Clay Loam			
-	· -										
	-										
¹Tvpe: C=Ce	oncentration, D=De	oletion. R	M=Re	duced Matrix. CS	=Cover	ed or Coated	 d Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
	Indicators: (Applie							Indicators for Problems			
☐ Histosol (☐ Sandy Gley		-		1 cm Muck (A9) (LRF	R L J)		
☐ Histic Epi	,			☐ Sandy Red				☐ Coast Prairie Redox (
☐ Black His				☐ Stripped M				☐ Dark Surface (S7) (L			
	Sulfide (A4)			☐ Loamy Mu	,	,		☐ High Plains Depressi	•		
	Layers (A5) (LRR F	=)		☐ Loamy Gle				(LRR H outside of I			
	k (A9) (LRR F, G, I			☐ Depleted M	-	, ,		☐ Reduced Vertic (F18)	1		
	Below Dark Surface			☐ Redox Dar				☐ Red Parent Material (,		
☐ Thick Dar	k Surface (A12)			☐ Depleted D	ark Sur	face (F7)		☐ Very Shallow Dark St	urface (TF 12)		
☐ Sandy Mu	ucky Mineral (S1)			☐ Redox Dep	ression	s (F8)		☐ Other (Explain in Ren	narks)		
☐ 2.5 cm M	ucky Peat or Peat (S2) (LRR	G , H)	☐ High Plains	Depres	ssions (F16)		3Indicators of hydrophytic	c vegetation and		
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H)								wetland hydrology must be present, unless disturbed or problematic			
Restrictive I	_ayer (if present):							Hydric Soil Present?			
Type: Depth (inches):								☐ Yes ⊠ No			
	hydric soil indicate		_								
HYDROLOG	iΥ										
Wetland Hy	drology Indicators	:									
Primary India	cators (minimum of	one requi	red; ch	neck all that apply	<u>′)</u>			Secondary Indicators (2	or more required)		
☐ Surface V	Vater (A1)			☐ Salt Crust (B1	1)			☐ Surface Soil Cracks (B6)			
☐ High Wat	er Table (A2)			Aquatic Invert	ebrates	(B13)		☐ Sparsely Vegetated Concave Surface (B8)			
☐ Saturation	n (A3)		1	☐ Hydrogen Sulf	fide Odd	or (C1)		☐ Drainage Patterns (B10)			
☐ Water Ma	ırks (B1)		l	□ Dry-Season W	/ater Ta	ble (C2)			res on Living Roots (C3)		
	Deposits (B2)			Oxidized Rhiz		es on Living	Roots (C3)	(where tilled)	٥)		
☐ Drift Depo				(where not	-	Ll=== (C4)		Crayfish Burrows (C			
	or Crust (B4)			☐ Presence of R		` ,		Saturation Visible on	• • • •		
☐ Iron Depo		/-		☐ Thin Muck Su ☐ Other (Explain	,	•		☐ Geomorphic Positior ☐ FAC-Neutral Test (D			
	n Visible on Aerial I	magery (E	37) 1	☐ Otrier (Explair	i iii Keii	iaiks)		☐ Frost-Heave Hummo	,		
☐ water-Sta	ained Leaves (B9)				1				JCKS (D1) (EIKK1)		
Field Obser	vations:	Yes	No	Depth (inches)			ed Data (strear , if available:	m gauge, monitoring well,	aerial photos, previous		
Surface Wat	er present?		\boxtimes			. ,					
Water Table	•		\boxtimes								
Saturation P	•										
(includes car											
	drology Present?		\boxtimes								
				mot	-1						
Remarks: W	etland hydrology ind	uicators al	E 110(ınet.							

Project/Site: Sweetland Wind Project	(City/County:	Hand Coun	ty Sampling Date: _10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC				State: SD Sampling Point: SP-667
Investigator(s): T. Beemer, W. Hirst		Section	n, Township	, Range: S6, T110N, R66W
Landform (hillslope, terrace, etc.) pothole	Lo	cal relief (conc		•
Subregion (LRR): Northern Great Plains Spring Whea		Lat: 44,365		Long: -98.805284 Datum: NAD83
	Region	44.303	1433	NIA(1.0) '(' ('
Soil Map Unit Name: Glenham loam, undulating Are climate/hydrologic conditions on the site typical for this	time of year	r? X Yes	□ No	(If no, explain in Remarks.)
7 to diffrate, flydrologie doffallione off the dite typical for this	, unio or your	. 🔼 100		(II no, explain in remaine.)
Vegetation Soil Hydr	ology	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?		(If need	ed. explain	any answers in Remarks.)
Naturally Problematic?		(,	,,
SUMMARY OF FINDINGS – Attach site map showi	ing sampli	ng point loc	ations, tra	insects, important features, etc.
Yes N	No Rema	arks: Wetland s	sample plot	located in PEM W-584.
Hydrophytic Vegetation Present?				
Hydric Soil Present? □ □ □				
Wetland Hydrology Present?]			
Is the Sampled Area within a Wetland?]			
VEGETATION – Use scientific names of plants				
Parities of Parities of Parities	Absolute	Dominant	Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	
1	<u></u> %	<u>.</u>		Number of Dominant Species that are OBL, FACW, or FAC
2	<u>%</u>			(excluding FAC-): (A)
3				Total Number of Dominant
4	%			Species Across All Strata: (B)
	0 %	= Total Cove	er	Percent of Dominant Species that
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1.	%			are OBL, FACW, or FAC:(A/B)
1 2	<u></u>			
3.	0.4			Prevalence Index Worksheet:
4.	0.4			Total % Cover of: Multiply by:
5	<u></u> %	·		OBL species% x 1 =0
	0 %	= Total Cove	er	FACW species% x 2 =0
Herb Stratum (Plot size: <u>5'</u>)				FAC species% x 3 =0 FACU species % x 4 =0
1. Phalaris arundinacea	<u>100 %</u>	<u>Y</u>	FACW	UPL species
2	%			Column Totals: 0 % (A) 0 (B)
3	<u>%</u> %			Prevalence Index = B/A =
4 5	<u></u>			
6.				Hydrophytic Vegetation Indicators:
7.	%			□ 1 Rapid Test for Hydrophytic Vegetation
8	%			☐ 2 Dominance Test is >50%
9	<u></u> %			☐ 3 Prevalence Index is ≤3.0 ¹
10	<u>%</u> 100 %	= Total Cove	 er	4 Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>)	0/			Problematic Hydrophytic Vegetation¹ (explain)
1 2	<u>%</u>			¹ Indicators of hydric soil and wetland hydrology
	0 %	= Total Cove		must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 0 %				Hydrophytic Vegetation Present? ☑ Yes ☐ No
Remarks: Rapid test for hydrophytic vegetation is met. Ph	otograph C-	54		
Transition reapid took for right opiny to vogetation is filet. I file	ologiapii O-l	· · ·		

SOIL Sampling Point: SP-667

Profile Desc	cription: (Describe	to the d	epth n	eeded to docur	nent the	indicator o	or confirm the	absence of indicators.)		
Depth	Matrix		_	Re	dox Fea	itures				
(inches)	Color (moist)	%	C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 2/2	100						Clay Loam		
6-20	10YR 3/2	90		10YR 4/6	10	C	M	Clay Loam		
	<u></u>									
-										
-		-						·	_	
-		-								
-										
¹Type: C=Co	oncentration, D=De	pletion, R	M=Re	duced Matrix, CS	S=Cover	ed or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil	Indicators: (Appli	cable to a	all LRF	Rs, unless othe	rwise no	oted.)		Indicators for Problema	tic Hydric Soils ³ :	
☐ Histosol (A1)			☐ Sandy Gle	yed Mat	rix (S4)		1 cm Muck (A9) (LRR	I, J)	
☐ Histic Epi	pedon (A2)			☐ Sandy Red	dox (S5)			☐ Coast Prairie Redox (A16) (LRR F, G, H)	
☐ Black His	tic (A3)			☐ Stripped M	latrix (Se	6)		☐ Dark Surface (S7) (LF	RR G)	
☐ Hydroger	Sulfide (A4)			☐ Loamy Mu	icky Min	eral (F1)		☐ High Plains Depression		
☐ Stratified	Layers (A5) (LRR F	=)		☐ Loamy Gle	eyed Ma	trix (F2)		(LRR H outside of N	•	
1 cm Muc	ck (A9) (LRR F, G, I	- I)		□ Depleted I	Matrix (F	3)		Reduced Vertic (F18)		
☐ Depleted	Below Dark Surface	e (A11)		Redox Da	rk Surfac	ce (F6)		Red Parent Material (,	
	rk Surface (A12)			☐ Depleted [Dark Sur	face (F7)		☐ Very Shallow Dark Su	` '	
-	ucky Mineral (S1)			Redox De		` '		Other (Explain in Rem	narks)	
	ucky Peat or Peat (☐ High Plain		` ,		3Indicators of hydrophytic		
5 cm Muc	cky Peat or Peat (S3	B) (LRR F)	(MLRA 72	2 & 73 o	f LRR H)		wetland hydrology must be disturbed or problematic	pe present, unless	
Restrictive I	Layer (if present):							Hydric Soil Present?		
Type:		_	Dept	h (inches):				⊠ Yes □ No		
Domorko: Us	dric soil indicator F	6 in mot								
rtemants. Hy	ranc son malcator r	o is met.								
HYDROLOG	Υ									
Wetland Hy	drology Indicators	:								
Primary India	cators (minimum of	one requi	red; ch	eck all that appl	<u>y)</u>			Secondary Indicators (2	or more required)	
☐ Surface V	Vater (A1)			☐ Salt Crust (B	11)			☐ Surface Soil Cracks (B6)	
_	er Table (A2)			Aquatic Inver	,	(B13)		☐ Sparsely Vegetated Concave Surface (B8)		
☐ Saturation				☐ Hydrogen Su				☐ Drainage Patterns (B		
☐ Water Ma				Ory-Season V				Oxidized Rhizospher		
☐ Sediment	Deposits (B2)		Ì	Oxidized Rhiz	zosphere	es on Living	Roots (C3)	(where tilled)	5 ()	
☐ Drift Depo	osits (B3)			(where not	tilled)			☐ Crayfish Burrows (C8	3)	
☐ Algal Mat	or Crust (B4)			Presence of F	Reduced	Iron (C4)		☐ Saturation Visible on	Aerial Imagery (C9)	
☐ Iron Depo	osits (B5)			Thin Muck Su				☐ Geomorphic Position		
☐ Inundatio	n Visible on Aerial I	magery (E	37)	Other (Explai	n in Rem	narks)		FAC-Neutral Test (D	,	
☐ Water-Sta	ained Leaves (B9)							☐ Frost-Heave Hummo	cks (D7) (LRR F)	
	votiona		No	Depth (inches)			ed Data (strea	m gauge, monitoring well, a	aerial photos, previous	
Field Obser	valions.	Yes		(/	iiishi	- ciiona, c ic.)	, ii availabie.			
		_	_							
Surface Wat	er present?		\boxtimes							
Surface Wat	er present? present?		\boxtimes							
Surface Wat Water Table Saturation P	er present? present? resent?		\boxtimes							
Surface Wat Water Table Saturation P (includes cap	er present? present? resent? pillary fringe)									
Surface Wat Water Table Saturation P (includes cap Wetland Hy	er present? present? resent? pillary fringe) drology Present?									
Surface Wat Water Table Saturation P (includes cap Wetland Hy	er present? present? resent? pillary fringe)			D5 are met.						
Surface Wat Water Table Saturation P (includes cap Wetland Hy	er present? present? resent? pillary fringe) drology Present?			D5 are met.						

Project/Site: Sweetland Wind Project	City/County: Hand Coun	sampling Date: 10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC	· · · · · · · · · · · · · · · · · · ·	State: SD Sampling Point: SP-668
Investigator(s): T. Beemer, W. Hirst	Section, Township	
	Local relief (concave, conve	-
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.365510	Long: _98.805115
Soil Map Unit Name: Glenham loam, undulating	44.000010	NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this time of y	ear? 🛛 Yes 🗌 No	(If no, explain in Remarks.)
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		(3, 1 3 3 3 3
Vegetation Soil Hydrology	Are "Normal Circur	mstances" present? ☑ Yes ☐ No
Significantly Disturbed?	(If needed, explain	any answers in Remarks.)
Naturally Problematic?		
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, tra	ansects, important features, etc.
	emarks: Upland sample plot a	adjacent to PEM W-584.
Hydrophytic Vegetation Present?		
Hydric Soil Present?		
Wetland Hydrology Present?		
Is the Sampled Area within a Wetland?		
VEGETATION – Use scientific names of plants		
Absolu		Dominance Test Worksheet:
Tree Stratum (Plot size: 30') % Cov		Number of Dominant Species that
	<u>%</u>	are OBL, FACW, or FAC
· · · · · · · · · · · · · · · · · · ·	<u>%</u>	(excluding FAC-): 0 (A)
	<u>%</u>	Total Number of Dominant
0		Species Across All Strata: 2 (B)
Sapling/Shrub Stratum (Plot size: 15')		Percent of Dominant Species that are OBL, FACW, or FAC: 0% (A/B)
	<u> </u>	are OBL, FACW, or FAC:0%_(A/B)
	<u></u>	Prevalence Index Worksheet:
	<u>%</u>	Total % Cover of: Multiply by:
	<u></u>	Total % Cover of: Multiply by: OBL species % x 1 = 0
5	% = Total Cover	FACW species
Herb Stratum (Plot size: 5')	<u>70</u> = 10tal 00vcl	FAC species
1. Bromus inermis 20	% Y UPL	FACU species% x 4 =0
2. Setaria pumila 20	% Y FACU	UPL species% x 5 =0 Column Totals: 0% (A) 0 (B)
3	<u></u>	(,
	<u> </u>	Prevalence Index = B/A =
	<u></u>	Hydrophytic Vegetation Indicators:
	<u> </u>	☐ 1 Rapid Test for Hydrophytic Vegetation
	<u>%</u>	2 Dominance Test is >50%
	<u>%</u>	
	<u>%</u>	☐ 3 Prevalence Index is ≤3.0¹
Woody Vine Stratum (Plot size: 30')		☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
· · · · · · · · · · · · · · · · · · ·	%	☐ Problematic Hydrophytic Vegetation¹ (explain)
2	<u></u>	¹ Indicators of hydric soil and wetland hydrology
0	% = Total Cover	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 60 %		Hydrophytic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photograph C-55.		

SOIL Sampling Point: SP-668

Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Rem	
Total (most) // Color (most) // Type Lee Texture Rem	
0.0	arks
0-8 10YR 3/2 100 Clay Loam	
8-20 10YR 3/3 100 Clay Loam	
Trungs C. Concentration D. Donletion DM Deduced Matrix CS. Covered or Coated Sand Crains 21 coations DL Days Links M. N.	lotriv
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining, M=N Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric S	
	JUIIS .
☐ Histosol (A1) ☐ Sandy Gleyed Matrix (S4) ☐ 1 cm Muck (A9) (LRR I, J)	- С П/
☐ Histic Epipedon (A2) ☐ Sandy Redox (S5) ☐ Coast Prairie Redox (A16) (LRR I ☐ Black Histic (A3) ☐ Stripped Matrix (S6) ☐ Dark Surface (S7) (LRR G)	-, G, n)
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) ☐ High Plains Depressions (F16)	
☐ Stratified Layers (A5) (LRR F) ☐ Loamy Gleyed Matrix (F2) ☐ Loamy Gleyed Matrix (F2)	73)
☐ 1 cm Muck (A9) (LRR F, G, H) ☐ Depleted Matrix (F3) ☐ Reduced Vertic (F18)	,
Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Red Parent Material (TF2)	
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF 12	2)
□ Sandy Mucky Mineral (S1) □ Redox Depressions (F8) □ Other (Explain in Remarks)	
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16)	and
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be present, u	
disturbed or problematic	
Restrictive Layer (if present): Hydric Soil Present?	
Type: Depth (inches): □ Yes ☑ No	
Deposition No hydric activities activities to a second	
Remarks: No hydric soil indicator is present.	
Remarks: No hydric soil indicator is present.	
Remarks: No hydric soil indicator is present.	
HYDROLOGY	
HYDROLOGY Wetland Hydrology Indicators:	in all
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required)	uired)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water (A1) Surface Soil Cracks (B6)	 -
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water (A1) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Concave Sur	 -
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)	rface (B8)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Concave Surface Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living	rface (B8)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Dry-Season Water Table (C2) Sediment Deposits (B2) Wetland Hydrology Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface Mydrology (C1) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3)	rface (B8)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface Materials (C1) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)	rface (B8) Roots (C3)
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HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Concave Surface Soil Cracks (B6) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Image (C7) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Water-Stained Leaves (B9) Prost-Heave Hummocks (D7) (LF Field Observations: Depth (inches) Describe Recorded Data (stream gauge, monitoring well, aerial photos inspections, etc.), if available:	Roots (C3) ery (C9)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Concave Surface Soil Cracks (B6) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Drift Deposits (B3) (where not tilled) Crayfish Burrows (C8) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Image (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Water-Stained Leaves (B9) Prost-Heave Hummocks (D7) (LF Field Observations: Yes No (inches) Depth (inches) Surface Water present? Depth (inches) Water Table present? Describe Recorded Data (stream gauge, monitoring well, aerial photos inspections, etc.), if available:	Roots (C3) ery (C9)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water (A1) High Water (A1) High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Concave Surface Water (A3) Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Water Marks (B1) Drift Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Where tilled) Crayfish Burrows (C8) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (B7) Hadrology (B7) Water-Stained Leaves (B9) Field Observations: Ves No (inches) Surface Water present? Saturation Present? Saturation Present? Saturation Present? Similar (A3) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water present? Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water present? Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply in the part apply (B6) Secondary Indicators (2 or more required; check all that apply in the part apply (B6) Secondary Indicators (B6) Surface Water present? Secondary Indicators (B1) Surface Water present? Secondary Indicators (B1) Surface Water present? Secondary Indicators (Roots (C3) ery (C9)
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HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water (A1) High Water (A1) High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Concave Surface Water (A3) Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Water Marks (B1) Drift Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Where tilled) Crayfish Burrows (C8) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (B7) Hadrology (B7) Water-Stained Leaves (B9) Field Observations: Ves No (inches) Surface Water present? Saturation Present? Saturation Present? Saturation Present? Similar (A3) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water present? Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water present? Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply in the part apply (B6) Secondary Indicators (2 or more required; check all that apply in the part apply (B6) Secondary Indicators (B6) Surface Water present? Secondary Indicators (B1) Surface Water present? Secondary Indicators (B1) Surface Water present? Secondary Indicators (Roots (C3) ery (C9)

Project/Site: Sweetland Wind Project	Ci	ty/County: _	Hand Coun	ty Sampling Date: 10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC		_		state: SD Sampling Point: SP-669
Investigator(s): T. Beemer, W. Hirst		Section	, Township	, Range: S5, T110N, R66W
Landform (hillslope, terrace, etc.) toeslope	Loc	al relief (conc		
Subregion (LRR): Northern Great Plains Spring Wheat Re	egion	Lat: 44.365	936	Long: -98.799860 Datum: NAD83
Soil Map Unit Name: Tetonka silt loam, 0 to 1 percent slop		44.000	000	NWI Classification: PEM1C
Are climate/hydrologic conditions on the site typical for this tim		Yes	□No	(If no, explain in Remarks.)
,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			(,,,
Vegetation Soil Hydrolog	gy	Are "No	rmal Circun	nstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?		(If neede	ed, explain	any answers in Remarks.)
Naturally Problematic?				
SUMMARY OF FINDINGS – Attach site map showing	samplin	g point loca	ations, tra	nsects, important features, etc.
Yes No	Remar	ks: Upland sa	mple plot.	
Hydrophytic Vegetation Present?				
Hydric Soil Present?				
Wetland Hydrology Present?				
Is the Sampled Area within a Wetland?				
VEGETATION – Use scientific names of plants				
	Absolute	Dominant	Indicator	Dominance Test Worksheet:
` —	% Cover	Species?	Status	Number of Dominant Species that
1	<u>%</u> %			are OBL, FACW, or FAC
3				(excluding FAC-):0 (A)
4.	<u>%</u>		-	Total Number of Dominant
	0 %	= Total Cove	er	Species Across All Strata:1_(B)
Sapling/Shrub Stratum (Plot size: 15')				Percent of Dominant Species that
1	%			are OBL, FACW, or FAC:(A/B)
2	<u>%</u>			Prevalence Index Worksheet:
3.	<u>%</u>			Total % Cover of: Multiply by:
4	<u>%</u>			OBL species
5	<u>%</u> 0 %	= Total Cove		FACW species
Herb Stratum (Plot size: 5')	0 70	- 10tai 00vc	,,	FAC species
1. Bromus inermis	100 %	Υ	UPL	FACU species% x 4 =0
2.	%			UPL species% x 5 =0 Column Totals: 0% (A) 0 (B)
3	%			
4	<u>%</u>			Prevalence Index = B/A =
5	<u>%</u>			Hydrophytic Vegetation Indicators:
6	<u>%</u>			☐ 1 Rapid Test for Hydrophytic Vegetation
7 8	<u> </u>			2 Dominance Test is >50%
9.	<u>%</u>		-	☐ 3 Prevalence Index is ≤3.0¹
10	%			_
Woody Vine Stratum (Plot size: <u>30'</u>)	<u>100 %</u>	= Total Cove	er	4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
1	<u>%</u>			☐ Problematic Hydrophytic Vegetation¹ (explain)
2	<u>%</u>			¹ Indicators of hydric soil and wetland hydrology
	0 %	= Total Cove	er	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum0 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photograph	C-56.			

SOIL Sampling Point: SP-669

Profile Description: (Describe to the depth needed to document th	e muicator or	commit me	absence of indicators.	
Depth Matrix Redox Fe	atures			
(inches) Color (moist) % Color (moist) %	Type ¹	Loc ²	Texture	Remarks
0-6 10YR 2/2 100			Clay Loam	
6-20 10YR 3/2 90 10YR 4/6 10	C	M	Clay Loam	
¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Cove	ed or Coated S	Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise n	oted.)		Indicators for Problem	atic Hydric Soils ³ :
☐ Histosol (A1) ☐ Sandy Gleyed Ma	trix (S4)		1 cm Muck (A9) (LRF	R I, J)
☐ Histic Epipedon (A2) ☐ Sandy Redox (S5			☐ Coast Prairie Redox	
☐ Black Histic (A3) ☐ Stripped Matrix (S			☐ Dark Surface (S7) (L	
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Min	eral (F1)		☐ High Plains Depressi	
☐ Stratified Layers (A5) (LRR F) ☐ Loamy Gleyed Ma	trix (F2)		(LRR H outside of	•
☐ 1 cm Muck (A9) (LRR F, G, H) ☐ Depleted Matrix (F	⁻ 3)		Reduced Vertic (F18)	,
☐ Depleted Below Dark Surface (A11) ☐ Redox Dark Surfa	ce (F6)		Red Parent Material	, ,
☐ Thick Dark Surface (A12) ☐ Depleted Dark Su	, ,		☐ Very Shallow Dark S	, ,
☐ Sandy Mucky Mineral (S1) ☐ Redox Depression			Other (Explain in Rer	marks)
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depre			³ Indicators of hydrophyti	
5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 c	oi LKK II)		wetland hydrology must disturbed or problematic	
Restrictive Layer (if present):			Hydric Soil Present?	
Type: Depth (inches):			⊠ Yes □ No	
D				
Remarks: Hydric soil indicator F6 is met.				
HYDROLOGY				
Wetland Hydrology Indicators:				
			Secondary Indicators (2	2 or more required)
Wetland Hydrology Indicators:			Secondary Indicators (2	· · · · · · · · · · · · · · · · · · ·
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	i (B13)		•	(B6)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates □ Saturation (A3) □ Hydrogen Sulfide Od	or (C1)		☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (B	(B6) Concave Surface (B8) B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates □ Saturation (A3) □ Hydrogen Sulfide Od □ Water Marks (B1) □ Dry-Season Water Table	or (C1) able (C2)		☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (B☐ Oxidized Rhizospher	(B6) Concave Surface (B8)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates □ Saturation (A3) □ Hydrogen Sulfide Od □ Water Marks (B1) □ Dry-Season Water Tables □ Sediment Deposits (B2) □ Oxidized Rhizospher	or (C1) able (C2)	oots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled)	(B6) Concave Surface (B8) B10) res on Living Roots (C3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Wetland Hydrology (Indicators: Check all that apply) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher (where not tilled)	or (C1) able (C2) es on Living Ro	pots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C	(B6) Concave Surface (B8) B10) res on Living Roots (C3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reducer	or (C1) able (C2) es on Living Ro	pots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or	(B6) Concave Surface (B8) B10) res on Living Roots (C3) B10 Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Wetland Hydrology (Check all that apply) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher (where not tilled) Presence of Reduced Iron Deposits (B5)	or (C1) able (C2) es on Living Ro d Iron (C4) C7)	oots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position	(B6) Concave Surface (B8) B10) res on Living Roots (C3) B8) A Aerial Imagery (C9) n (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Primary Indicators (minimum of one required; check all that apply) Aquatic Invertebrates Aquatic Invertebrates Aquatic Invertebrates Dry-Season Water Table (Oxidized Rhizospher (where not tilled)) This Muck Surface (Oxidized Rhizospher (B5)) Thin Muck Surface (Oxidized Rhizospher (B7)) Other (Explain in Ref	or (C1) able (C2) es on Living Ro d Iron (C4) C7)	pots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or	(B6) Concave Surface (B8) B10) res on Living Roots (C3) B8) A Aerial Imagery (C9) n (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9)	or (C1) able (C2) es on Living Ro I Iron (C4) C7) narks)	. ,	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) B10 Aerial Imagery (C9) CD2) CD5) COCKS (D7) (LRR F)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Field Observations: Palt Crust (B11) Aquatic Invertebrates Aquatic	or (C1) able (C2) es on Living Ro I Iron (C4) C7) narks)	d Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) B10 Aerial Imagery (C9) CD2) CD5) COCKS (D7) (LRR F)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Field Observations: Palt Crust (B11) Aquatic Invertebrates Aquatic	or (C1) able (C2) es on Living Ro d Iron (C4) C7) narks) cribe Recorded	d Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) B10 Aerial Imagery (C9) CD2) CD5) COCKS (D7) (LRR F)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Wetland Hydrology Hydrogen Sulfide Od Oxidized Rhizospher (where not tilled) Presence of Reduced Water-Stained Leaves (B9) Field Observations: Poepth Des	or (C1) able (C2) es on Living Ro d Iron (C4) C7) narks) cribe Recorded	d Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) B10 Aerial Imagery (C9) CD2) CD5) COCKS (D7) (LRR F)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates □ Saturation (A3) □ Hydrogen Sulfide Od □ Water Marks (B1) □ Dry-Season Water Tallian □ Sediment Deposits (B2) □ Oxidized Rhizospher □ Drift Deposits (B3) (where not tilled) □ Iron Deposits (B5) □ Thin Muck Surface (Color of the Carplain in Reference of Reducer □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Reference of Reducer □ Water-Stained Leaves (B9) Field Observations: Depth (inches) Destinspire Surface Water present? □ □	or (C1) able (C2) es on Living Ro d Iron (C4) C7) narks) cribe Recorded	d Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) B10 Aerial Imagery (C9) CD2) CD5) COCKS (D7) (LRR F)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates □ Saturation (A3) □ Hydrogen Sulfide Od □ Water Marks (B1) □ Dry-Season Water Table □ Sediment Deposits (B2) □ Oxidized Rhizospher □ Drift Deposits (B3) (where not tilled) □ Algal Mat or Crust (B4) □ Presence of Reduced □ Iron Deposits (B5) □ Thin Muck Surface (Context) □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Reference) □ Water-Stained Leaves (B9) Field Observations: Depth (inches) Surface Water present? □ Destinate (inches) Water Table present? □ Mean (inches)	or (C1) able (C2) es on Living Ro d Iron (C4) C7) narks) cribe Recorded	d Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) B10 Aerial Imagery (C9) CD2) CD5) COCKS (D7) (LRR F)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates □ Saturation (A3) □ Hydrogen Sulfide Od □ Water Marks (B1) □ Dry-Season Water Tables □ Sediment Deposits (B2) □ Oxidized Rhizospher □ Drift Deposits (B3) (where not tilled) □ Algal Mat or Crust (B4) □ Presence of Reduced □ Iron Deposits (B5) □ Thin Muck Surface (Context) □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Reference) □ Water-Stained Leaves (B9) Field Observations: Depth (inches) Destinates Surface Water present? □ Destinates □ Destinates Water Table present? □ Destinates □ Destinates Saturation Present? □ Destinates □ Destinates Saturation Present? □ Destinates □ Destinates Saturation Present? □ Destinates □ Destinates	or (C1) able (C2) es on Living Ro d Iron (C4) C7) narks) cribe Recorded	d Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) B10 Aerial Imagery (C9) CD2) CD5) COCKS (D7) (LRR F)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Aquatic Invertebrates Saturation (A3) Hydrogen Sulfide Od Water Marks (B1) Dry-Season Water Tables Sediment Deposits (B2) Oxidized Rhizospher Drift Deposits (B3) (where not tilled) Algal Mat or Crust (B4) Presence of Reduces Inon Deposits (B5) Thin Muck Surface (Context) Water-Stained Leaves (B9) Field Observations: Depth (inches) Surface Water present? Mater Table present? Water Table present? Mater Table present? Saturation Present? Mater Table present? (includes capillary fringe)	or (C1) able (C2) es on Living Ro d Iron (C4) C7) narks) cribe Recorded	d Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) B10 Aerial Imagery (C9) CD2) CD5) COCKS (D7) (LRR F)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Water (A1) □ Salt Crust (B11) □ High Water Table (A2) □ Aquatic Invertebrates □ Saturation (A3) □ Hydrogen Sulfide Od □ Water Marks (B1) □ Dry-Season Water Table presents (B2) □ Drift Deposits (B3) □ Oxidized Rhizospher (where not tilled) □ Iron Deposits (B4) □ Presence of Reducer (where not tilled) □ Iron Deposits (B5) □ Thin Muck Surface (Carlotter) □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Reresent) □ Water-Stained Leaves (B9) Field Observations: Depth (inches) Surface Water present? □ Destinches) Water Table present? □ Destinches Saturation Present? □ Destinches (includes capillary fringe) Wetland Hydrology Present?	or (C1) able (C2) es on Living Ro d Iron (C4) C7) narks) cribe Recorded	d Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) B10 Aerial Imagery (C9) CD2) CD5) COCKS (D7) (LRR F)

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Farm	Cit	ty/County: H	and Count	y Sampling Date: <u>10/9/2018</u>
Applicant/Owner: Sweetland Wind Farm, LLC		St	ate: SD Sampling Point: SP-702	
Investigator(s): K. Russo, J. Kensinger				Range: S6, T111N, R66W
Landform (hillslope, terrace, etc.) terrace	Loca	 I relief (concave	e, convex,	none): none Slope (%): 0 %
Subregion (LRR): Northern Great Plains Spring Wheat F				
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 pe		<u></u>		
Are climate/hydrologic conditions on the site typical for this t				(If no, explain in Remarks)
				, , ,
Vegetation Soil Hydrolo	ogy	Are "Norm	al Circums	stances" present? 🛛 Yes 🔲 No
Significantly Disturbed? Naturally Problematic?			(If neede	ed, explain any answers in Remarks)
·	_		•	
SUMMARY OF FINDINGS – Attach site map showi	ng sampl	ing point loc	ations, ti	ransects, important features, etc.
Yes No			n upland p	olot. Normal hydrologic conditions are not present
Hydrophytic Vegetation Present?	due to	recent rainfall.		
Hydric Soil Present? □ □ Wetland Hydrology Present? □ □				
Is the Sampled Area within a Wetland?				
is the Sampled Area within a Wetland?				
VEGETATION – Use scientific names of plants				
	Absolute	Dominant	Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: <u>30 ft.</u>)	% Cover	Species?	Status	Number of Dominant Species that
1	<u>%</u>			are OBL, FACW, or FAC
2	<u>%</u>			(excluding FAC-): 0 (A)
3. 4.	<u>%</u> %			Total Number of Dominant
T	0 %	= Total Cover		Species Across All Strata: 1 (B)
Sapling/Shrub Stratum (Plot size: 15 ft.)				Percent of Dominant Species that
1	%			are OBL, FACW, or FAC:0%_(A/B)
2.	%			Prevalence Index Worksheet:
3	<u>%</u>			
4				Total % Cover of: Multiply by:
5	<u>%</u>			OBL species% x 1 =0 FACW species% x 2 =0
	0 %	= Total Cover		FAC species
Herb Stratum (Plot size: <u>5 ft.</u>)				FACU species% x 4 =0
1. Bromus inermis	<u>95 %</u>	<u>Y</u> N	UPL FACU	UPL species% x 5 =0
Helianthus maximiliani Symphyotrichum pilosum	3 % 2 %	N N	FACU	Column Totals:0% (A)0(B)
4	<u>2 %</u>		1 400	Prevalence Index = B/A =
5.	%		-	Hydrophytic Vegetation Indicators:
6.	%			
7	<u>%</u>			1 Rapid Test for Hydrophytic Vegetation
8.	<u>%</u>			☐ 2 Dominance Test is >50%
9 10.	<u>%</u> %			☐ 3 Prevalence Index is ≤3.0 ¹
10.	100 %	= Total Cover		☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: 30 ft.)				☐ Problematic Hydrophytic Vegetation¹ (explain)
1	<u>%</u>			
2	<u>%</u>			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
	0 %	= Total Cover		, , , , , , , , , , , , , , , , , , , ,
Bare Ground in Herb Stratum 0 %				Hydrophytic Vegetation Present? ☐ Yes ☐ No
Remarks: Hydrophytic vegetation indicators are not met. Ph	otograph C	-57.		ı
, , , ,	U 1			

SOIL Sampling Point: SP-702

		eptn needed to doc	ument the	e indicator of	or confirm the	absence of indicators.)	
Depth Matrix	(Redox Fea	itures			
(inches) Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-810YR 3/1	93	10YR 3/4	7	C	M	silty clay loam	
8-16 10YR 3/1	100					clay	
16-22 10YR 2/1	97	10YR 4/1	3	D	M	clay	
		-					
¹ Type: C=Concentration, D=De	epletion, RI	M=Reduced Matrix,	CS=Cover	ed or Coate	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil Indicators: (Appl	icable to a	ıll LRRs, unless oth	erwise no	oted.)		Indicators for Problem	atic Hydric Soils ³ :
☐ Histosol (A1)		☐ Sandy G	Sleyed Mat	rix (S4)		1 cm Muck (A9) (LRF	R I, J)
☐ Histic Epipedon (A2)		☐ Sandy R	Redox (S5)			☐ Coast Prairie Redox	(A16) (LRR F, G, H)
☐ Black Histic (A3)		☐ Stripped	Matrix (S	3)		☐ Dark Surface (S7) (L	RR G)
☐ Hydrogen Sulfide (A4)		☐ Loamy N	Mucky Min	eral (F1)		☐ High Plains Depressi	
☐ Stratified Layers (A5) (LRR	F)	☐ Loamy C	Sleyed Ma	trix (F2)		(LRR H outside of	•
☐ 1 cm Muck (A9) (LRR F, G ,	H)	□ Depleted	d Matrix (F	3)		Reduced Vertic (F18)	,
☐ Depleted Below Dark Surface	ce (A11)	□ Redox D	ark Surfac	ce (F6)		Red Parent Material	
☐ Thick Dark Surface (A12)		□ Depleted	d Dark Sur	face (F7)		☐ Very Shallow Dark S	, ,
☐ Sandy Mucky Mineral (S1)		☐ Redox D				Other (Explain in Rer	marks)
2.5 cm Mucky Peat or Peat	, , ,	. ,		, ,		3Indicators of hydrophyti	
5 cm Mucky Peat or Peat (S	83) (LRR F)) (MLRA	72 & 73 o	t LRR H)		wetland hydrology must disturbed or problematic	
Destrictive Lever (if present)						<u> </u>	•
Restrictive Layer (if present):	:	Danth (inches)				Hydric Soil Present?	
Type:		Depth (inches):				☐ Yes ☐ No	
Remarks: Hydric soil indicator	i o io mot						
HYDROLOGY							
HYDROLOGY Wetland Hydrology Indicator	s:						
		ed; check all that ap	pply)			Secondary Indicators (2	or more required)
Wetland Hydrology Indicator Primary Indicators (minimum of							
Wetland Hydrology Indicator Primary Indicators (minimum of ☐ Surface Water (A1)		☐ Salt Crust (B11)	(B13)		☐ Surface Soil Cracks	(B6)
Wetland Hydrology Indicator Primary Indicators (minimum of			B11) ertebrates				(B6) Concave Surface (B8)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2)		☐ Salt Crust (B11) ertebrates Sulfide Odd	or (C1)		☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (B	(B6) Concave Surface (B8)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)		☐ Salt Crust (☐ Aquatic Inv	B11) ertebrates Sulfide Odo n Water Ta	or (C1) able (C2)	Roots (C3)	☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (B	(B6) Concave Surface (B8) 310)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Salt Crust (Aquatic Inv Hydrogen S Dry-Seasor	B11) ertebrates Sulfide Ode Water Ta hizosphere	or (C1) able (C2)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher	(B6) Concave Surface (B8) B10) res on Living Roots (C3)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		☐ Salt Crust (☐ Aquatic Inv☐ Hydrogen S☐ Dry-Seasor☐ Oxidized RI☐ (where n☐ Presence o	B11) ertebrates Sulfide Odd n Water Ta hizosphere ot tilled) f Reduced	or (C1) able (C2) es on Living	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9)
Wetland Hydrology Indicator Primary Indicators (minimum of the content of the co		□ Salt Crust (□ Aquatic Inv □ Hydrogen S □ Dry-Seasor □ Oxidized RI (where n □ Presence o □ Thin Muck s	B11) ertebrates Sulfide Ode n Water Ta hizosphere ot tilled) f Reduced Surface (C	or (C1) able (C2) es on Living I Iron (C4) e7)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2)
Wetland Hydrology Indicator Primary Indicators (minimum of the second o	f one requir	Salt Crust (Aquatic Inv Hydrogen S Dry-Seasor Oxidized R (where n Presence o	B11) ertebrates Sulfide Ode n Water Ta hizosphere ot tilled) f Reduced Surface (C	or (C1) able (C2) es on Living I Iron (C4) e7)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) D5)
Wetland Hydrology Indicator Primary Indicators (minimum of the second o	f one requir	Salt Crust (Aquatic Inv Hydrogen S Dry-Seasor Oxidized R (where n Presence o	B11) ertebrates Sulfide Ode n Water Ta hizosphere ot tilled) f Reduced Surface (C	or (C1) able (C2) es on Living I Iron (C4) e7)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) D5)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial	f one requir	Salt Crust (Aquatic Inv Hydrogen S Dry-Seasor Oxidized R (where n Presence o	B11) ertebrates Sulfide Odd n Water Ta hizosphere ot tilled) of Reduced Surface (Clain in Ren	or (C1) able (C2) es on Living I Iron (C4) er) narks)		Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Water-Stained Leaves (B9) Field Observations:	f one requir	Salt Crust (Aquatic Inv. Hydrogen S Dry-Seasor Oxidized RI (where n Presence o Thin Muck S Other (Expl	B11) ertebrates Sulfide Odd n Water Ta hizosphere ot tilled) of Reduced Surface (Clain in Ren	or (C1) able (C2) es on Living I Iron (C4) er) narks)	led Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Water-Stained Leaves (B9) Field Observations: Surface Water present?	Imagery (E	Salt Crust (Aquatic Inv. Hydrogen S Dry-Seasor Oxidized RI (where n Presence o Thin Muck S Other (Expl	B11) ertebrates Sulfide Odd n Water Ta hizosphere ot tilled) of Reduced Surface (Clain in Ren	or (C1) able (C2) es on Living I Iron (C4) er) narks)	led Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
Wetland Hydrology Indicator Primary Indicators (minimum of minimum of minimu	Imagery (E	Salt Crust (B11) ertebrates Sulfide Odd n Water Ta hizosphere ot tilled) of Reduced Surface (Clain in Ren	or (C1) able (C2) es on Living I Iron (C4) er) narks)	led Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present?	Imagery (E	Salt Crust (Aquatic Inv. Hydrogen S Dry-Seasor Oxidized RI (where n Presence o Thin Muck S Other (Expl	B11) ertebrates Sulfide Odd n Water Ta hizosphere ot tilled) of Reduced Surface (Clain in Ren	or (C1) able (C2) es on Living I Iron (C4) er7) narks)	led Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present? (includes capillary fringe)	Imagery (E	Salt Crust (B11) ertebrates Sulfide Odd n Water Ta hizosphere ot tilled) of Reduced Surface (Clain in Ren	or (C1) able (C2) es on Living I Iron (C4) er7) narks)	led Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
Wetland Hydrology Indicator Primary Indicators (minimum of pr	Imagery (E	Salt Crust (B11) ertebrates Sulfide Odd n Water Ta hizosphere ot tilled) of Reduced Surface (Clain in Ren	or (C1) able (C2) es on Living I Iron (C4) er7) narks)	led Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present? (includes capillary fringe)	Imagery (E	Salt Crust (B11) ertebrates Sulfide Odd n Water Ta hizosphere ot tilled) of Reduced Surface (Clain in Ren	or (C1) able (C2) es on Living I Iron (C4) er7) narks)	led Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Farm	Cit	y/County: Ha	and Count	y Sampling Date: <u>10/9/2018</u>				
Applicant/Owner: Sweetland Wind Farm, LLC			St	ate: SD Sampling Point: SP-705				
				Range: S1, T111N, R67W				
Landform (hillslope, terrace, etc.) depression	Local	relief (concave	e, convex,	none): concave Slope (%): 0 %				
Subregion (LRR): Northern Great Plains Spring Wheat R								
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 pe		-						
Are climate/hydrologic conditions on the site typical for this t			⊠ No	(If no, explain in Remarks)				
Are diffially divided to conditions on the site typical for this t	inc or year:	☐ 1C3		(ii no, explain iii Nemarko)				
Vegetation Soil Hydrolo	ogy	Are "Norm	al Circums	stances" present? 🛛 Yes 🔲 No				
Significantly Disturbed?			(If neede	ed, explain any answers in Remarks)				
Naturally Problematics								
SUMMARY OF FINDINGS – Attach site map showi	ng sampli	ng point loc	ations, tı	ansects, important features, etc.				
Yes No Hydrophytic Vegetation Present?								
VEGETATION – Use scientific names of plants								
VEGETATION - Use scientific flames of plants	Λ h = = l · · t =	Daminant	llit	Daminanaa Taat Waylahaat				
Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:				
1	<u></u> %			Number of Dominant Species that are OBL, FACW, or FAC				
2	<u>%</u>			(excluding FAC-): 0 (A)				
3				Total Number of Dominant				
4	%			Species Across All Strata: 1 (B)				
	0 %	= Total Cover		Percent of Dominant Species that				
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)				are OBL, FACW, or FAC: 0% (A/B)				
1.	<u>%</u>							
2 3.				Prevalence Index Worksheet:				
3 4				Total % Cover of: Multiply by:				
5.				OBL species % x 1 = 0				
·	0 %	= Total Cover		FACW species % x 2 = 0				
Herb Stratum (Plot size: <u>5 ft.</u>)				FAC species% x 3 =0				
1. Bromus inermis	<u>50 %</u>	<u>Y</u>	UPL	FACU species% x 4 =0 UPL species				
2. Ambrosia artemisiifolia	15 %	N	FACU	Column Totals:				
3. Xanthium strumarium	10 %	N	FAC	Prevalence Index = B/A =				
4. Poa pratensis	10 %	<u>N</u>	FACU	Frevalence index = B/A =				
5	<u>%</u>			Hydrophytic Vegetation Indicators:				
6.	<u>%</u>			☐ 1 Rapid Test for Hydrophytic Vegetation				
7 8.	<u>%</u> %			2 Dominance Test is >50%				
9.	// 6			☐ 3 Prevalence Index is ≤3.0¹				
10.	%							
	85 %	= Total Cover		4 Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)				
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	0/			☐ Problematic Hydrophytic Vegetation¹ (explain)				
1 2.	<u>%</u> %			¹ Indicators of hydric soil and wetland hydrology				
	0 %	= Total Cover		must be present, unless disturbed or problematic				
Bare Ground in Herb Stratum 15 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No				
Remarks: Hydrophytic vegetation indicators are not met. Ph	otograph C-	58						
Tromana. Try arophysio rogotation malacione are not most in	otograpii o							

SOIL Sampling Point: SP-705

Profile Desc	ription: (Describe	to the de	epth n	eeded to docun	nent the	e indicator o	or confirm the	absence of indicators.)	
Depth	Matrix			Re	dox Fea	atures			
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 2/1	100						silty clay loam	
		-							
		_							
	_								
		_							
		_	-						·
¹Type: C=Co	ncentration, D=De	pletion, RI	M=Red	duced Matrix, CS	=Cover	ed or Coated	d Sand Grains	² Location: PL=Por	e Lining, M=Matrix
Hydric Soil I	ndicators: (Appli	cable to a	II LRF			-		Indicators for Problen	natic Hydric Soils ³ :
☐ Histosol (A	,			☐ Sandy Gle				1 cm Muck (A9) (LR	
☐ Histic Epip				☐ Sandy Red				☐ Coast Prairie Redox	
☐ Black Hist	` '			☐ Stripped M	,	,		☐ Dark Surface (S7) (I	,
☐ Hydrogen				Loamy Mu	-	, ,		☐ High Plains Depress	sions (F16)
	∟ayers (A5) (LRR I			Loamy Gle	-			(LRR H outside of	•
	k (A9) (LRR F, G, I			Depleted N				☐ Reduced Vertic (F18	,
	Below Dark Surfac	e (A11)		Redox Dar		, ,		Red Parent Material	
	Surface (A12)			Depleted D		, ,		☐ Very Shallow Dark S	, ,
-	cky Mineral (S1)			☐ Redox Dep				Other (Explain in Re	marks)
	icky Peat or Peat (☐ High Plains				³ Indicators of hydrophy	
5 cm Muc	ky Peat or Peat (S	3) (LRR F)	1	(MLRA 72	& /30	T LKK H)		wetland hydrology mus disturbed or problemati	
Restrictive L	ayer (if present):							Hydric Soil Present?	
Type:	, , ,		Depth	n (inches):				☐ Yes ⊠ No	
		_	•	` <u> </u>					
HYDROLOG	ΞY								
Wetland Hyd	rology Indicators	:							
Primary Indic	ators (minimum of	one requir	ed; ch	eck all that apply	<u>/)</u>			Secondary Indicators (2 or more required)
☐ Surface W	later (A1)	•	Г	☐ Salt Crust (B1	1)			☐ Surface Soil Cracks	(B6)
☐ High Wate	` '			☐ Aquatic Invert		(B13)			Concave Surface (B8)
☐ Saturation				☐ Hydrogen Sul				☐ Drainage Patterns (
☐ Water Mai	, ,			☐ Dry-Season W					eres on Living Roots (C3)
_	Deposits (B2)			Oxidized Rhiz		, ,	Roots (C3)	(where tilled)	3 (,
☐ Drift Depo				(where not		· ·	` ,	☐ Crayfish Burrows (0	28)
☐ Algal Mat			[☐ Presence of R	Reduced	I Iron (C4)		☐ Saturation Visible o	n Aerial Imagery (C9)
☐ Iron Depo	, ,		[Thin Muck Su	rface (C	(7)		☐ Geomorphic Position	n (D2)
-	Visible on Aerial I	magery (B	i7) [Other (Explair	n in Ren	narks)		☐ FAC-Neutral Test (I	D5)
☐ Water-Sta	ined Leaves (B9)							☐ Frost-Heave Humm	ocks (D7) (LRR F)
Field Observ	ations:			Depth	Desc	cribe Record	ed Data (strear	m gauge, monitoring well.	aerial photos, previous
		Yes	No	(inches)			, if available:	- -	•
Surface Water	r present?		\boxtimes						
Water Table	oresent?		\boxtimes						
Saturation Pr	esent?		\boxtimes						
(includes cap	illary fringe)								
Wetland Hyd	rology Present?		\boxtimes						
Remarks: We	tland hydrology inc	dicator D2	is met	t.					
	, 0,								
i .									

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Farm	Cit	ty/County: H	and Count	y Sampling Date: 10/9/2018
Applicant/Owner: Sweetland Wind Farm, LLC			St	ate: SD Sampling Point: SP-706
Investigator(s): K. Russo, J. Kensinger		Section,	Township,	Range: S2, T111N, R67W
Landform (hillslope, terrace, etc.) depression	Loca	 I relief (concav	e, convex,	none): concave Slope (%): 1 %
Subregion (LRR): Northern Great Plains Spring Wheat F				
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 pe		'		NWI Classification: N/A
Are climate/hydrologic conditions on the site typical for this t				(If no, explain in Remarks)
	-		<u></u>	(in the state of t
Vegetation Soil Hydrolo	ogy	Are "Norm	nal Circums	stances" present? 🛛 Yes 🔲 No
Significantly Disturbed? Naturally Problematic?			(If neede	ed, explain any answers in Remarks)
·			`	
SUMMARY OF FINDINGS – Attach site map show	ing sampl	ing point loc	ations, ti	ransects, important features, etc.
Yes No				sample plot. Normal hydrologic conditions are not
Hydrophytic Vegetation Present?	presen	t due to recent	raintait.	
Hydric Soil Present? □ ☑ Wetland Hydrology Present? □ □				
Is the Sampled Area within a Wetland?				
is the Sampled Area within a Wetland?				
VEGETATION – Use scientific names of plants				
	Absolute	Dominant	Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: <u>30 ft.</u>)	% Cover	Species?	Status	Number of Dominant Species that
1	<u>%</u>			are OBL, FACW, or FAC
2	<u>%</u>			(excluding FAC-):0 (A)
3. 4.	<u>%</u> %			Total Number of Dominant
T	0 %	= Total Cove		Species Across All Strata: 1 (B)
Sapling/Shrub Stratum (Plot size: 15 ft.)				Percent of Dominant Species that
1	%			are OBL, FACW, or FAC:0%_(A/B)
2.				Prevalence Index Worksheet:
3	<u>%</u>			
4				Total % Cover of: Multiply by:
5	<u>%</u>			OBL species% x 1 =0 FACW species% x 2 =0
	0 %	= Total Cove	r	FAC species
Herb Stratum (Plot size: <u>5 ft.</u>)	05.0/	.,	E4011	FACU species % x 4 = 0
Poa pratensis Echinochloa crus-galli	95 % 3 %	 N	FACU FAC	UPL species % x 5 = 0
Echinochloa crus-galli Xanthium strumarium	2 %	N	FAC	Column Totals:0 % (A)0 (B)
4.	<u>2 %</u>			Prevalence Index = B/A =
5.	%			Hydrophytic Vegetation Indicators:
6	<u>%</u>			
7	<u>%</u>			1 Rapid Test for Hydrophytic Vegetation
8.	%			2 Dominance Test is >50%
9 10.	<u>%</u> %			☐ 3 Prevalence Index is ≤3.0¹
	100 %	= Total Cove	r	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30 ft.</u>)				☐ Problematic Hydrophytic Vegetation¹ (explain)
1.	<u>%</u>			¹ Indicators of hydric soil and wetland hydrology
2	<u>%</u> 0 %	= Total Cove	 r	must be present, unless disturbed or problematic
Para Cround in Horb Stratum		- 10101 0000	•	Hydrophytic Vegetation Present? ☐ Yes ☒ No
Bare Ground in Herb Stratum 0 % Remarks: Hydrophytic vegetation indicators are not met. Ph	otograph C	-50		
nomana. Hydrophytic vegetation ilidicators are not met. Fi	ologiapii C	JJ.		

SOIL Sampling Point: SP-706

	ription: (Describe	e to the de	epth n				r confirm the	absence of indicators.)		
Depth	Matrix			Red	ox Fe	atures				
(inches)	Color (moist)	%	C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 2/1	100						silty clay loam		
6-8	10YR 3/1	95		10YR 4/4	5	C	M	silty clay		
8-16	10YR 2/1	100						clay		
						· · ·				
-										
¹Type: C=Co	oncentration, D=De	pletion, RI	M=Re	duced Matrix, CS=	=Cove	red or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil I	ndicators: (Appli	cable to a	II LRF	Rs, unless otherv	vise n	oted.)		Indicators for Problem	atic Hydric Soils ³ :	
☐ Histosol (A1)			☐ Sandy Gley	ed Ma	trix (S4)		1 cm Muck (A9) (LR	R I, J)	
☐ Histic Epi	pedon (A2)			☐ Sandy Redo	x (S5))		☐ Coast Prairie Redox	(A16) (LRR F, G, H)	
☐ Black Hist	tic (A3)			☐ Stripped Ma	ıtrix (S	6)		☐ Dark Surface (S7) (L	.RR G)	
☐ Hydrogen	Sulfide (A4)			☐ Loamy Muc	ky Min	eral (F1)		☐ High Plains Depress		
☐ Stratified	Layers (A5) (LRR I	F)		☐ Loamy Gley	ed Ma	atrix (F2)		(LRR H outside of	MLRA 72 & 73)	
☐ 1 cm Muc	k (A9) (LRR F, G, I	H)		☐ Depleted Ma	atrix (F	- 3)		Reduced Vertic (F18		
□ Depleted	Below Dark Surfac	e (A11)		☐ Redox Dark	Surfa	ce (F6)		Red Parent Material		
☐ Thick Dar	k Surface (A12)			☐ Depleted Da	ark Su	rface (F7)		☐ Very Shallow Dark S	, ,	
☐ Sandy Mu	ıcky Mineral (S1)			☐ Redox Depr	essior	ns (F8)		Other (Explain in Re	marks)	
	ucky Peat or Peat (-		, ,		³ Indicators of hydrophyt		
5 cm Muc	ky Peat or Peat (S	3) (LRR F)		(MLRA 72	& 73 c	of LRR H)		wetland hydrology must disturbed or problemation		
Restrictive L	ayer (if present):							Hydric Soil Present?		
Type:	-u, o. (p. 000).		Dent	h (inches):				☐ Yes ⊠ No		
		_	2001							
HYDROLO	GY									
_	drology Indicators									
Primary Indic	ators (minimum of	one requir	ed; ch	eck all that apply)	1			Secondary Indicators (2	2 or more required)	
☐ Surface V	Vater (A1)			☐ Salt Crust (B11)			☐ Surface Soil Cracks	(B6)	
	er Table (A2)			Aquatic Inverte	brates	s (B13)		☐ Sparsely Vegetated Concave Surface (B8)		
	n (A3)			☐ Hydrogen Sulfi	de Od	or (C1)		□ Drainage Patterns (I	B10)	
☐ Water Ma	rks (B1)			☐ Dry-Season W	ater Ta	able (C2)		Oxidized Rhizosphe	res on Living Roots (C3)	
☐ Sediment	Deposits (B2)			Oxidized Rhizo		es on Living I	Roots (C3)	(where tilled)		
☐ Drift Depo	` '			(where not t	-			☐ Crayfish Burrows (C		
☐ Algal Mat	or Crust (B4)			Presence of Re		` ,		☐ Saturation Visible or	• • • •	
☐ Iron Depo	` '			Thin Muck Sur				☐ Geomorphic Position		
<u> </u>	n Visible on Aerial I	magery (B	57)	Other (Explain	ın Ker	narks)		☐ FAC-Neutral Test (□	,	
☐ Water-Sta	ained Leaves (B9)							☐ Frost-Heave Humm	OCKS (D7) (LRR F)	
Field Observ	vations:	Yes	No	Depth (inches)		cribe Record ections, etc.)		m gauge, monitoring well,	aerial photos, previous	
Surface Wate	er present?		\boxtimes							
Water Table	present?	\boxtimes		6						
Saturation Pr		\boxtimes		6						
(includes cap			ш							
	drology Present?	\boxtimes								
				and D2 are	1					
Remarks. We	etland hydrology ind	uicator AZ,	A3, 6	ıııu D∠ are IIIet.						

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Farm	Cit	ty/County: H	and Count	y Sampling Date: <u>10/9/2018</u>
Applicant/Owner: Sweetland Wind Farm, LLC	ate: SD Sampling Point: SP-708			
				Range: S7, T111N, R66W
Landform (hillslope, terrace, etc.)depression				
Subregion (LRR): Northern Great Plains Spring Wheat R				
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 pe				NWI Classification: N/A
Are climate/hydrologic conditions on the site typical for this ti				(If no, explain in Remarks)
	-		<u> </u>	(ii rio, oxplair iii redinano)
Vegetation Soil Hydrolo	ogy	Are "Norm	nal Circums	stances" present? Yes No
Significantly Disturbed?			(If neede	ed, explain any answers in Remarks)
•			,	,
SUMMARY OF FINDINGS – Attach site map showi	ng sampli	ing point loc	ations, t	ransects, important features, etc.
Yes No				sample plot. Normal hydrologic conditions are
Hydrophytic Vegetation Present? □ ⊠ Hydric Soil Present? □ ⊠		tural practices.		all. Soil and vegetation have been disturbed by
Hydric Soil Present? □ ☑ Wetland Hydrology Present? □ ☑		'		
Is the Sampled Area within a Wetland?				
is the Sampled Alea within a Wetland:				
VEGETATION – Use scientific names of plants				
Tree Otreture (Plateine 00 (t))	Absolute	Dominant	Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: <u>30 ft.</u>) 1.	% Cover	Species?	Status	Number of Dominant Species that
1 2	<u>%</u> %			are OBL, FACW, or FAC
3.				(excluding FAC-):0(A)
4.	%			Total Number of Dominant Species Across All Strata: 1 (B)
	0 %	= Total Cove	r	··
Sapling/Shrub Stratum (Plot size: 15 ft.)				Percent of Dominant Species that are OBL, FACW, or FAC: 0% (A/B)
1	%			<u> </u>
2	%			Prevalence Index Worksheet:
3				
4				Total % Cover of: Multiply by: OBL species % x 1 = 0
5	<u>%</u>	= Total Cove		FACW species% x 2 =0
Harb Otration (Plate See 5 (c)	0 %	= Total Cove	ı	FAC species
Herb Stratum (Plot size: <u>5 ft.</u>)	75 0/	V	UPL	FACU species% x 4 =0
1. Glycine max 2.	<u>75 %</u> %		<u>UFL</u>	UPL species% x 5 =0 Column Totals: 0% (A) 0 (B)
3.	// 6			(,
4.	%			Prevalence Index = B/A =
5	%			Hydrophytic Vegetation Indicators:
6	%			
7	<u>%</u>			1 Rapid Test for Hydrophytic Vegetation
8. 9.	<u>%</u> %			2 Dominance Test is >50%
10.	<u> </u>			☐ 3 Prevalence Index is ≤3.0 ¹
	75 %	= Total Cove	r	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	0/			☐ Problematic Hydrophytic Vegetation¹ (explain)
1 2.	<u>%</u> %			¹ Indicators of hydric soil and wetland hydrology
2	0 %	= Total Cove	r	must be present, unless disturbed or problematic
Para Cround in Harb Stratum 25 9/				Hydrophytic Vegetation Present? ☐ Yes ☒ No
Bare Ground in Herb Stratum 25 % Remarks: Hydrophytic vegetation indicators are not met. Th	e only year	tation observe	d was acri	Cultural sovhean Photograph C-60
remaiks. Hydrophytic vegetation indicators are not met. Th	e only vege	tation observe	u was ayii	cultural soyucan. Filotograph 0-00.

SOIL Sampling Point: SP-708

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth	Matrix			Re	dox Fea	atures					
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-16	10YR 2/1	100						silty clay loam			
	-										
¹Type: C=Co	ncentration, D=De	pletion, RI	M=Red	duced Matrix, CS	=Cover	ed or Coated	d Sand Grains	² Location: PL=Pore	e Lining, M=Matrix		
Hydric Soil I	ndicators: (Appli	cable to a	III LRF	Rs, unless other	wise no	oted.)		Indicators for Problem	natic Hydric Soils ³ :		
☐ Histosol (/	,			☐ Sandy Gle				1 cm Muck (A9) (LR			
☐ Histic Epip				☐ Sandy Red				☐ Coast Prairie Redox			
☐ Black Hist	` '			☐ Stripped M	,	,		Dark Surface (S7) (I	,		
☐ Hydrogen				☐ Loamy Mu	-	, ,		☐ High Plains Depressions (F16)			
	∟ayers (A5) (LRR I			Loamy Gle	-			(LRR H outside of MLRA 72 & 73)			
	k (A9) (LRR F, G, I			Depleted N				Reduced Vertic (F18	,		
	Below Dark Surfac	e (A11)		☐ Redox Dar		, ,		Red Parent Material			
	Surface (A12)			☐ Depleted □		, ,		☐ Very Shallow Dark S	, ,		
								Other (Explain in Re	inarks)		
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16)											
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be present, unless disturbed or problematic											
Restrictive L	ayer (if present):	Hydric Soil Present?									
Type:			Deptl	n (inches):				☐ Yes ☒ No			
	Remarks: Hydric soil indicators are not met.										
HYDROLO	3Y										
	rology Indicators	:									
-	ators (minimum of		red: ch	eck all that apply	/)			Secondary Indicators (2 or more required)		
		<u> </u>		• • • •							
☐ Surface W☐ High Wate	` '			☐ Salt Crust (B1 ☐ Aquatic Invert		(D12)		☐ Surface Soil Cracks (B6)			
☐ Saturation	, ,			☐ Hydrogen Sul				☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10)			
☐ Water Ma	` '			☐ Dry-Season V		. ,			eres on Living Roots (C3)		
_	Deposits (B2)			☐ Oxidized Rhiz		, ,	Roots (C3)	(where tilled)	ores on Living Roots (05)		
☐ Drift Depo			'	(where not		55 On Living I	110013 (00)	Crayfish Burrows (C	C8)		
☐ Algal Mat			[☐ Presence of F		I Iron (C4)		☐ Saturation Visible o	•		
☐ Iron Depo	, ,		ĺ	☐ Thin Muck Su	rface (C	7)		☐ Geomorphic Position	• • • •		
-	No (26) No Visible on Aerial I	magery (E		Other (Explair				☐ FAC-Neutral Test (I	D5)		
	ined Leaves (B9)		,					☐ Frost-Heave Humm	ocks (D7) (LRR F)		
Field Observ	· ,			Depth	Door	riha Record	ed Data (stress	m gauge, monitoring well,	aerial photos, provious		
Field Observ	ations.	Yes	No	(inches)			, if available:	in gauge, monitoring well,	aeriai priotos, previous		
Surface Water	er present?		\boxtimes								
Water Table present?											
Saturation Pr			\boxtimes								
(includes cap		_									
	Irology Present?		\boxtimes								
	etland hydrology inc			met.							

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Farm	City/C	County: Hand	d County	Sampling Date: 10/11/2018					
Applicant/Owner: Sweetland Wind Farm, LLC		Sta	ate: SD Sampling Point: SP-713						
Investigator(s): K. Russo, J. Kensinger Section, Township, Range: S23, T111N, R67W									
Landform (hillslope, terrace, etc.) swale	Local re	lief (concave, o	convex, r	none): concave Slope (%): 1 %					
Subregion (LRR): Northern Great Plains Spring Wheat I									
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 pe		<u> </u>							
Are climate/hydrologic conditions on the site typical for this			⊠ No	(If no, explain in Remarks)					
Are climate/hydrologic conditions on the site typical for this	unic or year:			(ii no, explain in remarks)					
Vegetation Soil Hydrol	ogy	Are "Normal	Circumst	tances" present? 🛛 Yes 🔲 No					
Significantly Disturbed?		((If neede	d, explain any answers in Remarks)					
Naturally Problematic?									
SUMMARY OF FINDINGS – Attach site map show	ing sampling	point locati	ions, tr	ansects, important features, etc.					
Yes No Hydrophytic Vegetation Present? □ Hydric Soil Present? □ Wetland Hydrology Present? □ Is the Sampled Area within a Wetland? □	ample plot located in W-710, an emergent wetland. not present due to recent rainfall.								
VEGETATION – Use scientific names of plants									
		ominant Ind	dicator	Dominance Test Worksheet:					
Tree Stratum (Plot size: 30 ft.)		Species? S	Status	Number of Dominant Species that					
1.				are OBL, FACW, or FAC					
2. 3.			_	(excluding FAC-):(A)					
4.			_	Total Number of Dominant					
		Total Cover		Species Across All Strata:(B)					
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)				Percent of Dominant Species that					
1	<u>%</u>			are OBL, FACW, or FAC:(A/B					
2.				Prevalence Index Worksheet:					
3	<u>%</u>								
4				Total % Cover of: Multiply by:					
5	%			OBL species % x 1 = 0 FACW species % x 2 = 0					
	<u> </u>	Total Cover		FAC species					
Herb Stratum (Plot size: <u>5 ft.</u>)				FACU species% x 4 =0					
1. Spartina pectinata	<u>95 %</u>		ACW	UPL species% x 5 =0					
2. <u>Helianthus maximiliani</u>	<u>5 %</u>	<u>N F</u>	ACU	Column Totals: <u>0</u> % (A) <u>0</u> (B)					
3. 4.	<u>%</u> <u>%</u>		_	Prevalence Index = B/A =					
5.	<u> </u>			Hudusub die Verstetien Indicatore					
6.	<u></u>		_	Hydrophytic Vegetation Indicators:					
7.	%			□ 1 Rapid Test for Hydrophytic Vegetation					
8	<u>%</u>			☐ 2 Dominance Test is >50%					
9	%			☐ 3 Prevalence Index is ≤3.0 ¹					
10.	<u>%</u> 100 % =	Total Cover		☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)					
Woody Vine Stratum (Plot size: 30 ft.)				☐ Problematic Hydrophytic Vegetation¹ (explain)					
1	<u>%</u> _			¹ Indicators of hydric soil and wetland hydrology					
2.	<u>%</u>	Total Cover		must be present, unless disturbed or problematic					
	<u> </u>	Total Cover		Hydrophytic Vegetation Present? ⊠ Yes ☐ No					
Bare Ground in Herb Stratum 0 %				Thydrophysio Vogotation Frederic: 2 100 2 100					
Remarks: The Rapid Test is met. Photograph C-61.									

SOIL Sampling Point: SP-713

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix		Re	dox Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-16	10YR 2/1	94	10YR 4/4	6	С	M	silty clay loam		
		· —— -							
	· · · · · · · · · · · · · · · · · · ·		Reduced Matrix, CS			d Sand Grains	² Location: PL=Pore		
Hydric Soil I	ndicators: (Appli	cable to all l	RRs, unless other	rwise note	d.)		Indicators for Problem	natic Hydric Soils ³ :	
☐ Histosol (A	,		☐ Sandy Gle	yed Matrix	(S4)		1 cm Muck (A9) (LR	R I, J)	
☐ Histic Epip	edon (A2)		☐ Sandy Red	dox (S5)			☐ Coast Prairie Redox (A16) (LRR F, G, H)		
☐ Black Hist	ic (A3)		☐ Stripped M	1atrix (S6)			☐ Dark Surface (S7) (LRR G)		
☐ Hydrogen	Sulfide (A4)		☐ Loamy Mu	cky Minera	l (F1)		☐ High Plains Depress		
☐ Stratified I	ayers (A5) (LRR F	-)	☐ Loamy Gle	eyed Matrix	(F2)		(LRR H outside of MLRA 72 & 73)		
☐ 1 cm Mucl	k (A9) (LRR F, G, I	- I)	□ Depleted N	Matrix (F3)			Reduced Vertic (F18)		
☐ Depleted I	Below Dark Surfac	e (A11)	🛚 Redox Dai	rk Surface	(F6)		Red Parent Material (TF2)		
☐ Thick Dark	Surface (A12)		☐ Depleted [Dark Surfac	e (F7)		☐ Very Shallow Dark S	, ,	
☐ Sandy Mu	cky Mineral (S1)		☐ Redox Dep				Other (Explain in Re	marks)	
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16)									
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be present, unless disturbed or problematic									
Restrictive L	ayer (if present):			Hydric Soil Present?					
Type:		D	epth (inches):				⊠ Yes □ No		
, romanor ry	Remarks: Hydric soil indicator F6 is met.								
HYDROLOG	ay .								
	rology Indicators	:							
	•		; check all that appl	v)			Secondary Indicators (2 or more required)	
	·	<u> </u>							
☐ Surface W☐ ☐ High Wate	` '		☐ Salt Crust (B1		12)		☐ Surface Soil Cracks	Concave Surface (B8)	
Saturation			☐ Hydrogen Sul				☐ Drainage Patterns (
☐ Water Mai			☐ Dry-Season V	,			•	eres on Living Roots (C3)	
☐ Sediment	` '		Oxidized Rhiz		` '	Poots (C3)	(where tilled)	ries on Living Roots (C3)	
☐ Drift Depo			(where not		JII LIVIIIG I	110013 (C3)	☐ Crayfish Burrows (C	28)	
☐ Algal Mat			☐ Presence of F	-	on (C4)		☐ Saturation Visible o		
☐ Iron Depo			☐ Thin Muck Su		()		☐ Geomorphic Positio	3 , , ,	
	Nisible on Aerial I	magery (B7)	Other (Explain	, ,	ks)		☐ FAC-Neutral Test ([` '	
_	ined Leaves (B9)	magory (Dr)	_ ` ` '		,		☐ Frost-Heave Humm	ocks (D7) (LRR F)	
	. ,		Depth			15			
Field Observ	ations:	Yes N	lo (inches)			ed Data (strear , if available:	m gauge, monitoring well,	aeriai photos, previous	
Surface Water	r present?		 _						
Water Table	present?		0						
Saturation Pr			0						
(includes cap		ا لاع	_						
			٦						
	Wetland Hydrology Present? □ Remarks: Wetland hydrology indicators A2, A3, D2, and D5 are met.								
ixemains. We	aana nyurology Inc	noatura MZ, F	no, Dz, anu Do ale	111 0 1.					

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Farm	Cit	y/County: H	and Count	y Sampling Date:10/11/2018			
Applicant/Owner: Sweetland Wind Farm, LLC		St	ate: SD Sampling Point: SP-714				
		Range: <u>S23, T111N, R67W</u>					
Landform (hillslope, terrace, etc.) hillslope	Local	relief (concave	e, convex,	none): convex Slope (%): 3 %			
Subregion (LRR): Northern Great Plains Spring Wheat R							
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 per				· · · · · · · · · · · · · · · · · · ·			
Are climate/hydrologic conditions on the site typical for this ti				(If no, explain in Remarks)			
	-		— 110	(ii iio, explain iii remaile)			
Vegetation Soil Hydrolo	gy	Are "Norm	al Circums	stances" present? 🛛 Yes 🔲 No			
Significantly Disturbed? Naturally Problematic?			(If neede	ed, explain any answers in Remarks)			
,			`				
SUMMARY OF FINDINGS – Attach site map showing	ng sampli	ng point loc	ations, tr	ansects, important features, etc.			
Yes No Hydrophytic Vegetation Present? Yes No Remarks: SP-714 is an upland sample plot located adjacent to W-710, an emergent wetland. Normal hydrologic conditions are not present due to recent							
Hydric Soil Present?	rainfall.						
Wetland Hydrology Present?							
Is the Sampled Area within a Wetland?							
VEGETATION – Use scientific names of plants							
Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:			
1	% Cover	Species:	Status	Number of Dominant Species that			
2				are OBL, FACW, or FAC (excluding FAC-): 0 (A)			
3.							
4	<u>%</u>			Total Number of Dominant Species Across All Strata: 1 (B)			
	0 %	= Total Cover		Percent of Dominant Species that			
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)				are OBL, FACW, or FAC: 0% (A/B)			
1	<u>%</u>						
2.				Prevalence Index Worksheet:			
3				Total % Cover of: Multiply by:			
4 5.	<u>%</u> %			OBL species			
5	0 %	= Total Cover	,	FACW species% x 2 =0			
Herb Stratum (Plot size: <u>5 ft.</u>)		- 10tai 0010i		FAC species% x 3 =0			
1. <u>Bromus inermis</u>	80 %	Υ	UPL	FACU species% x 4 =0			
2. Solidago rugosa	10 %	N	FAC	UPL species% x 5 =0 Column Totals:0 % (A)0 (B)			
3. Bouteloua curtipendula	10 %	N	UPL				
4	<u>%</u>			Prevalence Index = B/A =			
5	<u>%</u>			Hydrophytic Vegetation Indicators:			
6	<u>%</u>			☐ 1 Rapid Test for Hydrophytic Vegetation			
7.	<u>%</u>						
8 9.	<u>%</u>	-		2 Dominance Test is >50%			
910.				☐ 3 Prevalence Index is ≤3.0 ¹			
	100 %	= Total Cover		4 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)			
Woody Vine Stratum (Plot size: 30 ft.)	0/			☐ Problematic Hydrophytic Vegetation¹ (explain)			
1	<u>%</u> %			¹ Indicators of hydric soil and wetland hydrology			
	0 %	= Total Cover		must be present, unless disturbed or problematic			
Bare Ground in Herb Stratum0 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No			
Remarks: Hydrophytic vegetation indicators are not met. Pho	otograph C-	·62.					
, , , ,	0 1						

SOIL Sampling Point: SP-714

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth Matrix		Red	lox Features						
(inches) Color (moist)	% (Color (moist)	% Type ¹	Loc ²	Texture	Remarks			
0-16 10YR 3/1	100				silty clay loam				
¹ Type: C=Concentration, D=Dep	letion, RM=Re	educed Matrix, CS	=Covered or Coate	d Sand Grains	² Location: PL=Pore	e Lining, M=Matrix			
Hydric Soil Indicators: (Applications)	able to all LR	Rs, unless other	vise noted.)		Indicators for Problem	natic Hydric Soils ³ :			
☐ Histosol (A1)		☐ Sandy Gley			☐ 1 cm Muck (A9) (LR				
☐ Histic Epipedon (A2)		☐ Sandy Red			☐ Coast Prairie Redox				
☐ Black Histic (A3)		☐ Stripped Ma	` '		Dark Surface (S7) (L	,			
☐ Hydrogen Sulfide (A4)		•	ky Mineral (F1)		☐ High Plains Depress				
Stratified Layers (A5) (LRR F)		Loamy Gley			(LRR H outside of MLRA 72 & 73) Reduced Vertic (F18)				
1 cm Muck (A9) (LRR F, G, H		Depleted M			_ `	,			
☐ Depleted Below Dark Surface	(A11)	Redox Dark	, ,		Red Parent Material				
☐ Thick Dark Surface (A12)		•	ark Surface (F7)		☐ Very Shallow Dark S	, ,			
Sandy Mucky Mineral (S1)		☐ Redox Dep			Other (Explain in Re	marks)			
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16)									
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be present, unless disturbed or problematic									
Restrictive Layer (if present):	Hydric Soil Present?								
Type:	Dep	th (inches):			☐ Yes No				
Remarks: Hydric soil indicators are not met.									
HYDROLOGY									
Wetland Hydrology Indicators:									
Primary Indicators (minimum of o	ne required; c	heck all that apply)		Secondary Indicators (2	2 or more required)			
☐ Surface Water (A1)		☐ Salt Crust (B1	1)		☐ Surface Soil Cracks				
_ ` '					☐ Sparsely Vegetated Concave Surface (B8)				
Saturation (A3)		High Water Table (A2) ☐ Aquatic Invertebrates (B13)							
☐ Water Marks (B1)					☐ Sparsely Vegetated	Concave Surface (B8)			
I I I Walei Walks (DT)		☐ Hydrogen Sulf	de Odor (C1)		☐ Sparsely Vegetated☐ Drainage Patterns (Concave Surface (B8) B10)			
_ ` '		☐ Hydrogen Sulf☐ Dry-Season W	de Odor (C1) ater Table (C2)	Roots (C3)	☐ Sparsely Vegetated☐ Drainage Patterns (Concave Surface (B8)			
Sediment Deposits (B2)		☐ Hydrogen Sulf☐ Dry-Season W	ide Odor (C1) ater Table (C2) ospheres on Living	Roots (C3)	☐ Sparsely Vegetated ☐ Drainage Patterns (☐ Oxidized Rhizosphe	Concave Surface (B8) B10) eres on Living Roots (C3)			
☐ Sediment Deposits (B2) ☐ Drift Deposits (B3)		☐ Hydrogen Sulf☐ Dry-Season W☐ Oxidized Rhize	ide Odor (C1) ater Table (C2) ospheres on Living iilled)	Roots (C3)	☐ Sparsely Vegetated ☐ Drainage Patterns (☐ Oxidized Rhizosphe (where tilled)	Concave Surface (B8) B10) eres on Living Roots (C3)			
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		☐ Hydrogen Sulf ☐ Dry-Season W ☐ Oxidized Rhize (where not	ide Odor (C1) ater Table (C2) ospheres on Living illed) educed Iron (C4)	Roots (C3)	Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C	Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9)			
☐ Sediment Deposits (B2) ☐ Drift Deposits (B3)	iagery (B7)	☐ Hydrogen Sulf ☐ Dry-Season W ☐ Oxidized Rhize	ide Odor (C1) ater Table (C2) espheres on Living cilled) educed Iron (C4) face (C7)	Roots (C3)	Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or	Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2)			
☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5)	nagery (B7)	☐ Hydrogen Sulf ☐ Dry-Season W ☐ Oxidized Rhize (where not to ☐ Presence of R ☐ Thin Muck Sur	ide Odor (C1) ater Table (C2) espheres on Living cilled) educed Iron (C4) face (C7)	Roots (C3)	Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible o Geomorphic Positio	Concave Surface (B8) B10) eres on Living Roots (C3) C8) in Aerial Imagery (C9) in (D2)			
☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Im		☐ Hydrogen Sulf☐ Dry-Season W☐ Oxidized Rhizo (where not to presence of R☐ Thin Muck Sur☐ Other (Explain Depth	ide Odor (C1) ater Table (C2) espheres on Living cilled) educed Iron (C4) face (C7) in Remarks)		Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible o Geomorphic Positio	Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)			
☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Im ☐ Water-Stained Leaves (B9)	nagery (B7) Yes No	☐ Hydrogen Sulf ☐ Dry-Season W ☐ Oxidized Rhize	ide Odor (C1) ater Table (C2) espheres on Living cilled) educed Iron (C4) face (C7) in Remarks)	ded Data (strear	Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible o Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humm	Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)			
☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Im ☐ Water-Stained Leaves (B9)	Yes No □	☐ Hydrogen Sulf☐ Dry-Season W☐ Oxidized Rhizo (where not to presence of R☐ Thin Muck Sur☐ Other (Explain Depth	ide Odor (C1) ater Table (C2) espheres on Living cilled) educed Iron (C4) face (C7) in Remarks) Describe Record	ded Data (strear	Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible o Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humm	Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)			
☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Im ☐ Water-Stained Leaves (B9) Field Observations:	Yes No	☐ Hydrogen Sulf☐ Dry-Season W☐ Oxidized Rhizo (where not to presence of R☐ Thin Muck Sur☐ Other (Explain Depth	ide Odor (C1) ater Table (C2) espheres on Living cilled) educed Iron (C4) face (C7) in Remarks) Describe Record	ded Data (strear	Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible o Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humm	Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)			
☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Im ☐ Water-Stained Leaves (B9) Field Observations: Surface Water present?	Yes No □	☐ Hydrogen Sulf☐ Dry-Season W☐ Oxidized Rhizo (where not to presence of R☐ Thin Muck Sur☐ Other (Explain Depth	ide Odor (C1) ater Table (C2) espheres on Living cilled) educed Iron (C4) face (C7) in Remarks) Describe Record	ded Data (strear	Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible o Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humm	Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)			
☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Im ☐ Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present?	Yes No	☐ Hydrogen Sulf☐ Dry-Season W☐ Oxidized Rhizo (where not to presence of R☐ Thin Muck Sur☐ Other (Explain Depth	ide Odor (C1) ater Table (C2) espheres on Living cilled) educed Iron (C4) face (C7) in Remarks) Describe Record	ded Data (strear	Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible o Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humm	Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)			
☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Im ☐ Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present?	Yes No	☐ Hydrogen Sulf☐ Dry-Season W☐ Oxidized Rhizo (where not to presence of R☐ Thin Muck Sur☐ Other (Explain Depth	ide Odor (C1) ater Table (C2) espheres on Living cilled) educed Iron (C4) face (C7) in Remarks) Describe Record	ded Data (strear	Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible o Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humm	Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)			
☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Im ☐ Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present? (includes capillary fringe)	Yes No	Hydrogen Sulf Dry-Season W Oxidized Rhizo (where not to Presence of R Thin Muck Sur Other (Explain Depth (inches)	ide Odor (C1) ater Table (C2) espheres on Living cilled) educed Iron (C4) face (C7) in Remarks) Describe Record	ded Data (strear	Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible o Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humm	Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)			
☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Im ☐ Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present? (includes capillary fringe) Wetland Hydrology Present?	Yes No	Hydrogen Sulf Dry-Season W Oxidized Rhizo (where not to Presence of R Thin Muck Sur Other (Explain Depth (inches)	ide Odor (C1) ater Table (C2) espheres on Living cilled) educed Iron (C4) face (C7) in Remarks) Describe Record	ded Data (strear	Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible o Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humm	Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)			

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Farm	Cit	y/County: H	and Count	y Sampling Date: 10/11/2018	
Applicant/Owner: Sweetland Wind Farm, LLC			St	ate: SD Sampling Point: SP-716	
				Range: <u>S26, T111N, R67W</u>	
Landform (hillslope, terrace, etc.) terrace	Local	relief (concav	e, convex,	none): none Slope (%): 0 %	
Subregion (LRR): Northern Great Plains Spring Wheat F					
Soil Map Unit Name: Prosper-Stickney loams, nearly lev				· · · · · · · · · · · · · · · · · · ·	
Are climate/hydrologic conditions on the site typical for this t				(If no, explain in Remarks)	
Are climate/hydrologic conditions on the site typical for this t	iiiic oi yeai:	1C3	2 140	(ii no, explain iii remaiks)	
Vegetation Soil Hydrolo	ogy	Are "Norm	al Circums	stances" present? Yes No	
Significantly Disturbed?	ed, explain any answers in Remarks)				
Naturally Problematic?					
SUMMARY OF FINDINGS – Attach site map show	ing sampli	ng point loc	ations, t	ansects, important features, etc.	
Yes No Hydrophytic Vegetation Present? □ □ Hydric Soil Present? □ □ Wetland Hydrology Present? □ □ Is the Sampled Area within a Wetland? □ □	not pres	ks: SP-716 is a sent due to rec ural activities.	an upland s cent rainfal	ample plot. Normal hydrologic conditions are l. Soil and vegetation have been disturbed by	
VEGETATION – Use scientific names of plants					
	Absolute	Dominant	Indicator	Dominance Test Worksheet:	
Tree Stratum (Plot size: <u>30 ft.</u>)	% Cover	Species?	Status	Number of Dominant Species that	
1.	<u>%</u>			are OBL, FACW, or FAC	
2.				(excluding FAC-): 0 (A)	
3 4	<u>%</u> <u>%</u>			Total Number of Dominant	
	0 %	= Total Cover	<u> </u>	Species Across All Strata: 1 (B)	
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)				Percent of Dominant Species that	
1	%			are OBL, FACW, or FAC:0%_(A/B)	
2.				Prevalence Index Worksheet:	
3					
4				Total % Cover of: Multiply by:	
5	<u>%</u>			OBL species% x 1 =0 FACW species% x 2 =0	
	0 %	= Total Cover	r	FAC species% x 2 =0 FAC species	
Herb Stratum (Plot size: <u>5 ft.</u>)				FACU species% x 4 =0	
1. Glycine max	<u>40 %</u>	<u>Y</u>	<u>UPL</u>	UPL species% x 5 =0	
2.	<u>%</u>			Column Totals: <u>0</u> % (A) <u>0</u> (B)	
3.	<u>%</u>			Prevalence Index = B/A =	
4 5.	<u>%</u> %			Hadranbada Vanatalian Indiana	
5 6	// 0			Hydrophytic Vegetation Indicators:	
7.	%			☐ 1 Rapid Test for Hydrophytic Vegetation	
8.	%			☐ 2 Dominance Test is >50%	
9	<u></u> %			☐ 3 Prevalence Index is ≤3.0¹	
10	<u>%</u>			☐ 4 Morphological Adaptations¹ (Provide	
	40 %	= Total Cover	r	supporting data in Remarks or on a separate sheet)	
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	0/			☐ Problematic Hydrophytic Vegetation¹ (explain)	
1 2.	<u>%</u> %			¹ Indicators of hydric soil and wetland hydrology	
	0 %	= Total Cover	r	must be present, unless disturbed or problematic	
Bare Ground in Herb Stratum 60 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No	
Remarks: Hydrophytic vegetation indicators are not met. Th	e only veaet	tation present	is agricultu	ral soybean. Photograph C-63.	
, , , , ,	, .30	,	3		

SOIL Sampling Point: SP-716

Profile Descri	ption: (Describe	to the de	pth n	eeded to docum	ent th	e indicator o	r confirm the	absence of indicators.)			
Depth	Depth Matrix Redox Features										
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-4	10YR 2/1	100						silty clay loam			
4-8	10YR 3/2	100						sandy clay			
8-16	10YR 2/1	100						silty clay			
		· -									
		· 									
			-								
¹Type: C=Con	centration, D=Dep	oletion, RI	л=Re	duced Matrix, CS	=Cove	red or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil Inc	dicators: (Applic	able to a	II LRF	Rs, unless other	wise n	oted.)		Indicators for Problem	atic Hydric Soils3:		
☐ Histosol (A1)			☐ Sandy Gley	ed Ma	trix (S4)		1 cm Muck (A9) (LRI	R I, J)		
☐ Histic Epipe	don (A2)			☐ Sandy Red	ox (S5)		☐ Coast Prairie Redox			
☐ Black Histic	(A3)			☐ Stripped Ma	atrix (S	6)		☐ Dark Surface (S7) (L	RR G)		
☐ Hydrogen S				☐ Loamy Mud	cky Mir	eral (F1)		☐ High Plains Depressions (F16)			
	yers (A5) (LRR F			☐ Loamy Gle				(LRR H outside of MLRA 72 & 73)			
	(A9) (LRR F, G, F			□ Depleted M				Reduced Vertic (F18)			
	elow Dark Surface	e (A11)		Redox Dark		` ,		Red Parent Material			
☐ Thick Dark	, ,			☐ Depleted D		, ,		☐ Very Shallow Dark S	, ,		
☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8) ☐ Other (Explain in Remarks)											
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) 3Indicators of hydrophytic vegetation and											
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be present, unless disturbed or problematic											
Restrictive Layer (if present):								Hydric Soil Present?			
Type: Depth (inches):								☐ Yes ⊠ No			
	Demonstra Unité de l'éculier de la constant										
Remarks: Hydr	ic soil indicators a	are not me	et.								
HYDROLOG	Y										
Wetland Hydro	ology Indicators	:									
Primary Indicat	ors (minimum of	one requir	ed; ch	neck all that apply	<u>')</u>			Secondary Indicators (2	2 or more required)		
☐ Surface Wa	ter (A1)			☐ Salt Crust (B1	1)			☐ Surface Soil Cracks (B6)			
☐ High Water	Table (A2)		1	Aquatic Inverte	ebrates	s (B13)		☐ Sparsely Vegetated Concave Surface (B8)			
☐ Saturation (A3)			☐ Hydrogen Sulf	ide Od	or (C1)		☐ Drainage Patterns (F	B10)		
☐ Water Mark	s (B1)			□ Dry-Season W		, ,			res on Living Roots (C3)		
Sediment D				Oxidized Rhize		es on Living I	Roots (C3)	(where tilled)	0)		
☐ Drift Deposi	, ,			(where not		d Iron (C4)		☐ Crayfish Burrows (C			
Algal Mat or				☐ Presence of R ☐ Thin Muck Sui		` ,		☐ Saturation Visible or☐ Geomorphic Position			
☐ Iron Deposi		· · · · · /D		☐ Other (Explain	,	•		☐ FAC-Neutral Test (D	` '		
	/isible on Aerial In	magery (B	(7)	☐ Otriel (Explain	i iii ixei	iiaiks)		☐ Frost-Heave Humm	,		
□ water-Stain	ed Leaves (B9)				1				. , , , , ,		
Field Observa	tions:	Yes	No	Depth (inches)		cribe Record ections, etc.)		m gauge, monitoring well,	aerial photos, previous		
Surface Water	present?		\boxtimes		'	. ,					
Water Table pr	•										
Saturation Pres											
(includes capill			لاعا								
	ology Present?		\boxtimes								
Remarks: Wetl	and hydrology inc	licators ar	e not	met.	•						
	, ,										

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Farm	Cit	y/County: H	y Sampling Date: <u>10/12/2018</u>						
Applicant/Owner: Sweetland Wind Farm, LLC			St	ate: SD Sampling Point: SP-717					
Investigator(s): K. Russo, J. Kensinger Section, Township, Range: S18, T111N, R66W									
Landform (hillslope, terrace, etc.)depression									
Subregion (LRR): Northern Great Plains Spring Wheat R									
Soil Map Unit Name: Tetonka silt loam, 0 to 1 percent sl		·							
Are climate/hydrologic conditions on the site typical for this t				(If no, explain in Remarks)					
Are diffially divided to contain the site typical for this t	iiiic oi yeai :		△ 140	(ii no, explain iii Nemano)					
Vegetation Soil Hydrolo	ogy	Are "Norm	al Circums	stances" present? 🛛 Yes 🔲 No					
Significantly Disturbed?			(If neede	ed, explain any answers in Remarks)					
Naturally Problematic?									
SUMMARY OF FINDINGS – Attach site map showi	ng sampli	ing point loc	ations, tr	ansects, important features, etc.					
Yes No Hydrophytic Vegetation Present? □ □ Remarks: SP-717 is a wetland sample plot located in W-712, an emergent Normal hydrologic conditions are not present due to recent rainfall. Wetland Hydrology Present? □ □ □ Is the Sampled Area within a Wetland? □ □									
VEGETATION – Use scientific names of plants									
	Absolute	Dominant	Indicator	Dominance Test Worksheet:					
Tree Stratum (Plot size: <u>30 ft.</u>)	% Cover	Species?	Status	Number of Dominant Species that					
1.	<u>%</u>			are OBL, FACW, or FAC					
2 3.				(excluding FAC-): 1 (A)					
3 4		·		Total Number of Dominant					
	0 %	= Total Cover		Species Across All Strata: 1 (B)					
Sapling/Shrub Stratum (Plot size: 15 ft.)				Percent of Dominant Species that are OBL, FACW, or FAC:100%_ (A/B)					
1.	<u>%</u>								
2 3.		·		Prevalence Index Worksheet:					
				Total % Cover of: Multiply by:					
5.		-		OBL species % x 1 = 0					
·	0 %	= Total Cover		FACW species % x 2 = 0					
Herb Stratum (Plot size: 5 ft.)				FAC species % x 3 = 0					
1. Echinochloa crus-galli	80 %	Υ	FAC	FACU species% x 4 =0 UPL species					
2. Rumex crispus	10 %	N	FAC	UPL species% x 5 =0 Column Totals: 0 % (A) 0 (B)					
3.	%								
4	<u></u> %			Prevalence Index = B/A =					
5	<u></u> %			Hydrophytic Vegetation Indicators:					
6	%			☐ 1 Rapid Test for Hydrophytic Vegetation					
7.	<u>%</u>								
8. 9.	<u>%</u>			☑ 2 Dominance Test is >50%					
910.	<u> </u>			☐ 3 Prevalence Index is ≤3.0¹					
	90 %	= Total Cover		4 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)					
Woody Vine Stratum (Plot size: <u>30 ft.</u>)				☐ Problematic Hydrophytic Vegetation¹ (explain)					
1	<u>%</u>			¹ Indicators of hydric soil and wetland hydrology					
2	<u>%</u> 0 %	= Total Cover		must be present, unless disturbed or problematic					
D 0 1 1 1 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1		- Total Cover		Hydrophytic Vegetation Present? ⊠ Yes ☐ No					
Bare Ground in Herb Stratum 10 %									
Remarks: The Dominance Test is met. Photograph C-64.									

SOIL Sampling Point: SP-717

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix			Red	dox Fe	atures				
(inches)	Color (moist)	%	C	color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10YR 2/1	100						silty clay loam		
4-16	10YR 2/1	92		10YR 3/3	5	C	M	silty clay loam		
				10YR 4/1	3	D	M			
l										
l ———								_		
		_								
								2		
	ncentration, D=De						d Sand Grains			
-	ndicators: (Appli	cable to a	III LKI	Sandy Gley		-		Indicators for Problem	•	
Histosol (,	1 cm Muck (A9) (LRI								
Histic Epi				Sandy Red				Coast Prairie Redox (A16) (LRR F, G, H)		
Black Hist	` '			Stripped M	,	,		Dark Surface (S7) (LRR G)		
☐ Hydrogen				Loamy Mud	-			☐ High Plains Depress	ions (F16)	
	Layers (A5) (LRR I			Loamy Gle	-			(LRR H outside of	•	
	k (A9) (LRR F, G, I	•		□ Depleted M	,	,		Reduced Vertic (F18	,	
	Below Dark Surfac	e (A11)		Redox Darl				Red Parent Material		
	k Surface (A12)			Depleted D		. ,		☐ Very Shallow Dark S	, ,	
	icky Mineral (S1)			Redox Dep		` '		Other (Explain in Re	marks)	
	ucky Peat or Peat (, ,	. ,	•		, ,		³ Indicators of hydrophyti		
☐ 5 cm Muc	5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be present, unless									
								disturbed or problematic	•	
	.ayer (if present):		_					Hydric Soil Present?		
Type:			Dept	h (inches):				☐ Yes ☐ No		
HYDROLO	GY									
Wetland Hyd	Irology Indicators	:								
Primary Indic	ators (minimum of	one requir	ed; ch	neck all that apply	<u>/)</u>			Secondary Indicators (2	or more required)	
☐ Surface W	/ater (A1)			☐ Salt Crust (B1	1)			☐ Surface Soil Cracks	(B6)	
☐ ☐ High Wate	` '			 ☐ Aquatic Invert		s (B13)		☐ Sparsely Vegetated	Concave Surface (B8)	
	, ,			, ☐ Hydrogen Sulf				☐ Drainage Patterns (I		
☐ Water Ma	rks (B1)			☐ Dry-Season W	/ater T	able (C2)		Oxidized Rhizosphe	res on Living Roots (C3)	
☐ Sediment	Deposits (B2)			Oxidized Rhiz	ospher	es on Living	Roots (C3)	(where tilled)	• , ,	
☐ Drift Depo				(where not		<u> </u>	` ,	☐ Crayfish Burrows (C	8)	
☐ Algal Mat	or Crust (B4)			☐ Presence of R	duce	d Iron (C4)		☐ Saturation Visible or	n Aerial Imagery (C9)	
☐ Iron Depo				☐ Thin Muck Su	rface (0	C7)		☐ Geomorphic Position	n (D2)	
☐ Inundation	n Visible on Aerial I	magery (E	37)	Other (Explain	in Rei	marks)		☐ FAC-Neutral Test (□	05)	
☐ Water-Sta	ined Leaves (B9)							☐ Frost-Heave Humm	ocks (D7) (LRR F)	
Field Observ	ations:	Yes	No	Depth (inches)		scribe Record		am gauge, monitoring well,	aerial photos, previous	
Surface Wate	er present?					,	,			
Water Table	•	\boxtimes		4						
Saturation Pr	•									
		\boxtimes		0						
(includes cap		5 7	_							
Wetland Hyd	Irology Present?	\square								
Remarks: We	etland hydrology in	dicators A	2, A3,	and D2 are met.						

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Farm	Ci	ty/County: H	and Count	y Sampling Date: 10/12/2018
Applicant/Owner: Sweetland Wind Farm, LLC			St	tate: SD Sampling Point: SP-718
Investigator(s): K. Russo, J. Kensinger	Section,	Township,	Range: S18, T111N, R66W	
Landform (hillslope, terrace, etc.) <u>terrace</u>	Loca	l relief (concav	e, convex,	none): <u>none</u> Slope (%): <u>0 %</u>
Subregion (LRR): Northern Great Plains Spring Wheat R	38	Long: -98.811671 Datum: NAD83		
Soil Map Unit Name: Tetonka silt loam, 0 to 1 percent sle	opes			NWI Classification: PEM1C
Are climate/hydrologic conditions on the site typical for this t				(If no, explain in Remarks)
Vegetation Soil Hydrolo	oav	A "N.I	- I C:	-t-m" mm+2 □ V □ V □ N
Significantly Disturbed?	уду	Are "Norm	iai Circums	stances" present?
Naturally Problematic?			(If neede	ed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showi	ng sampl	ing point loc	ations, t	ransects, important features, etc.
Yes No	Remar	ks: SP-718 is a	an upland s	sample plot located adjacent to W-712, an
Hydrophytic Vegetation Present? □				ologic conditions are not present due to recent
Hydric Soil Present?	Tainiaii	. Son and vege	tation nave	e been disturbed by agricultural activities.
Wetland Hydrology Present?				
Is the Sampled Area within a Wetland?				
VEGETATION – Use scientific names of plants				
T (D) (() () () () ()	Absolute	Dominant	Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: <u>30 ft.</u>)	% Cover	Species?	Status	Number of Dominant Species that
1 2	<u> </u>			are OBL, FACW, or FAC
3.				(excluding FAC-):0_(A)
4.	%			Total Number of Dominant Species Across All Strata: 1 (B)
	0 %	= Total Cove	r	
Sapling/Shrub Stratum (Plot size: 15 ft.)				Percent of Dominant Species that are OBL, FACW, or FAC: 0% (A/B)
1	<u>%</u>			
2				Prevalence Index Worksheet:
3.				Total % Cover of: Multiply by:
4 5.	<u>%</u> %			OBL species
5	0 %	= Total Cove		FACW species % x 2 = 0
Herb Stratum (Plot size: 5 ft.)	<u> </u>			FAC species% x 3 =0
1. <u>Glycine max</u>	60 %	Υ	UPL	FACU species% x 4 =0 UPL species
2.	%			Column Totals:
3	%			Prevalence Index = B/A =
4	<u></u> %			Prevalence index = B/A =
5	<u>%</u>			Hydrophytic Vegetation Indicators:
6	<u>%</u>			☐ 1 Rapid Test for Hydrophytic Vegetation
7. 8.				2 Dominance Test is >50%
9.	%			☐ 3 Prevalence Index is ≤3.0¹
10.	<u>%</u>			☐ 4 Morphological Adaptations¹ (Provide
	60 %	= Total Cove	r	supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30 ft.</u>) 1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)
2.	%			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
	0 %	= Total Cove	r	must be present, unless disturbed of problematic
Bare Ground in Herb Stratum40 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation indicators are not met. Th	e only veae	tation present	is agricultu	ıral soybean. Photograph C-65.
	, 90	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	J	

SOIL Sampling Point: SP-718

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix			Re	dox Fea	atures				
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-16	10YR 2/1	100						silty clay loam		
		-								
		_								
	_									
		_								
		_	-						·	
¹Type: C=Co	ncentration, D=De	pletion, RI	M=Red	duced Matrix, CS	S=Cover	ed or Coated	d Sand Grains	² Location: PL=Por	e Lining, M=Matrix	
Hydric Soil I	ndicators: (Appli	cable to a	II LRF			-		Indicators for Problen	natic Hydric Soils ³ :	
☐ Histosol (A	,			☐ Sandy Gle	-			1 cm Muck (A9) (LR		
☐ Histic Epip				☐ Sandy Red				☐ Coast Prairie Redox		
☐ Black Hist	` '			☐ Stripped M	,	,		☐ Dark Surface (S7) (I	,	
☐ Hydrogen				☐ Loamy Mu	-	, ,		☐ High Plains Depress	sions (F16)	
	_ayers (A5) (LRR I			Loamy Gle	-			(LRR H outside of MLRA 72 & 73)		
	k (A9) (LRR F, G, I			☐ Depleted N				Reduced Vertic (F18	,	
	Below Dark Surfac	e (A11)		Redox Dar		, ,		Red Parent Material		
	Surface (A12)			Depleted D		, ,		☐ Very Shallow Dark S	, ,	
-	cky Mineral (S1)			☐ Redox Dep				Other (Explain in Re		
	icky Peat or Peat (☐ High Plains				³ Indicators of hydrophy		
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be present, unless disturbed or problematic										
Restrictive L	ayer (if present):	Hydric Soil Present?								
Type:	, , ,		Depth	n (inches):				☐ Yes ⊠ No		
		_	•	·						
	Remarks: Hydric soil indicators are not met.									
HYDROLOG	ЭΥ									
Wetland Hyd	rology Indicators	:								
Primary Indic	ators (minimum of	one requir	ed; ch	eck all that apply	<u>/)</u>			Secondary Indicators (2 or more required)	
☐ Surface W	later (A1)	•	Г	☐ Salt Crust (B1	1)			Surface Soil Cracks (B6)		
☐ High Wate	` '			☐ Aquatic Invert		(B13)		☐ Sparsely Vegetated Concave Surface (B8)		
☐ Saturation	, ,			☐ Hydrogen Sul				☐ Drainage Patterns (
☐ Water Mai	, ,			☐ Dry-Season V		. ,		_	eres on Living Roots (C3)	
_	Deposits (B2)			Oxidized Rhiz		, ,	Roots (C3)	(where tilled)		
☐ Drift Depo			•	(where not			(,	☐ Crayfish Burrows (0	C8)	
☐ Algal Mat			[☐ Presence of F	Reduced	I Iron (C4)		☐ Saturation Visible o	n Aerial Imagery (C9)	
☐ Iron Depo	, ,		[Thin Muck Su	rface (C	(7)		☐ Geomorphic Position	n (D2)	
-	. Visible on Aerial I	magery (B	(7)	Other (Explain	n in Rem	narks)		☐ FAC-Neutral Test (I	O5)	
☐ Water-Sta	ined Leaves (B9)	• • • • • • • • • • • • • • • • • • • •	,					☐ Frost-Heave Humm	ocks (D7) (LRR F)	
Field Observ	ations:			Depth	Desc	cribe Record	ed Data (strear	m gauge, monitoring well.	aerial photos, previous	
		Yes	No	(inches)			, if available:			
Surface Water	r present?		\boxtimes							
Water Table present?										
Saturation Pr	esent?		\boxtimes							
(includes cap	illary fringe)									
Wetland Hyd	rology Present?		\boxtimes							
Remarks: We	tland hydrology in	dicators ar	e not r	met.						
	, : : : : : : : : : : : : : : : : : : :									
i .										

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Farm	City/County: Hand Coun	ty Sampling Date: 10/12/2018							
Applicant/Owner: Sweetland Wind Farm, LLC	tate: SD Sampling Point: SP-719								
Investigator(s): K. Russo, J. Kensinger Section, Township, Range: S18, T111N, R66W									
Landform (hillslope, terrace, etc.) swale									
Subregion (LRR): Northern Great Plains Spring Wheat									
·		NWI Classification: N/A							
Are climate/hydrologic conditions on the site typical for this		(If no, explain in Remarks)							
	into or year	(ii rio, explain iii recitatio)							
Vegetation Soil Hydro		stances" present? ⊠ Yes ☐ No							
Significantly Disturbed?	///	ed, explain any answers in Remarks)							
Naturally Problematic?	1								
SUMMARY OF FINDINGS – Attach site map show	ing sampling point locations, t	ransects, important features, etc.							
Hydrophytic Vegetation Present? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Normal hydrologic conditions ar	sample plot located in W-713, an emergent wetland. re not present due to recent rainfall.							
VEGETATION – Use scientific names of plants									
	Absolute Dominant Indicator	Dominance Test Worksheet:							
Tree Stratum (Plot size: 30 ft.)	% Cover Species? Status	Number of Dominant Species that							
1.		are OBL, FACW, or FAC							
2		(excluding FAC-):(A)							
4.	ā.	Total Number of Dominant							
	0 % = Total Cover	Species Across All Strata:(B)							
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)		Percent of Dominant Species that							
1.	<u>%</u>	are OBL, FACW, or FAC:(A/B)							
2.		Prevalence Index Worksheet:							
3	<u></u>								
4		Total % Cover of: Multiply by:							
5	<u> </u>	OBL species % x 1 = 0 FACW species % x 2 = 0							
	0 % = Total Cover	FAC species							
Herb Stratum (Plot size: <u>5 ft.</u>)		FACU species % x 4 =0							
Spartina pectinata	<u>95 %</u> Y <u>FACW</u>	UPL species% x 5 =0							
2	<u>%</u>	Column Totals:0% (A)0 (B)							
4.	<u></u>	Prevalence Index = B/A =							
5.	<u> </u>	Hydrophytic Vegetation Indicators:							
6.	<u>%</u>	nydrophytic vegetation indicators.							
7.	<u>%</u>								
8	<u></u> <u>%</u>	☐ 2 Dominance Test is >50%							
9	<u> </u>	☐ 3 Prevalence Index is ≤3.01							
10	<u>%</u>	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)							
Woody Vine Stratum (Plot size: <u>30 ft.</u>)		☐ Problematic Hydrophytic Vegetation¹ (explain)							
1.	<u> </u>	¹ Indicators of hydric soil and wetland hydrology							
2	<u>%</u> 0	must be present, unless disturbed or problematic							
Day Count in Hart Oration 5.00	<u> </u>	Hydrophytic Vegetation Present? ⊠ Yes ☐ No							
Bare Ground in Herb Stratum		<u> </u>							
Remarks. The Rapid Test is met. Photograph C-00.									

SOIL Sampling Point: SP-719

Profile Desc	ription: (Describe	to the depth	needed to docume	ent the inc	dicator o	r confirm the	absence of indicators.)			
Depth	Matrix		Red	ox Feature	es					
(inches)	Color (moist)	%	Color (moist)	% 7	Γype¹	Loc ²	Texture	Remarks		
0-16	10YR 2/1	96	10YR 3/3	4	С	M	silty clay			
	-									
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :										
Hydric Soil I	ndicators: (Applic	able to all L	RRs, unless otherw	ise noted	l .)		Indicators for Problem	natic Hydric Soils ³ :		
☐ Histosol (/	A1)		☐ Sandy Gley	ed Matrix (S4)		☐ 1 cm Muck (A9) (LR	R I, J)		
Histic Epip			Sandy Redo				Coast Prairie Redox			
☐ Black Hist			☐ Stripped Ma	, ,			☐ Dark Surface (S7) (L	,		
Hydrogen			Loamy Mucl	•	. ,		☐ High Plains Depress (LRR H outside of	SIONS (F16) MIRA 72 & 73)		
	_ayers (A5) (LRR F) k (A9) (LRR F, G, H		☐ Loamy Gley		(F2)		Reduced Vertic (F18	•		
	Below Dark Surface	•	☐ Depleted Ma ☑ Redox Dark		- 6)		☐ Red Parent Material	*		
•	k Surface (A12)	(A11)	☐ Depleted Da	,	,		☐ Very Shallow Dark S			
	cky Mineral (S1)		☐ Redox Depr		. ,		Other (Explain in Re			
	icky Peat or Peat (S	(2) (LRR G , I	•	•			³ Indicators of hydrophyt	ic vegetation and		
	ky Peat or Peat (S3)		(MLRA 72	& 73 of LR	RR H)		wetland hydrology must disturbed or problematic	be present, unless		
Restrictive L	ayer (if present):						Hydric Soil Present?			
Type:	, (p	De	pth (inches):				⊠ Yes □ No			
		_								
Remarks: Hy	dric soil indicator F6	is met.								
HYDROLO	GY									
Wetland Hyd	Irology Indicators:									
Primary Indic	ators (minimum of c	ne required;	check all that apply)				Secondary Indicators (2 or more required)		
Surface W	/ater (A1)	-	☐ Salt Crust (B11)			☐ Surface Soil Cracks	(B6)		
☐ High Wate			☐ Aquatic Inverte	,	3)		_	Concave Surface (B8)		
			☐ Hydrogen Sulfi		B10)					
☐ Water Ma			☐ Dry-Season Wa					eres on Living Roots (C3)		
☐ Sediment	Deposits (B2)		Oxidized Rhizo		n Living f	Roots (C3)	(where tilled)			
☐ Drift Depo			(where not t	-			☐ Crayfish Burrows (C	*		
☐ Algal Mat	, ,		☐ Presence of Re		n (C4)		☐ Saturation Visible o			
☐ Iron Depo		(- -)	☐ Thin Muck Surf		۵)		Geomorphic Positio	` '		
	Visible on Aerial In	nagery (B7)	Other (Explain	ın Kemark	S)			,		
☐ Water-Sta	ined Leaves (B9)			1			I 105t-Heave Hullilli	OCKS (D7) (EKK F)		
Field Observ	rations:	Yes No	Depth (inches)			ed Data (strear , if available:	n gauge, monitoring well,	aerial photos, previous		
Surface Wate	er present?		0.5							
Water Table	present?		0							
Saturation Pr	esent?		0							
(includes cap	illary fringe)		-							
Wetland Hyd	Irology Present?]							
Remarks: We	etland hydrology ind	cators A1, A	2, A3, D2, and D5 a	re met.						

US Army Corps of Engineers Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Farm	Cit	ty/County: H	and Count	y Sampling Date: <u>10/12/2018</u>					
Applicant/Owner: Sweetland Wind Farm, LLC									
		Section, Township, Range: S18, T111N, R66W							
Landform (hillslope, terrace, etc.) hillslope	Loca	I relief (concav	e, convex,	none): convex Slope (%): 5 %					
Subregion (LRR): Northern Great Plains Spring Wheat F									
				NWI Classification: N/A					
Are climate/hydrologic conditions on the site typical for this			⊠ No	(If no, explain in Remarks)					
	-	. 🔲 100	<u></u>	(ii rio, oxpiair iii rediiano)					
Vegetation Soil Hydrolo	ogy	Are "Norm	al Circums	stances" present? Yes No					
Significantly Disturbed? Naturally Problematic?			(If neede	ed, explain any answers in Remarks)					
•	·								
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.									
Yes No Hydrophytic Vegetation Present? □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □									
VEGETATION – Use scientific names of plants									
	Absolute		Indicator	Dominance Test Worksheet:					
Tree Stratum (Plot size: 30 ft.)	% Cover	Species?	Status	Number of Dominant Species that					
1	<u></u> %			are OBL, FACW, or FAC					
3.	<u>%</u> %			(excluding FAC-):0_(A)					
4.				Total Number of Dominant					
	0 %	= Total Cover		Species Across All Strata: 2 (B)					
Sapling/Shrub Stratum (Plot size: 15 ft.)				Percent of Dominant Species that are OBL, FACW, or FAC:0%_(A/B)					
1.	<u>%</u>			are OBL, I ACW, OF I AC.					
2	<u>%</u>			Prevalence Index Worksheet:					
3									
4				Total % Cover of: Multiply by:					
5	<u>%</u>			OBL species% x 1 =0 FACW species% x 2 =0					
	0 %	= Total Cover	•	FAC species					
Herb Stratum (Plot size: <u>5 ft.</u>)	50.0/	V	E4011	FACU species					
Schedonorus arundinaceus Bromus inermis	<u>50 %</u> 20 %	<u>Y</u> Y	<u>FACU</u> UPL	UPL species% x 5 =0					
2 Pop protonois	15 %	 N	FACU	Column Totals:0% (A)0 (B)					
4. Solidago rugosa	5 %	N	FAC	Prevalence Index = B/A =					
5.	%			Hydrophytic Vegetation Indicators:					
6	<u>%</u>								
7	%			1 Rapid Test for Hydrophytic Vegetation					
8.	%			☐ 2 Dominance Test is >50%					
9 10.	<u>%</u> %			☐ 3 Prevalence Index is ≤3.0 ¹					
	90 %	= Total Cover	•	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)					
Woody Vine Stratum (Plot size: 30 ft.)	0/			☐ Problematic Hydrophytic Vegetation¹ (explain)					
1	<u>%</u> %			¹ Indicators of hydric soil and wetland hydrology					
2	0 %	= Total Cover		must be present, unless disturbed or problematic					
Bare Ground in Herb Stratum				Hydrophytic Vegetation Present? ☐ Yes ☒ No					
Remarks: Hydrophytic vegetation indicators are not met. Ph	otograph C	-67.							
· · · · · ·	→ •								

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SOIL Sampling Point: SP-720

	to the dopt	ii iieeded to docuii	nent the indicator	or confirm the	absence of indicators.)				
Depth Matrix		Re	dox Features						
(inches) Color (moist)	%	Color (moist)	% Type ¹	Loc ²	Texture	Remarks			
0-16 10YR 2/2	100				silty clay loam				
				. <u> </u>					
				. <u> </u>					
				·					
¹ Type: C=Concentration, D=Dep	letion, RM=	Reduced Matrix, CS	S=Covered or Coate	ed Sand Grains	² Location: PL=Pore	e Lining, M=Matrix			
Hydric Soil Indicators: (Applications)	able to all I		-		Indicators for Problem	natic Hydric Soils ³ :			
☐ Histosol (A1)			yed Matrix (S4)		☐ 1 cm Muck (A9) (LR				
☐ Histic Epipedon (A2)		☐ Sandy Red			☐ Coast Prairie Redox				
☐ Black Histic (A3)		☐ Stripped M	` '		Dark Surface (S7) (L	,			
☐ Hydrogen Sulfide (A4)		•	cky Mineral (F1)		☐ High Plains Depress	sions (F16)			
Stratified Layers (A5) (LRR F)			eyed Matrix (F2)		(LRR H outside of	•			
☐ 1 cm Muck (A9) (LRR F, G, H)		☐ Depleted N			Reduced Vertic (F18	,			
Depleted Below Dark Surface	(A11)		k Surface (F6)		Red Parent Material				
☐ Thick Dark Surface (A12)		•	Dark Surface (F7)		☐ Very Shallow Dark S	, ,			
Sandy Mucky Mineral (S1)		☐ Redox Dep			Other (Explain in Re	marks)			
2.5 cm Mucky Peat or Peat (S			s Depressions (F16	5)	³ Indicators of hydrophyt				
5 cm Mucky Peat or Peat (S3)	(LRR F)	(MLRA 72	2 & 73 of LRR H)		wetland hydrology must disturbed or problemation				
Restrictive Layer (if present):					Hydric Soil Present?				
Type:	D	epth (inches):			☐ Yes ⊠ No				
	_	· · · /							
Remarks: Hydric soil indicators are not met.									
	ie not met.								
HYDROLOGY	TO HOL HIGH								
·									
HYDROLOGY		; check all that apply	y)		Secondary Indicators (2 or more required)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o									
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1)		☐ Salt Crust (B1	11)		☐ Surface Soil Cracks	s (B6)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2)		☐ Salt Crust (B1	tebrates (B13)		☐ Surface Soil Cracks ☐ Sparsely Vegetated	s (B6) I Concave Surface (B8)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3)		Salt Crust (B1 Aquatic Invert	tebrates (B13) fide Odor (C1)		☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns ((B6) I Concave Surface (B8) B10)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V	tebrates (B13) fide Odor (C1) Vater Table (C2)	Roots (C3)	☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (s (B6) I Concave Surface (B8)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V	tebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Living	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe	s (B6) I Concave Surface (B8) B10) eres on Living Roots (C3)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		□ Salt Crust (B1 □ Aquatic Invert □ Hydrogen Sul □ Dry-Season V □ Oxidized Rhiz (where not	tebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Living	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled)	s (B6) I Concave Surface (B8) B10) eres on Living Roots (C3)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		□ Salt Crust (B1 □ Aquatic Invert □ Hydrogen Sul □ Dry-Season V □ Oxidized Rhiz (where not	tebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C	s (B6) I Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ne required	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not	tebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) urface (C7)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible o	s (B6) I Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) in (D2)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	ne required	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F	tebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) urface (C7)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible o	cs (B6) I Concave Surface (B8) B10) Peres on Living Roots (C3) C8) In Aerial Imagery (C9) In (D2) C5)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im	ne required	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain	tebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) urface (C7) in in Remarks)		Surface Soil Cracks Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio	(B6) I Concave Surface (B8) B10) eres on Living Roots (C3) C8) In Aerial Imagery (C9) In (D2) C5) In C6 (D7) (LRR F)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations:	ne required	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain	tebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) urface (C7) in in Remarks)	ded Data (strea	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio	(B6) I Concave Surface (B8) B10) eres on Living Roots (C3) C8) In Aerial Imagery (C9) In (D2) C5) In C6 (D7) (LRR F)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Water-Stained Leaves (B9)	ne required	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain	tilled) Reduced Iron (C4) In Remarks) Describe Record	ded Data (strea	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio	(B6) I Concave Surface (B8) B10) eres on Living Roots (C3) C8) In Aerial Imagery (C9) In (D2) C5) In C6 (D7) (LRR F)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations:	ne required	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain	tilled) Reduced Iron (C4) In Remarks) Describe Record	ded Data (strea	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio	(B6) I Concave Surface (B8) B10) eres on Living Roots (C3) C8) In Aerial Imagery (C9) In (D2) C5) In C6 (D7) (LRR F)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations: Surface Water present?	ne required	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain	tilled) Reduced Iron (C4) In Remarks) Describe Record	ded Data (strea	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio	(B6) I Concave Surface (B8) B10) eres on Living Roots (C3) C8) In Aerial Imagery (C9) In (D2) C5) In C6 (D7) (LRR F)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present?	ne required	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain	tilled) Reduced Iron (C4) In Remarks) Describe Record	ded Data (strea	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio	(B6) I Concave Surface (B8) B10) eres on Living Roots (C3) C8) In Aerial Imagery (C9) In (D2) C5) In C6 (D7) (LRR F)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present?	ne required nagery (B7) Yes C	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain	tilled) Reduced Iron (C4) In Remarks) Describe Record	ded Data (strea	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio	(B6) I Concave Surface (B8) B10) eres on Living Roots (C3) C8) In Aerial Imagery (C9) In (D2) C5) In C6 (D7) (LRR F)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present? (includes capillary fringe)	ne required nagery (B7) Yes C C C C	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain Depth (inches)	tilled) Reduced Iron (C4) In Remarks) Describe Record	ded Data (strea	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio	(B6) I Concave Surface (B8) B10) eres on Living Roots (C3) C8) In Aerial Imagery (C9) In (D2) C5) In C6 (D7) (LRR F)			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present? (includes capillary fringe) Wetland Hydrology Present?	ne required nagery (B7) Yes C C C C	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain Depth (inches)	tilled) Reduced Iron (C4) In Remarks) Describe Record	ded Data (strea	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio	(B6) I Concave Surface (B8) B10) eres on Living Roots (C3) C8) In Aerial Imagery (C9) In (D2) C5) In C6 (D7) (LRR F)			

US Army Corps of Engineers Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Project	Ci	ity/County: H	land Coun	ty Sampling Date: 9/30/2019					
Applicant/Owner: Scout Clean Energy			S	state: SD Sampling Point: SP-901					
Investigator(s): W. Hirst	Township	, Range: S3, T110N, R66W							
Landform (hillslope, terrace, etc.) drainage	Loc	 al relief (conca							
Subregion (LRR): Northern Great Plains Spring When	-	Lat: 44.3592		Long: -98.745067 Datum: NAD83					
Soil Map Unit Name: Java-Glenham loams, hilly	at r togion			NWI Classification: NA					
Are climate/hydrologic conditions on the site typical for th	is time of vear	? ∏Yes	⊠ No	(If no, explain in Remarks.)					
, ,	,	_	_	,					
	Irology	Are "Nor	mal Circun	nstances" present? ⊠ Yes ☐ No					
Significantly Disturbed?		(If needed	d, explain a	any answers in Remarks.)					
Naturally Problematic?									
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.									
				located in PEM W-901. WETS analysis for this					
	_ -	shows prior 3	month peri	iod has been wetter than normal for this time of year.					
, 0, —									
Is the Sampled Area within a Wetland?									
VEGETATION – Use scientific names of plants									
	Absolute	Dominant	Indicator	Dominance Test Worksheet:					
Tree Stratum (Plot size: <u>30'</u>)	% Cover	Species?	Status	Number of Dominant Species that					
1				are OBL, FACW, or FAC					
2.				(excluding FAC-):1_(A)					
3				Total Number of Dominant					
4	<u>%</u> 0_%	= Total Cover		Species Across All Strata: 2 (B)					
Sapling/Shrub Stratum (Plot size: 15')	<u> </u>	- Total Cover		Percent of Dominant Species that					
1	%			are OBL, FACW, or FAC: 50% (A/B)					
2.				Burnel and a land and Manhacha at					
3	0/			Prevalence Index Worksheet:					
4	%			Total % Cover of: Multiply by:					
5	%			OBL species 50 % x 1 = 50					
	0 %	= Total Cover	r	FACW species0 % x 2 =0 FAC species0 % x 3 =0					
Herb Stratum (Plot size: <u>5'</u>)	50.0/		ODI	FACU species 20 % x 4 = 80					
1. Eleocharis obtusa	<u>50 %</u> 20 %	<u>Y</u> Y	OBL FACU	UPL species					
Bromus arvensis Carex sp.		<u></u> N	FACU	Column Totals: <u>70</u> % (A) <u>130</u> (B)					
4				Prevalence Index = B/A = 1.85					
5				Hydrophytic Vogetation Indicators:					
6	0/			Hydrophytic Vegetation Indicators:					
7				☐ 1 Rapid Test for Hydrophytic Vegetation					
8				☐ 2 Dominance Test is >50%					
9.				⊠ 3 Prevalence Index is ≤3.0¹					
10.	75 %	= Total Cover	 r	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)					
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)					
2.	<u>%</u>			¹ Indicators of hydric soil and wetland hydrology					
	0 %	= Total Cover	r	must be present, unless disturbed or problematic					
Bare Ground in Herb Stratum25 %				Hydrophytic Vegetation Present? ☐ Yes ☐ No					
Remarks: Prevalence Index for hydrophytic vegetation is	met. Photograp	ph C-68.							

SOIL Sampling Point: SP-901

Profile Desc	ription: (Describe	to the dep	oth needed to	docume	ent the	indicator o	r confirm th	e absence of indicators.)			
Depth	Matrix		Red	ox Fea	tures						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-14	10YR 3/1	90	10YR 3/6		10	C	M	Mucky Clay			
14-24	10YR 3/1	95	10YR 3/6		5	C	M	Silty Clay			
			-								
-											
-									-		
¹Type: C=Co	oncentration, D=Dep	oletion, RM	=Reduced Matr	ix, CS=	Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil	ndicators: (Applic	cable to all	LRRs, unless	otherw	ise no	ted.)		Indicators for Problem	natic Hydric Soils³:		
☐ Histosol (A1)		☐ Sand	ly Gleye	ed Mat	rix (S4)		☐ 1 cm Muck (A9) (LR	R I, J)		
☐ Histic Epi	pedon (A2)		☐ Sand	ly Redo	x (S5)			☐ Coast Prairie Redox	(A16) (LRR F, G, H)		
☐ Black His	tic (A3)		☐ Strip	ped Ma	trix (S6	6)		☐ Dark Surface (S7) (L	.RR G)		
☐ Hydroger	Sulfide (A4)		☐ Loan	ny Muck	ky Mine	eral (F1)		☐ High Plains Depress			
	Layers (A5) (LRR F		☐ Loan					(LRR H outside of			
	k (A9) (LRR F, G, F	,	☐ Depl					Reduced Vertic (F18	,		
	Below Dark Surface	e (A11)	⊠ Redo			. ,		Red Parent Material			
	k Surface (A12)		•			face (F7)		☐ Very Shallow Dark S			
-	ıcky Mineral (S1)		Redo			. ,		☐ Other (Explain in Re	marks)		
	ucky Peat or Peat (\$				•	ssions (F16)		³ Indicators of hydrophyt			
☐ 5 cm Muc	ky Peat or Peat (S3	3) (LRR F)	(IVIL	KA /2 (x /3 0	f LRR H)		wetland hydrology must disturbed or problemation			
Restrictive I	ayer (if present):							Hydric Soil Present?			
Type:		[Depth (inches):					⊠ Yes □ No			
D I I	alais suit in disease E	0 ! 4									
Remarks. ny	dric soil indicator F	o is met.									
HYDROLOG	Υ										
Wetland Hy	drology Indicators	:									
Primary India	ators (minimum of	one require	d; check all tha	t apply)				Secondary Indicators (2 or more required)		
⊠ Surface V	Vater (A1)		☐ Salt Cru	st (B11)			☐ Surface Soil Cracks	(B6)		
	er Table (A2)		☐ Aquatic	Invertel	brates	(B13)		☐ Sparsely Vegetated	Concave Surface (B8)		
	n (A3)		☐ Hydroge	en Sulfic	de Odo	or (C1)		☑ Drainage Patterns (B10)			
☐ Water Ma	, ,		☐ Dry-Sea	son Wa	ater Ta	ble (C2)			eres on Living Roots (C3)		
	Deposits (B2)					s on Living I	Roots (C3)	(where tilled)			
☐ Drift Depo			•	e not ti	,	. (0.1)		Crayfish Burrows (C	*		
	or Crust (B4)		Present			٠,		☐ Saturation Visible o			
☐ Iron Depo		, <u> </u>	☐ Thin Mu			•		☐ Geomorphic Positio	` '		
· —	n Visible on Aerial II	magery (B7) Dther (E	expiain i	ın Kerr	iarks)		☐ FAC-Neutral Test (I☐ Frost-Heave Humm	,		
☐ Water-Sta	nined Leaves (B9)							☐ Flost-neave nullill	ocks (D7) (LKK F)		
Field Obser	vations:	Yes	Depth No (inches				ed Data (stre , if available:	am gauge, monitoring well,	aerial photos, previous		
Surface Wat	er present?	\boxtimes	□ 1			. ,					
Water Table	·										
Saturation P	•										
(includes car			<u> </u>								
	drology Present?	\boxtimes									
				nd DO -	l ro ma	·					
remarks: W	etland hydrology ind	iicators AT,	~∠, AJ, DIU, A	iiu DZ 8	are ille	ι.					

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Project	C	City/County:	Hand Coun	sampling Date: 9/30/2019					
Applicant/Owner: Scout Clean Energy		_		ate: SD Sampling Point: SP-902					
Investigator(s): W. Hirst		Section	n, Township	, Range: S3, T110N, R66W					
Landform (hillslope, terrace, etc.) hillslope	Lo	cal relief (cond	cave, conve	·					
Subregion (LRR): Northern Great Plains Spring Wheat F	Region	Lat: 44.359	9264	Long: -98.745101 Datum: NAD83					
Soil Map Unit Name: Java-Glenham loams, hilly				NWI Classification: NA					
Are climate/hydrologic conditions on the site typical for this ti	me of year	r?	⊠ No	(If no, explain in Remarks.)					
Vegetation Soil Hydrolo	ogy	Are "No	ormal Circun	nstances" present? 🛛 Yes 🔲 No					
Significantly Disturbed? Naturally Problematic?		(If need	ed, explain	any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.									
Yes No Hydrophytic Vegetation Present?				ocated adjacent to PEM W-901. WETS analysis for period has been wetter than normal for this time of					
Hydric Soil Present?	year.	- g							
Wetland Hydrology Present?									
Is the Sampled Area within a Wetland?									
<u> </u>									
/EGETATION – Use scientific names of plants				T					
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:					
1	%	орсою.	Otatas	Number of Dominant Species that					
2.	%			are OBL, FACW, or FAC (excluding FAC-): 0 (A)					
3	<u>%</u>								
4	%			Total Number of Dominant Species Across All Strata:1_(B)					
	0 %	= Total Cov	er	Percent of Dominant Species that					
Sapling/Shrub Stratum (Plot size: 15')	0/			are OBL, FACW, or FAC: 0% (A/B)					
1	<u>%</u>								
3.				Prevalence Index Worksheet:					
4.	%			Total % Cover of:Multiply by:					
5.	%			OBL species% x 1 =0					
	0 %	= Total Cov	er	FACW species% x 2 =0					
Herb Stratum (Plot size: <u>5'</u>)				FAC species% x 3 =0 FACU species					
1. <u>Bromus arvensis</u>	80 %	<u>Y</u>	<u>FACU</u>	UPL species					
2. Poa pratensis	<u>20 %</u> 5 %	<u>N</u>	<u>FACU</u> FACU	Column Totals: 0 % (A) 0 (B)					
Taraxacum officinale Cirsium arvense	5 %	<u>N</u> N	FACU FACU	Prevalence Index = B/A =					
5	<u> </u>		. 7.00	Hydrophytic Vegetation Indicators:					
6.	%								
7	%			☐ 1 Rapid Test for Hydrophytic Vegetation					
8	%			☐ 2 Dominance Test is >50%					
9	<u>%</u>			☐ 3 Prevalence Index is ≤3.0¹					
10(Dlat size 20)	110 %	= Total Cov	er	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)					
Woody Vine Stratum (Plot size: 30') 1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)					
2.	% 0 %	= Total Cov	er	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic					
Bare Ground in Herb Stratum 0 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No					
Remarks: Hydrophytic vegetation is not present. Photograph	C-69.			1					
,,, regeration to the product in notograph	- 50.								

SOIL Sampling Point: SP-902

Profile Descr	iption: (Describe	to the dep	th needed to docur	nent th	e indicator o	or confirm the	e absence of indicators.)	
Depth	Matrix		Re	dox Fe				
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-14	10YR 3/1	100					Sandy Clay	
14-24	10YR 4/2	100					Gravelly Sandy Clay	
								
								
					-			
¹Type: C=Co	ncentration, D=De	pletion, RM	=Reduced Matrix, CS	S=Cove	red or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil Ir	ndicators: (Appli	cable to all	LRRs, unless other	rwise n	oted.)		Indicators for Problema	atic Hydric Soils³:
☐ Histosol (A	(1)		☐ Sandy Gle	yed Ma	ıtrix (S4)		1 cm Muck (A9) (LRF	R I, J)
☐ Histic Epip	edon (A2)		☐ Sandy Red	dox (S5)		☐ Coast Prairie Redox ((A16) (LRR F, G, H)
☐ Black Histi	c (A3)		☐ Stripped M	latrix (S	66)		☐ Dark Surface (S7) (LI	RR G)
☐ Hydrogen	Sulfide (A4)		☐ Loamy Mu	cky Mir	neral (F1)		☐ High Plains Depressi	
☐ Stratified L	ayers (A5) (LRR F	=)	☐ Loamy Gle	eyed Ma	atrix (F2)		(LRR H outside of I	•
	(A9) (LRR F, G, I		☐ Depleted N	-			Reduced Vertic (F18)	
•	Below Dark Surface	e (A11)	Redox Da		, ,		Red Parent Material (
	Surface (A12)		Depleted [, ,		☐ Very Shallow Dark St	, ,
-	cky Mineral (S1)	aa\	Redox Dep		. ,		Other (Explain in Ren	
	cky Peat or Peat (, H) ☐ High Plain (MLRA 72	•	, ,		³ Indicators of hydrophytic	
□ 5 cm Muck	xy Peat or Peat (S3	3)(LRR F)	(WENA 12	2 0. 73 (JI LKK II)		wetland hydrology must disturbed or problematic	
Restrictive L	ayer (if present):						Hydric Soil Present?	
Type:		[Depth (inches):				☐ Yes ⊠ No	
HYDROLOGY								
_	rology Indicators		d				0 d l - di t (0	
		one require	d; check all that appl				Secondary Indicators (2	
☐ Surface W	` ,		☐ Salt Crust (B1	,	(=)		Surface Soil Cracks	
☐ High Wate			☐ Aquatic Invert		(- /		☐ Sparsely Vegetated	
☐ Saturation			☐ Hydrogen Sul				☐ Drainage Patterns (B	
☐ Water Mar	` '		☐ Dry-Season V		` '	Booto (C2)	Oxidized Rhizospher (where tilled)	es on Living Roots (C3)
Sediment I			Oxidized Rhiz (where not		es on Living	Roots (C3)	☐ Crayfish Burrows (C	3)
☐ Drift Depos			☐ Presence of F	,	d Iron (C4)		☐ Saturation Visible on	
☐ Iron Depos			☐ Thin Muck Su				☐ Geomorphic Position	
	Visible on Aerial I	magery (B7			•		☐ FAC-Neutral Test (D	
_	ned Leaves (B9)	magory (Br	, –		,		☐ Frost-Heave Hummo	ocks (D7) (LRR F)
Field Observ	ations:		Depth	Des	cribe Record	ed Data (strea	am gauge, monitoring well,	aerial photos, previous
		Yes	No (inches)	insp	ections, etc.)	, if available:		, , ,
Surface Wate	r present?							
Water Table p	resent?							
Saturation Pre	esent?							
(includes capi	llary fringe)							
Wetland Hyd	rology Present?							
Remarks: No	wetland hydrology	indicators a	are present.					

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Sweetland Wind Project	City/County: Hand Coun	ty Sampling Date: 9/30/2019							
Applicant/Owner: Scout Clean Energy	State: SD Sampling Point: SP-903								
Investigator(s): W. Hirst	Section, Township	, Range: S10, T110N, R66W							
Landform (hillslope, terrace, etc.) hillslope	Local relief (concave, convex	x, none): Slope (%):5							
Subregion (LRR): Northern Great Plains Spring Wheat Region	1 Lat: <u>44.354380</u>	Long:98.753991							
Soil Map Unit Name: Glenham-Java loams, rolling		NWI Classification: NA							
Are climate/hydrologic conditions on the site typical for this time of	year? 🗌 Yes 🖾 No	(If no, explain in Remarks.)							
Vegetation Soil Hydrology	Are "Normal Circun	nstances" present? ☑ Yes ☐ No							
Significantly Disturbed?		any answers in Remarks.)							
Naturally Problematic?	(II ricodod, explair t	any answers in remarks.)							
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.									
		WETS analysis for this region shows prior 3 month							
Hydrophytic Vegetation Present? □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	period has been wetter than no	miai for this time of year.							
Wetland Hydrology Present?									
Is the Sampled Area within a Wetland?									
VEGETATION – Use scientific names of plants	lata Danimant Indicator	Parising and Tank Market and							
Abso Tree Stratum (Plot size: 30') % Co		Dominance Test Worksheet:							
1	<u>%</u>	Number of Dominant Species that are OBL, FACW, or FAC							
2	<u></u>	(excluding FAC-): 0 (A)							
3	<u></u>	Total Number of Dominant							
4	<u>%</u>	Species Across All Strata:2 (B)							
	<u>%</u> = Total Cover	Percent of Dominant Species that							
Sapling/Shrub Stratum (Plot size: 15') 1	%	are OBL, FACW, or FAC: 0% (A/B)							
2.									
3.	%	Prevalence Index Worksheet:							
4	<u></u>	Total % Cover of: Multiply by:							
5	<u></u>	OBL species % x 1 =0							
0	<u>%</u> = Total Cover	FACW species% x 2 =0 FAC species							
Herb Stratum (Plot size: <u>5'</u>)		FACU species							
) % Y FACU) % Y FACU	UPL species							
) % Y FACU % N FACU	Column Totals: 0 % (A) 0 (B)							
3. <u>Cirsium arvense</u> 5	% <u>TACO</u>	Prevalence Index = B/A =							
5	<u>%</u>	Hydrophytic Vegetation Indicators:							
6	<u>%</u>	☐ 1 Rapid Test for Hydrophytic Vegetation							
7	<u>%</u>	☐ 2 Dominance Test is >50%							
8	%								
10.	%	☐ 3 Prevalence Index is ≤3.0 ¹							
	5 % = Total Cover	☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)							
1	<u></u>	☐ Problematic Hydrophytic Vegetation¹ (explain)							
2	<u></u>	¹ Indicators of hydric soil and wetland hydrology							
0	<u>%</u> = Total Cover	must be present, unless disturbed or problematic							
Bare Ground in Herb Stratum0 %		Hydrophytic Vegetation Present? ☐ Yes ☒ No							
Remarks: Hydrophytic vegetation is not present. Photograph C-70.									

SOIL Sampling Point: SP-903

Profile Descr	ription: (Describe	to the dep	th needed to docum	ent the indi	icator o	r confirm the	absence of indicators.)	
Depth	Matrix		Red	ox Features	3			
(inches)	Color (moist)	%	Color (moist)	% Ty	ype ¹	Loc ²	Texture	Remarks
0-24	10YR 4/2	100					Sandy Clay Loam	
					 -			
					 -			-
								
¹Type: C=Co	ncentration, D=De	pletion, RM=	Reduced Matrix, CS	Covered or	Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil Ir	ndicators: (Appli	cable to all	LRRs, unless otherv	vise noted.))		Indicators for Problem	atic Hydric Soils³:
☐ Histosol (A	\1)		☐ Sandy Gley	ed Matrix (S	84)		1 cm Muck (A9) (LRI	R I, J)
☐ Histic Epip	edon (A2)		☐ Sandy Red	ox (S5)			☐ Coast Prairie Redox	(A16) (LRR F, G, H)
☐ Black Histi	, ,		Stripped Ma	. ,			Dark Surface (S7) (L	,
Hydrogen			Loamy Muc				☐ High Plains Depress	
	ayers (A5) (LRR F	•	☐ Loamy Gley		- 2)		(LRR H outside of ☐ Reduced Vertic (F18	•
	(A9) (LRR F, G, I	-	☐ Depleted M	. ,	0 \		☐ Red Parent Material	,
	Below Dark Surface	e (A11)	Redox Dark	,	,		☐ Very Shallow Dark S	• •
	Surface (A12) cky Mineral (S1)		☐ Depleted Da		. ,		☐ Other (Explain in Re	, ,
_ ,	cky Peat or Peat (S2) (I RR G	•	•	•		³ Indicators of hydrophyti	•
	cky reat or reat (S			& 73 of LRF	` ,		wetland hydrology must	
	.,	, (<u> </u>	•		,		disturbed or problemation	
Restrictive L	ayer (if present):						Hydric Soil Present?	
Type:	, ,	Г	epth (inches):				☐ Yes ⊠ No	
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								
Remarks: No	hydric soil indicate	ors are prese	ent.					
HYDROLOG	′							
Wetland Hyd	rology Indicators	:						
Primary Indica	ators (minimum of	one required	d; check all that apply	<u>)</u>			Secondary Indicators (2	2 or more required)
☐ Surface W	ater (A1)		☐ Salt Crust (B11	1)			☐ Surface Soil Cracks	(B6)
☐ High Wate	r Table (A2)		☐ Aquatic Inverte	brates (B13	3)		☐ Sparsely Vegetated	Concave Surface (B8)
☐ Saturation			☐ Hydrogen Sulfi	-	B10)			
☐ Water Mar	ks (B1)		☐ Dry-Season W	ater Table (C2)		Oxidized Rhizosphe	res on Living Roots (C3)
☐ Sediment	Deposits (B2)		Oxidized Rhizo		Living F	Roots (C3)	(where tilled)	
☐ Drift Depos	, ,		(where not t		(0.1)		Crayfish Burrows (C	
Algal Mat			☐ Presence of Re		(C4)		☐ Saturation Visible or	0, 1,
☐ Iron Depos	, ,	(= -)	☐ Thin Muck Sur				Geomorphic Position	
	Visible on Aerial I	magery (B7)	Other (Explain	in Remarks	•)		☐ FAC-Neutral Test (☐ ☐ Frost-Heave Humm	,
☐ Water-Sta	ined Leaves (B9)			П			☐ FIOSt-Heave Hullilli	ocks (D7) (LKK F)
Field Observ	ations:	Yes 1	Depth No (inches)			ed Data (strear if available:	m gauge, monitoring well,	aerial photos, previous
Surface Wate	r present?		⊠ 0	'	, ,,			
Water Table p	•		<u> </u>					
Saturation Pre								
(includes capi		ъ,						
	rology Present?		\boxtimes					
	wetland hydrology			I				
			5 P1000111.					
1								

APPENDIX C - PHOTOGRAPH LOG



Photograph C-1: View of upland sample plot (SP-)008, facing east.



Photograph C-2: View of upland SP-011, facing south.





Photograph C-3: View of upland SP-501, facing south.



Photograph C-4: View of upland SP-502, facing north.



Photograph C-5: View of SP-503 in palustrine emergent (PEM) wetland (W-)501, facing north.

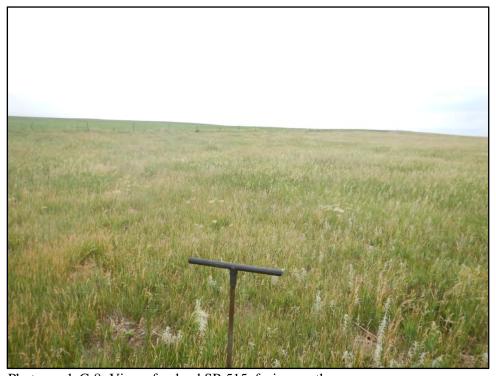


Photograph C-6: View of SP-504, an upland sample plot adjacent to W-501, facing east.





Photograph C-7: View of upland SP-505, facing west.



Photograph C-8: View of upland SP-515, facing south.



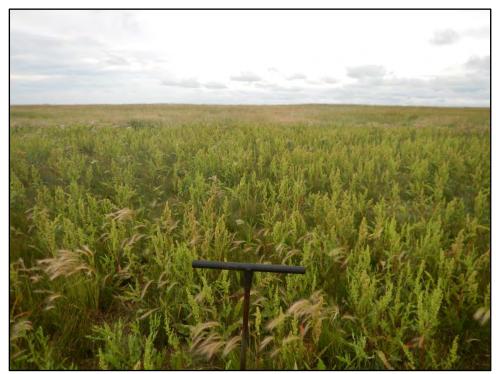


Photograph C-9: View of SP-516 in PEM W-507, facing north.



Photograph C-10: View of SP-517, an upland sample plot adjacent to W-507 and W-508, facing north.





Photograph C-11: View of SP-518 in PEM W-508, facing north.



Photograph C-12: View of upland SP-519, facing west.





Photograph C-13: View of SP-522 in PEM W-510, facing east.



Photograph C-14: View of SP-536 in PEM W-518, facing west.





Photograph C-15: View of SP-537, an upland sample plot adjacent to W-518, facing east.



Photograph C-16: View of SP-538 in PEM W-520, facing west.





Photograph C-17: View of SP-539, an upland sample plot adjacent to W-520, facing west.



Photograph C-18: View of upland SP-541, facing west.





Photograph C-19: View of SP-544 in PEM W-524, facing south.



Photograph C-20: View of SP-545, an upland sample plot adjacent to W-524, facing south.



Photograph C-21: View of SP-548 in PEM W-526, facing east.



Photograph C-22: View of SP-549, an upland sample plot adjacent to W-526, facing east.



Photograph C-23: View of upland SP-551, facing north.



Photograph C-24: View of upland SP-552, facing north.





Photograph C-25: View of SP-570 in PEM W-537, facing north.



Photograph C-26: View of SP-571, an upland sample plot adjacent to W-537, facing south.





Photograph C-27: View of upland SP-591, facing south.



Photograph C-28: View of SP-592 in PEM W-548, facing east.





Photograph C-29: View of SP-593, an upland sample plot adjacent to W-548, facing east.



Photograph C-30: View of SP-596 in PEM W-550, facing east.



Photograph C-31: View of SP-597, an upland sample plot adjacent to W-550, facing east.



Photograph C-32: View of upland SP-600, facing north.



Photograph C-33: View of upland SP-603, facing east.



Photograph C-34: View of SP-606 in PEM W-554, facing south.





Photograph C-35: View of SP-607, an upland sample plot adjacent to W-554, facing south.



Photograph C-36: View of upland SP-612, facing north.





Photograph C-37: View of upland SP-615, facing south.



Photograph C-38: View of SP-616 in PEM W-558, facing north.





Photograph C-39: View of SP-617, an upland plot adjacent to W-558, facing north.



Photograph C-40: View of upland SP-619, facing north.





Photograph C-41: View of upland SP-621, facing north.



Photograph C-42: View of upland SP-623, facing north.



Photograph C-43: View of SP-634 in PEM W-566, facing west.



Photograph C-44: View of SP-635, an upland plot adjacent to W-566, facing west.





Photograph C-45: View of SP-651 in PEM W-005, facing south.



Photograph C-46: View of SP-652, an upland sample plot adjacent to W-005, facing north.





Photograph C-47: View of SP-658 in PEM W-579, facing west.



Photograph C-48: View of SP-659, an upland sample plot adjacent to W-579, facing west.



Photograph C-49: View of SP-660 in PEM W-580, facing west.



Photograph C-50: View of SP-661, an upland sample plot adjacent to W-580, facing west.



Photograph C-51: View of upland SP-663, facing west.



Photograph C-52: View of upland SP-664, facing west.





Photograph C-53: View of upland SP-666, facing north.



Photograph C-54: View of SP-667 in PEM W-584, facing west.





Photograph C-55: View of SP-668, an upland sample plot adjacent to W-584, facing west.



Photograph C-56: View of upland SP-669, facing north.



Photograph C-57: View of upland SP-702, facing northwest.



Photograph C-58: View of upland SP-705, facing north.



Photograph C-59: View of upland SP-706, facing southeast.



Photograph C-60: View of upland SP-708, facing west.





Photograph C-61: View of SP-713 in PEM W-710, facing south.



Photograph C-62: View of SP-714, an upland plot adjacent to W-710, facing northwest.



Photograph C-63: View of upland SP-716, facing west.



Photograph C-64: View of SP-717 in PEM W-712, facing east.



Photograph C-65: View of SP-718, an upland plot adjacent to W-712, facing northeast.



Photograph C-66: View of SP-719 in PEM W-713, facing northeast.





Photograph C-67: View of SP-720, an upland plot adjacent to W-713, facing north.



Photograph C-68: View of SP-901 in PEM W-901, facing southeast.



Photograph C-69: View of SP-902, an upland plot adjacent to W-901, facing southeast.



Photograph C-70: View of upland SP-903, facing southeast.



Photograph C-71: View of ephemeral stream (S-)002, facing upstream.



Photograph C-72: View of intermittent S-003, facing downstream.



Photograph C-73: View of intermittent S-004, facing upstream.



Photograph C-74: View of ephemeral S-502, facing downstream.





Photograph C-75: View of ephemeral S-504, facing downstream.



Photograph C-76: View of ephemeral S-508, facing downstream.





Photograph C-77: View of ephemeral S-510, facing upstream.



Photograph C-78: View of ephemeral S-513, facing upstream.





Photograph C-79: View of ephemeral S-514, facing across.



Photograph C-80: View of ephemeral S-516, facing upstream.





Photograph C-81: View of ephemeral S-517, facing upstream.



Photograph C-82: View of ephemeral S-518, facing downstream.





Photograph C-83: View of ephemeral S-519, facing upstream.



Photograph C-84: View of ephemeral S-521, facing downstream.





Photograph C-85: View of ephemeral S-522, facing downstream.



Photograph C-86: View of intermittent S-523, facing downstream.



Photograph C-87: View of ephemeral S-526, facing downstream.



Photograph C-88: View of ephemeral S-701, facing downstream.





Photograph C-89: View of ephemeral S-702, facing downstream.



Photograph C-90: View of ephemeral S-703, facing upstream.



Photograph C-91: View of ephemeral S-704, facing downstream.



Photograph C-92: View of ephemeral S-705, facing downstream.





Photograph C-93: View of ephemeral S-707, facing downstream.



Photograph C-94: View of ephemeral S-708, facing downstream.





Photograph C-95: View of ephemeral S-901, facing downstream.



Photograph C-96: View of Photo Point (PP-)008 in Project Area representative of upland pasture, facing west.



Photograph C-97: View of PP-503 in Project Area representative upland pasture, facing west.



Photograph C-98: View of PP-505 in Project Area representative upland pasture, facing east.





Photograph C-99: View of PP-512 in Project Area representative upland swale, facing north.



Photograph C-100: View of PP-514 in Project Area representative upland swale, facing west.





Photograph C-101: View of PP-526 in Project Area representative upland area that has hydric soil or NWI data, facing north.



Photograph C-102: View of PP-529 in Project Area representative upland area that has hydric soil or NWI data, facing west.





Photograph C-103: View of PP-530 in Project Area representative upland area that has hydric soil or NWI data, facing west.



Photograph C-104: View of PP-533 in Project Area representative upland area that has hydric soil or NWI data, facing east.





Photograph C-105: View of PP-537 in Project Area representative upland area that has hydric soil or NWI data, facing south.



Photograph C-106: View of PP-551 in Project Area representative upland area that has hydric soil or NWI data, facing west.





Photograph C-107: View of PP-565 in Project Area representative upland swale, facing east.



Photograph C-108: View of PP-577 in Project Area representative upland area that has hydric soil or NWI data, facing west.





Photograph C-109: View of PP-593 in Project Area representative upland pasture, facing west.



Photograph C-110: View of PP-599 in Project Area representative upland swale, facing south.





Photograph C-111: View of PP-605 in Project Area representative upland swale, facing west.



Photograph C-112: View of PP-628 in Project Area representative upland pasture, facing north.



Photograph C-113: View of PP-632 in Project Area representative roadside drainage, facing south.



Photograph C-114: View of PP-694 in Project Area representative roadside drainage, facing south.





Photograph C-115: View of PP-696 in Project Area representative roadside drainage, facing south.



Photograph C-116: View of PP-701 in Project Area representative upland pasture, facing north.



Photograph C-117: View of PP-724 in Project Area representative upland area with a spoil pile adjacent to an excavated pond, facing east.





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