EXHIBIT D



November 14, 2019

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, 26 wetlands and 24 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 26 wetlands, comprised of one wetland type: PEM and encompassing a total of 4.5 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	0.34	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	0.45	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-611d	PEM	0.06	A-4.21
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:	4.52	

⁽a) W = wetland

Streams

A total of 24 streams, consisting of two stream types (intermittent and ephemeral) and equaling 5,118 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 864 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.

⁽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



A total of 21 ephemeral streams, extending for a total of 4,254 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-003	Intermittent	34	A-4.21
S-004	Intermittent	455	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	272	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	211	A-4.13
S-522	Ephemeral	234	A-4.13
S-523	Intermittent	375	A-4.13
S-526	Ephemeral	520	A-4.20
S-701	Ephemeral	83	A-4.1
S-702	Ephemeral	314	A-4.11
S-703	Ephemeral	36	A-4.8



Stream Number ^a	Flow Classification	Length of Stream in Survey Area (feet)	Figure A-4 Page Number
S-704	Ephemeral	488	A-4.12
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	5,118	

⁽a) S = stream



SUMMARY

Burns & McDonnell conducted a wetland delineation of the Survey Area to identify wetlands and other water bodies. A total of 26 wetlands and 24 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

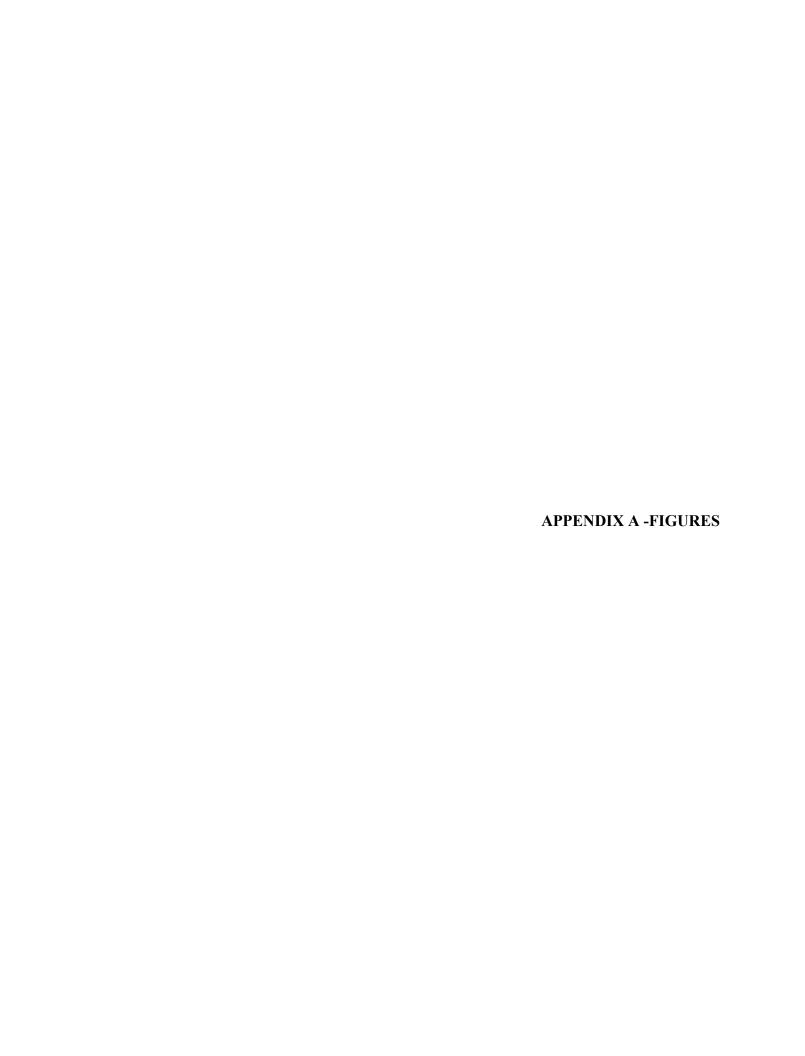
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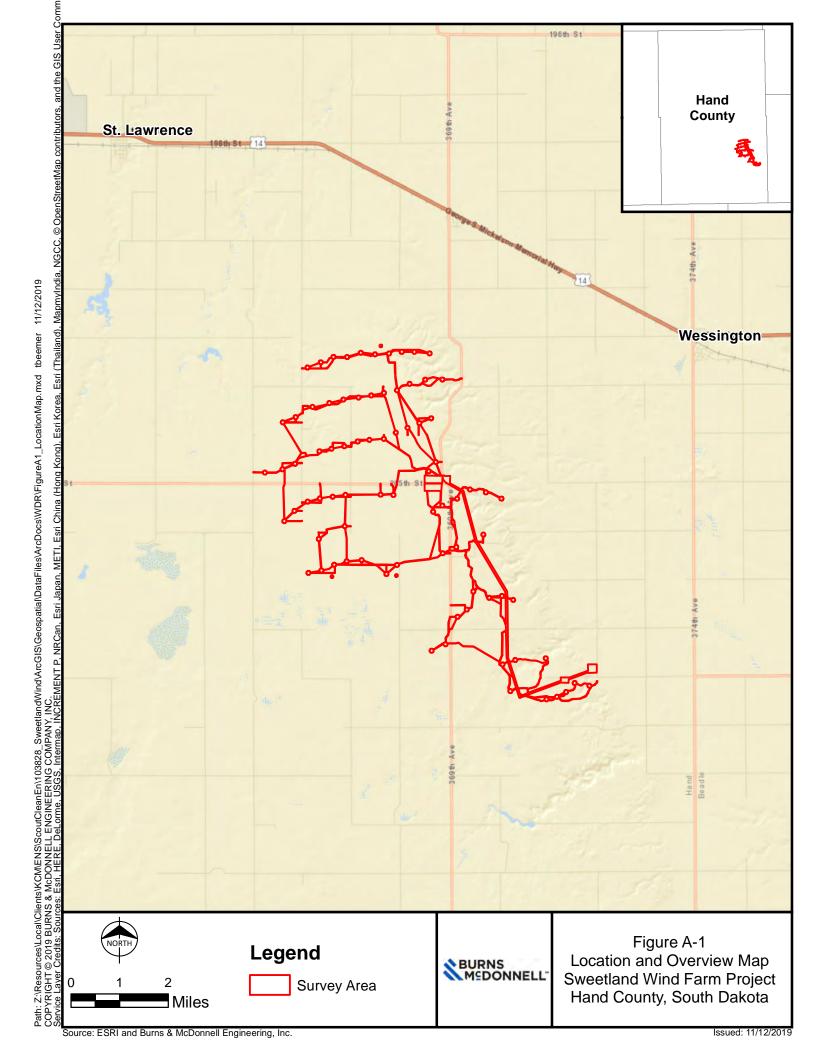
Appendix A - Figures

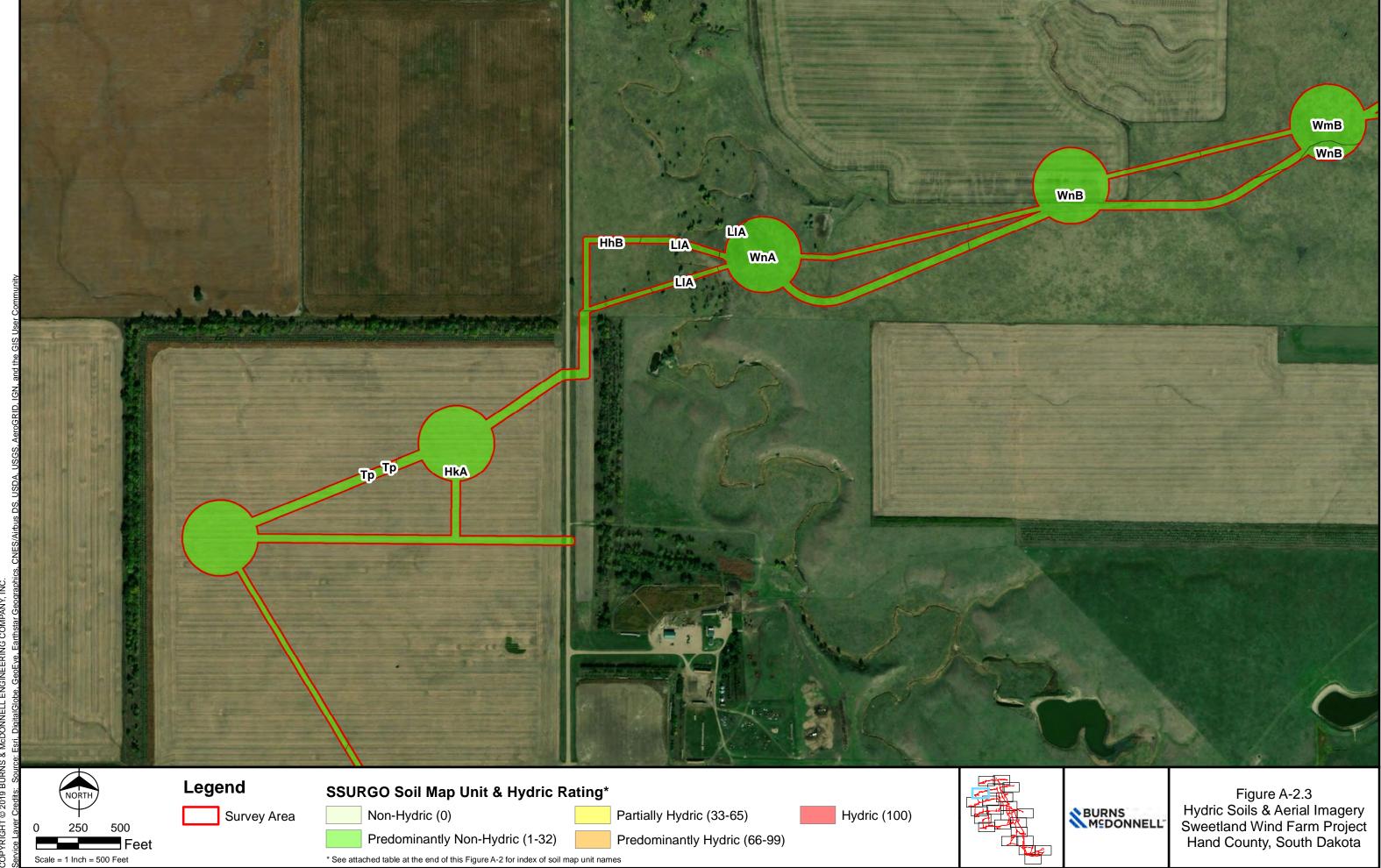
Appendix B - Routine Wetland Determination Data Forms, Great Plains Region

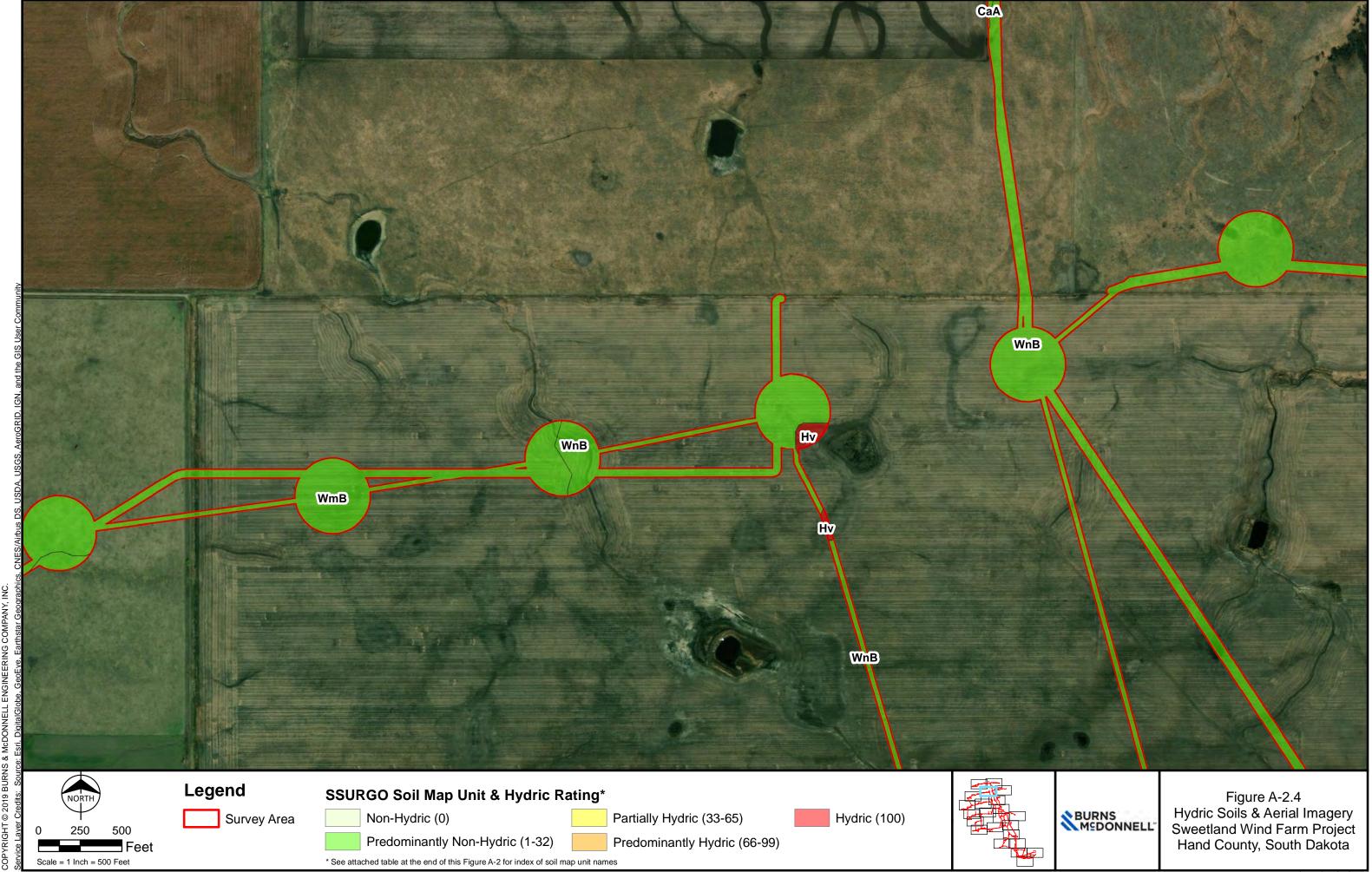
Appendix C - Photograph Log

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

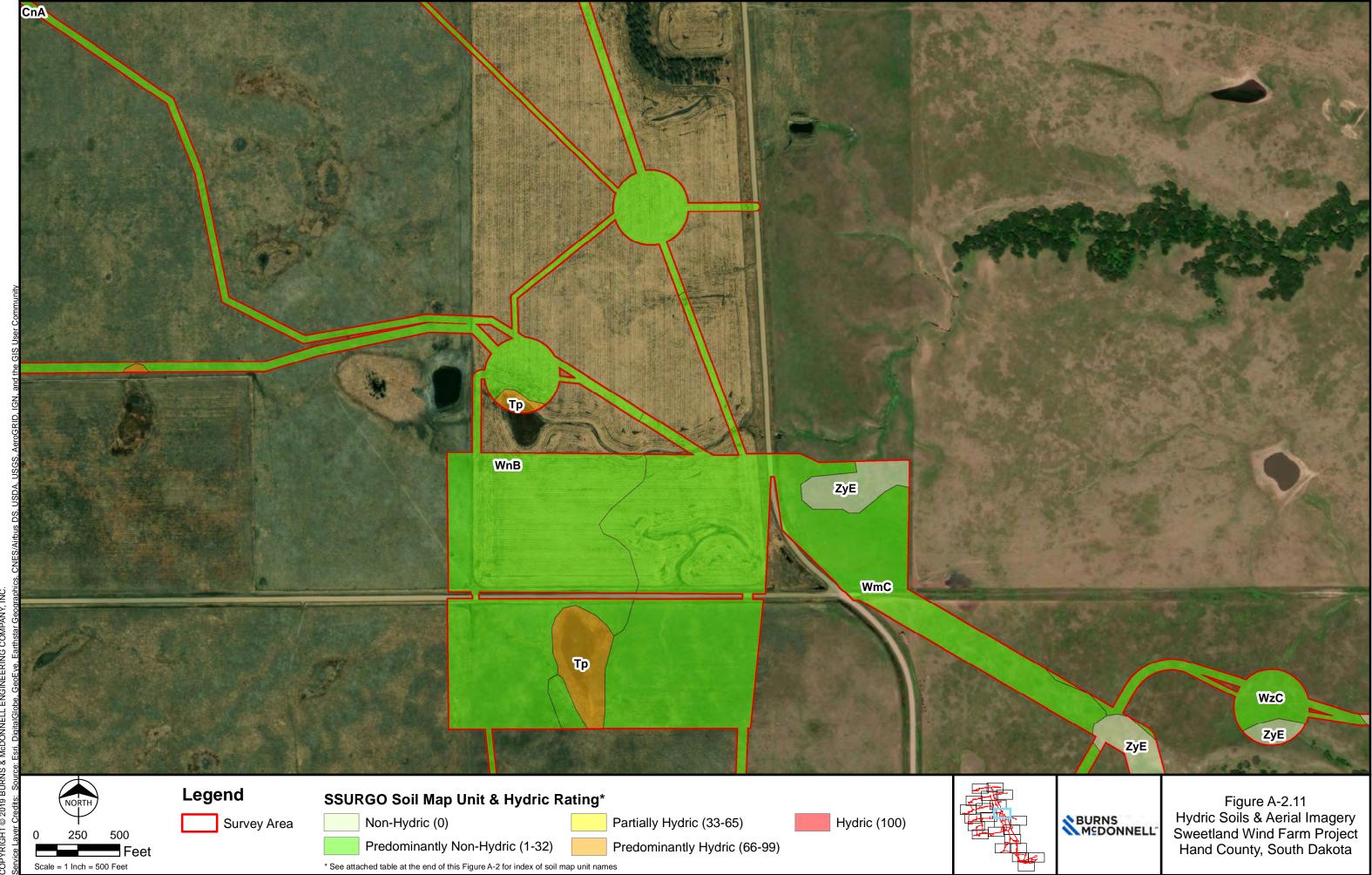


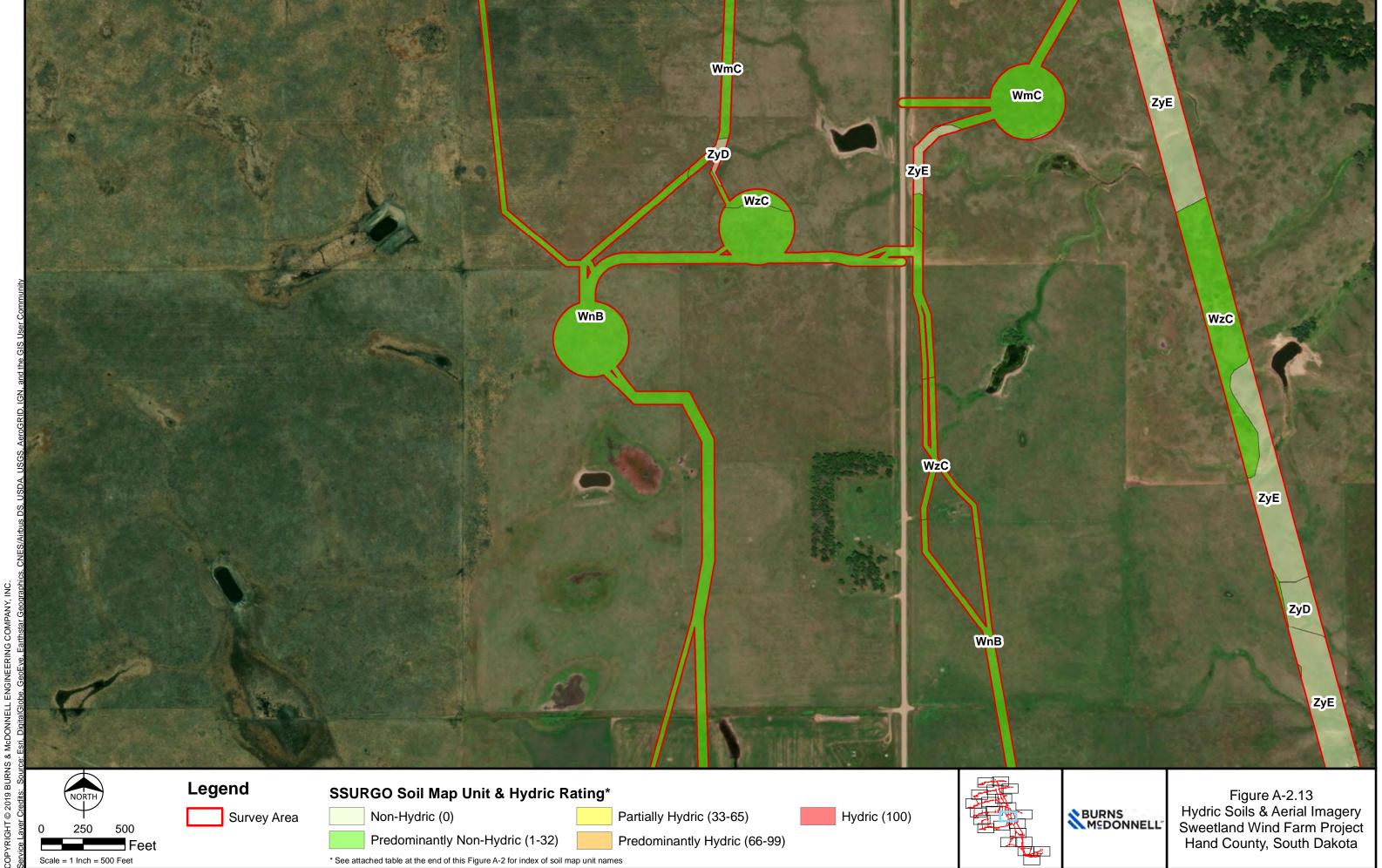




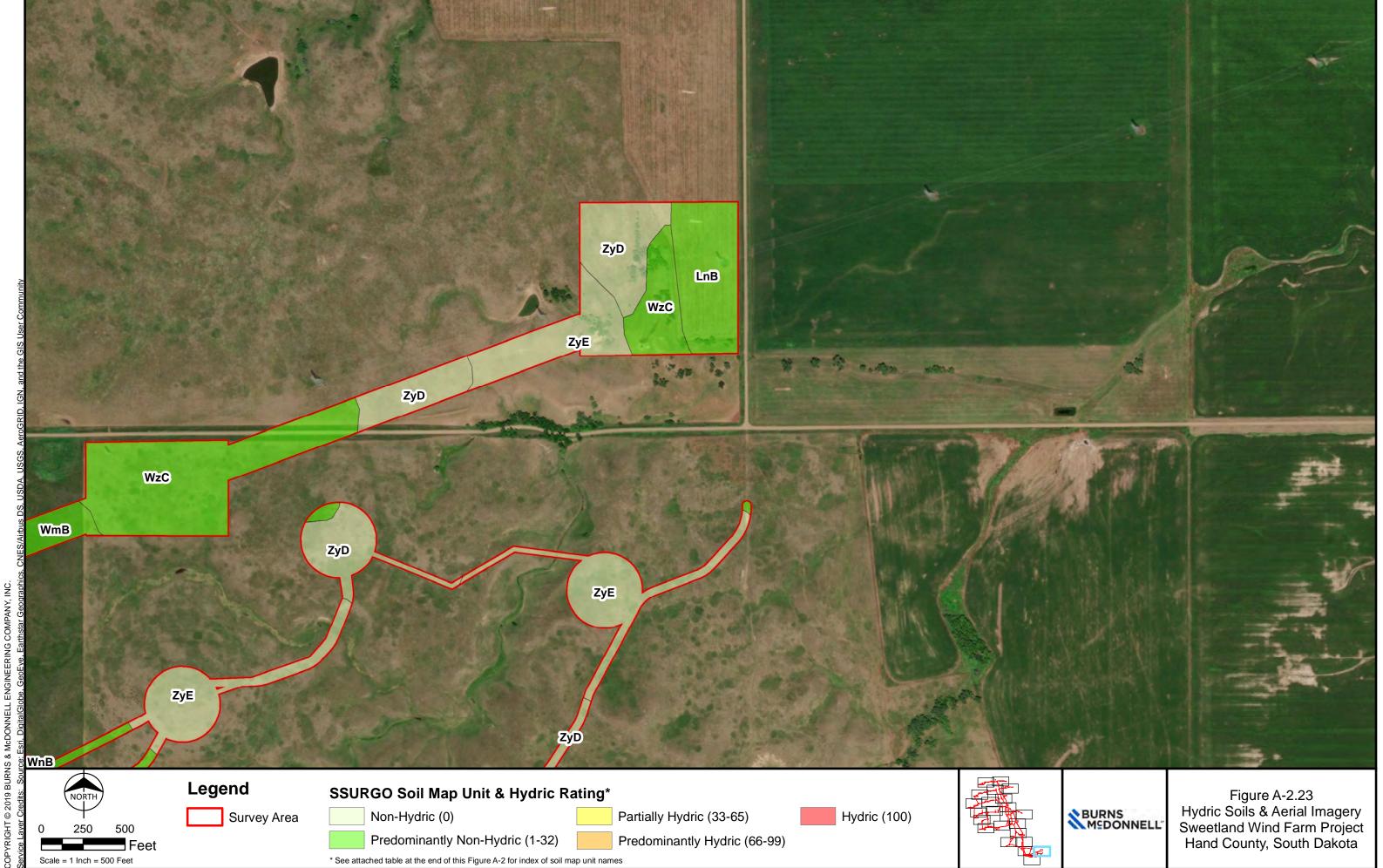












Hydric Rating by Map Unit

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	4.7	0.5%
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	12.9	1.5%
W	Water	0	0.3	0.0%
WmB	Glenham loam, undulating	1	108.5	12.6%
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	322.0	37.4%
WpA	Glenham-Cavo loams, nearly level	10	9.2	1.1%
WpB	Glenham-Cavo loams, undulating	10	48.6	5.6%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
WxC	Glenham-Java loams, rolling	1	2.5	0.3%
WzC	Glenham-Java loams, rolling	1	84.9	9.9%
ZxE	Betts-Java loams, steep	0	3.0	0.4%
ZyD	Java-Glenham loams, hilly	0	31.6	3.7%
ZyE	Betts-Java loams, steep	0	64.6	7.5%
Totals for Area of Interest		861.6	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.

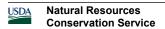
The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria 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.

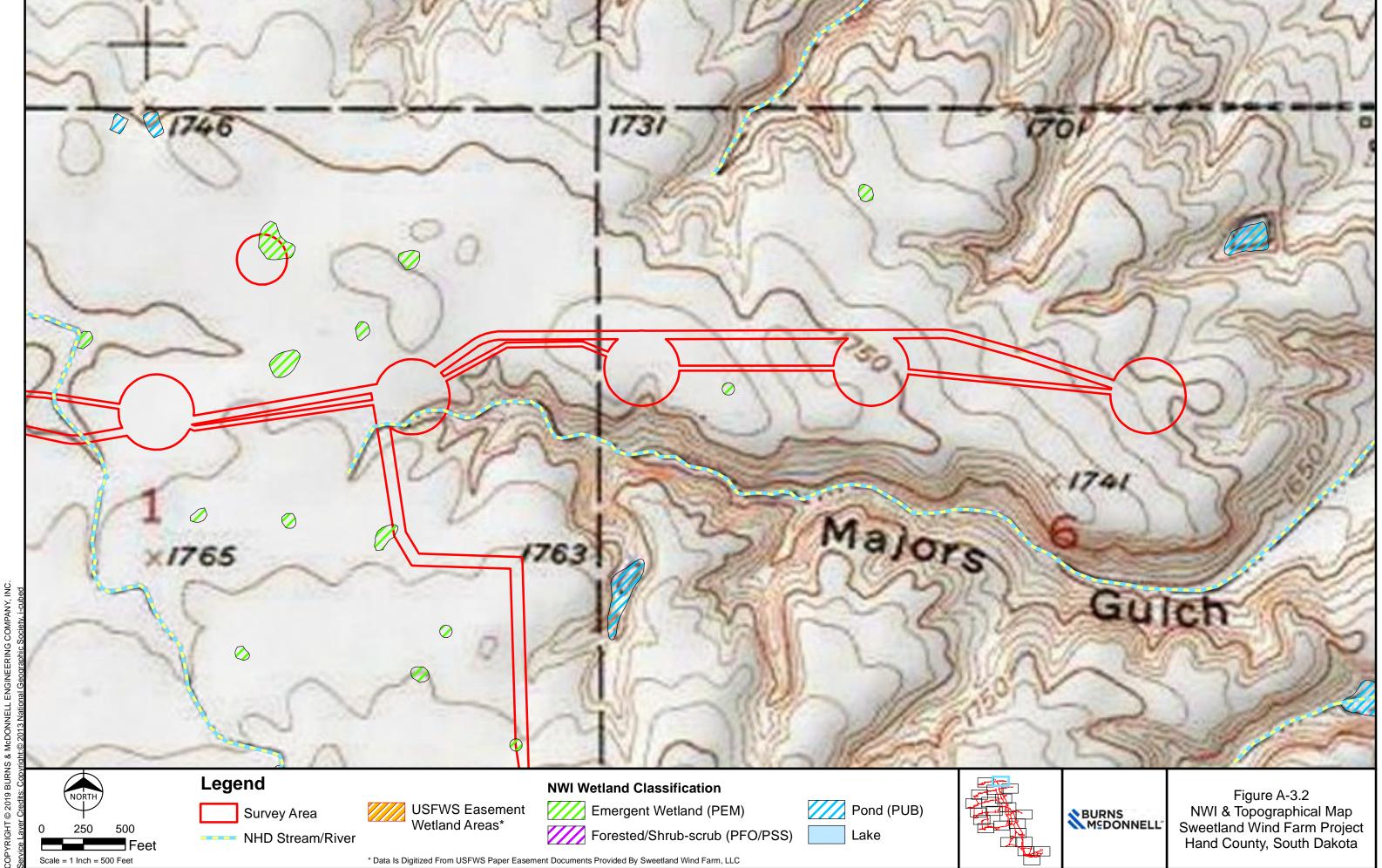
Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

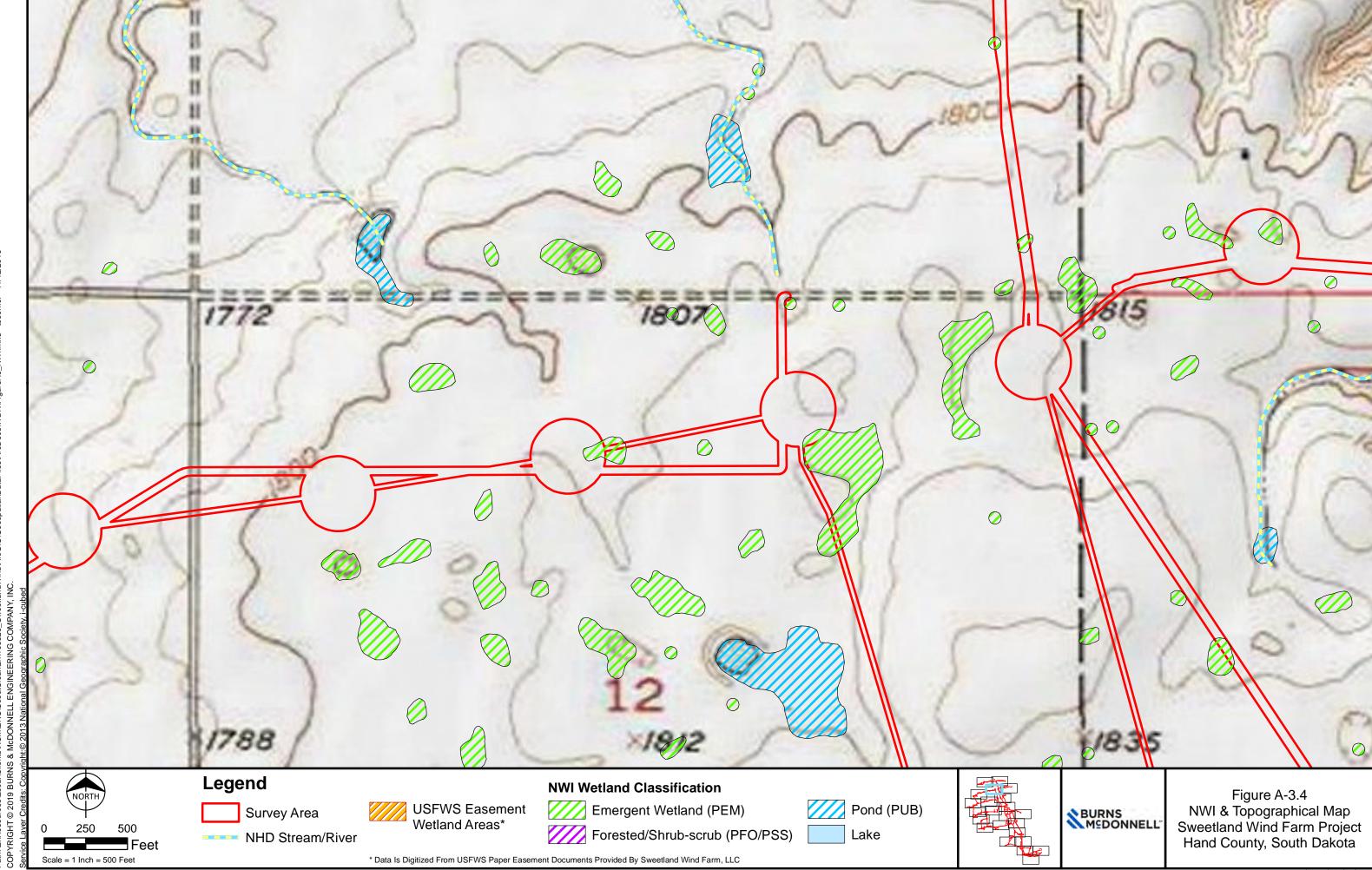
Rating Options

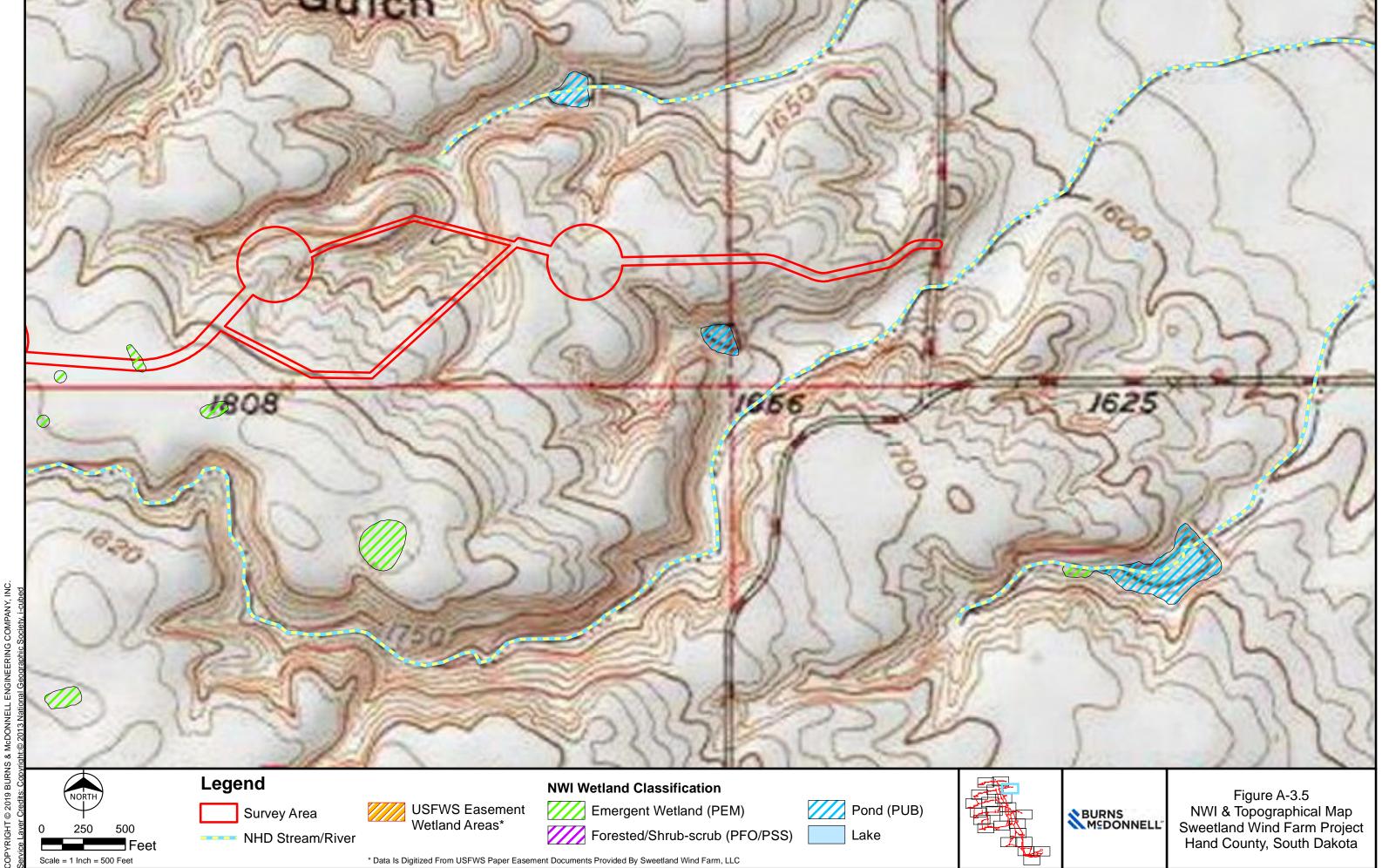
Aggregation Method: Percent Present

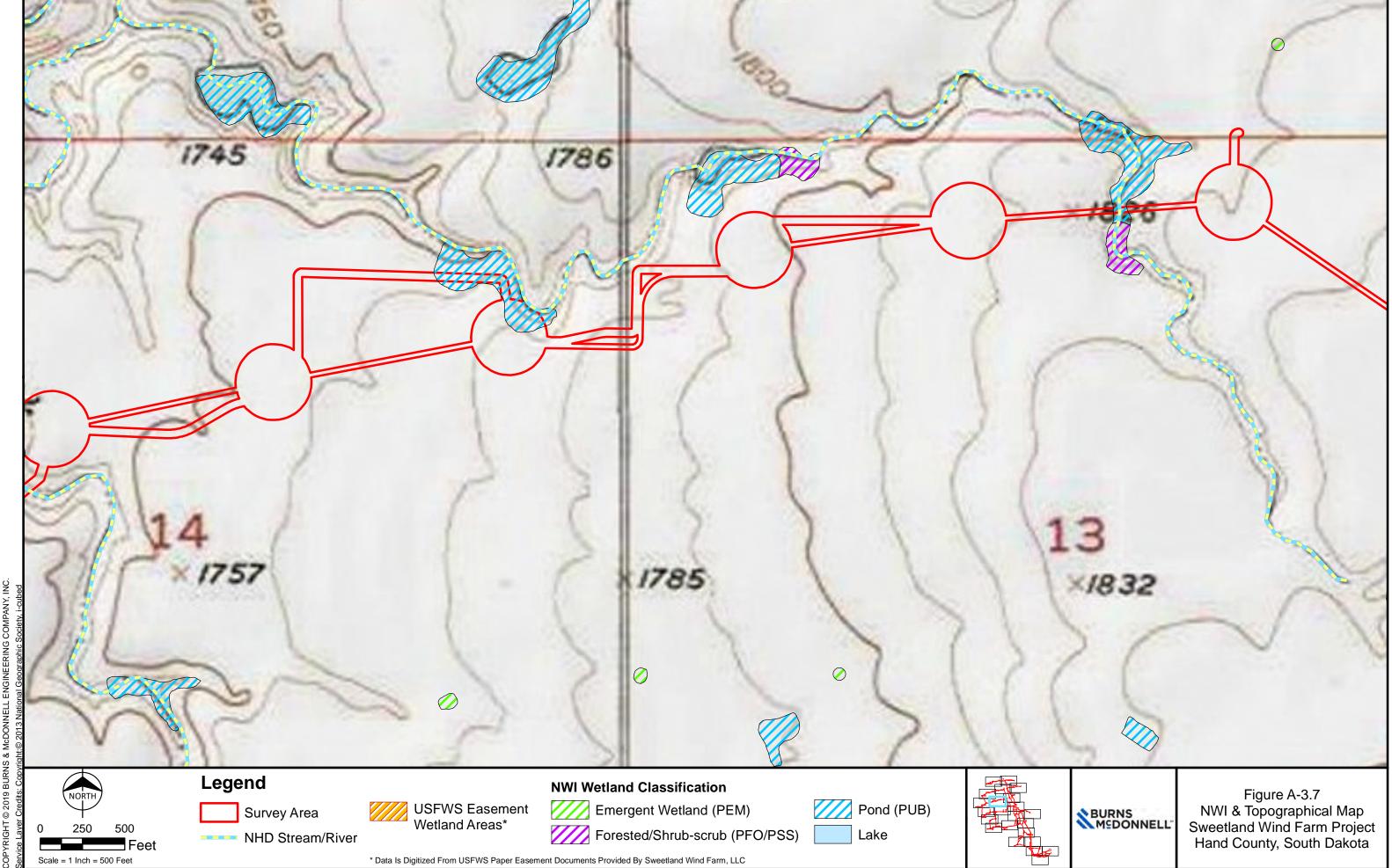
Component Percent Cutoff: None Specified

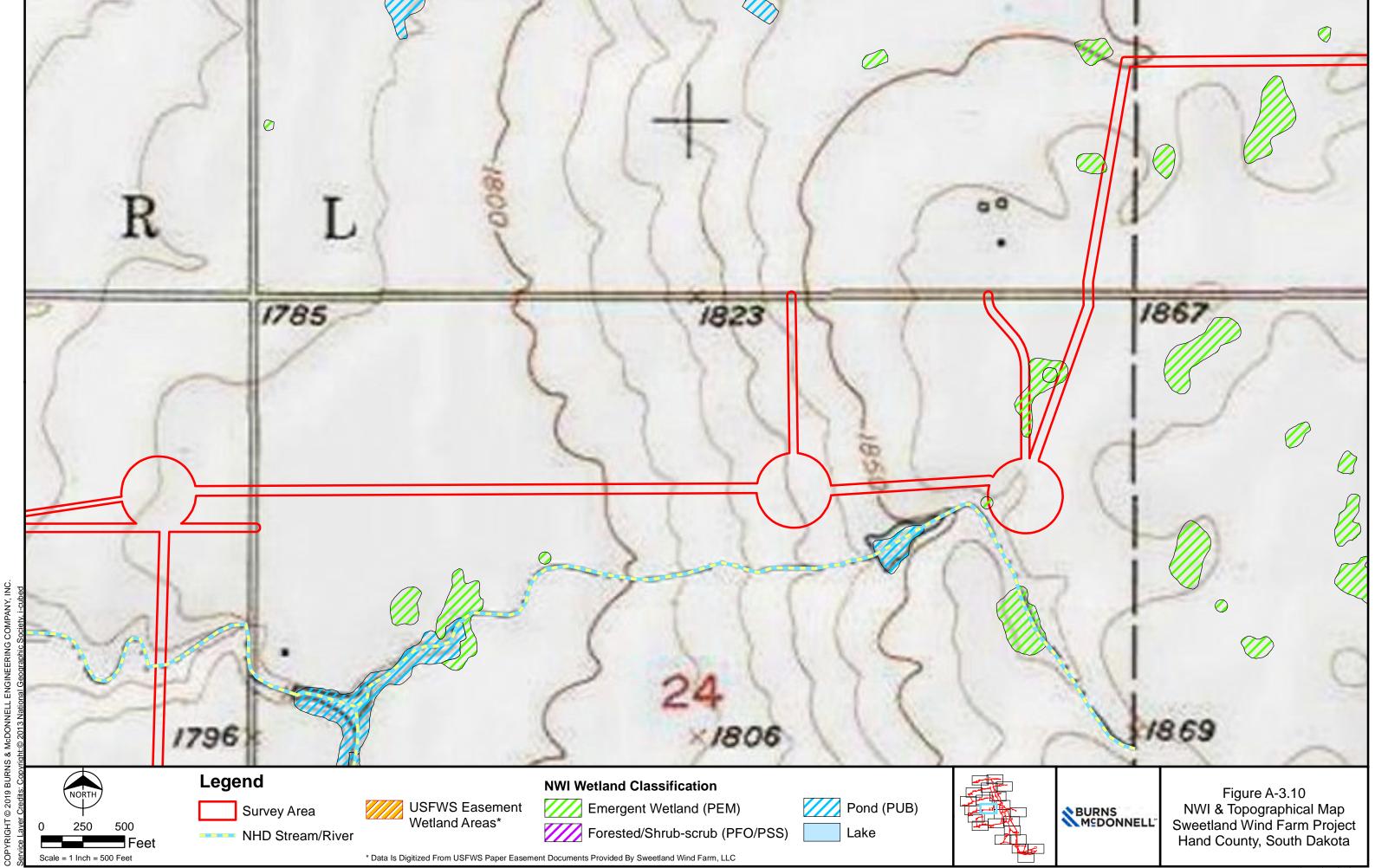
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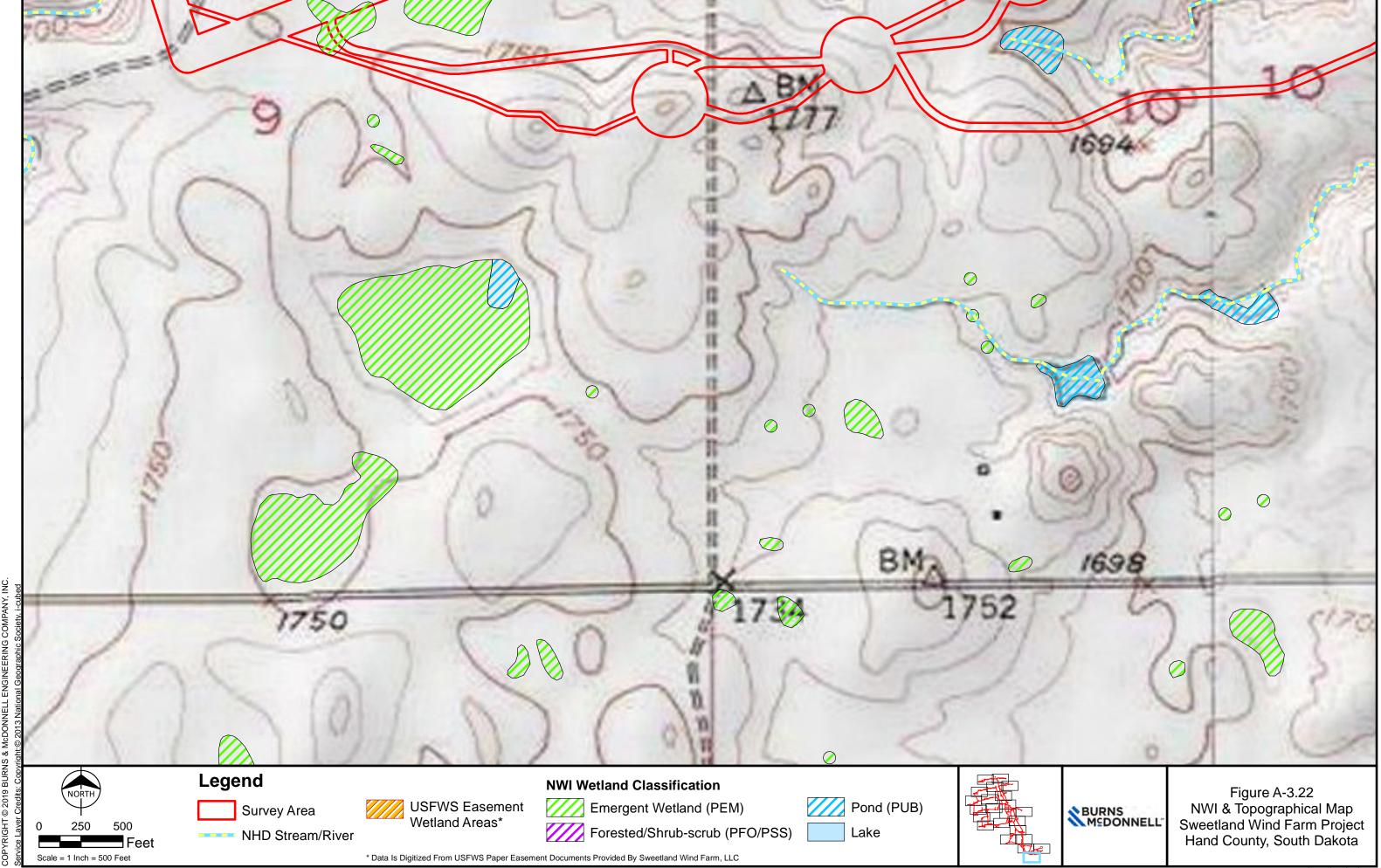


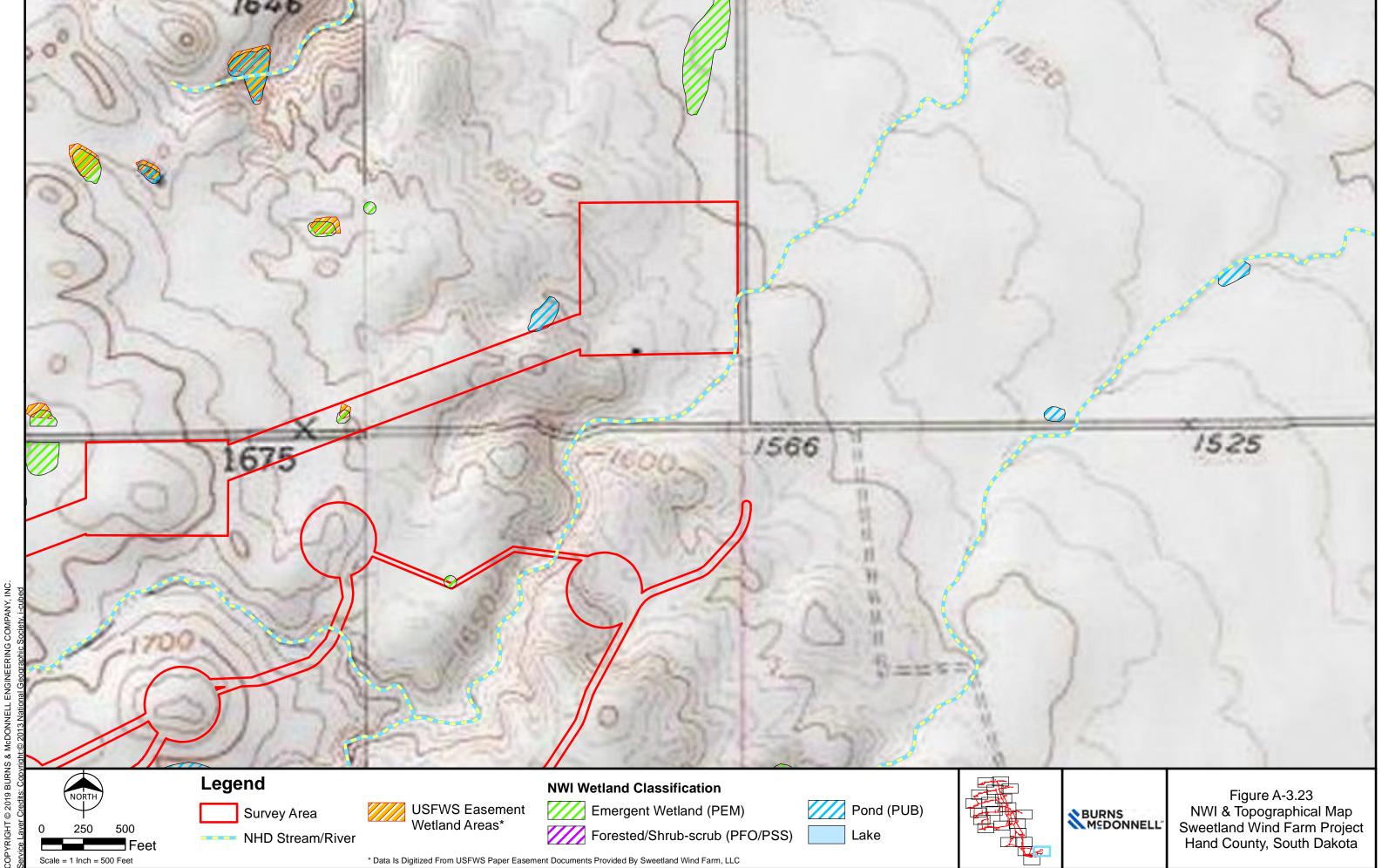


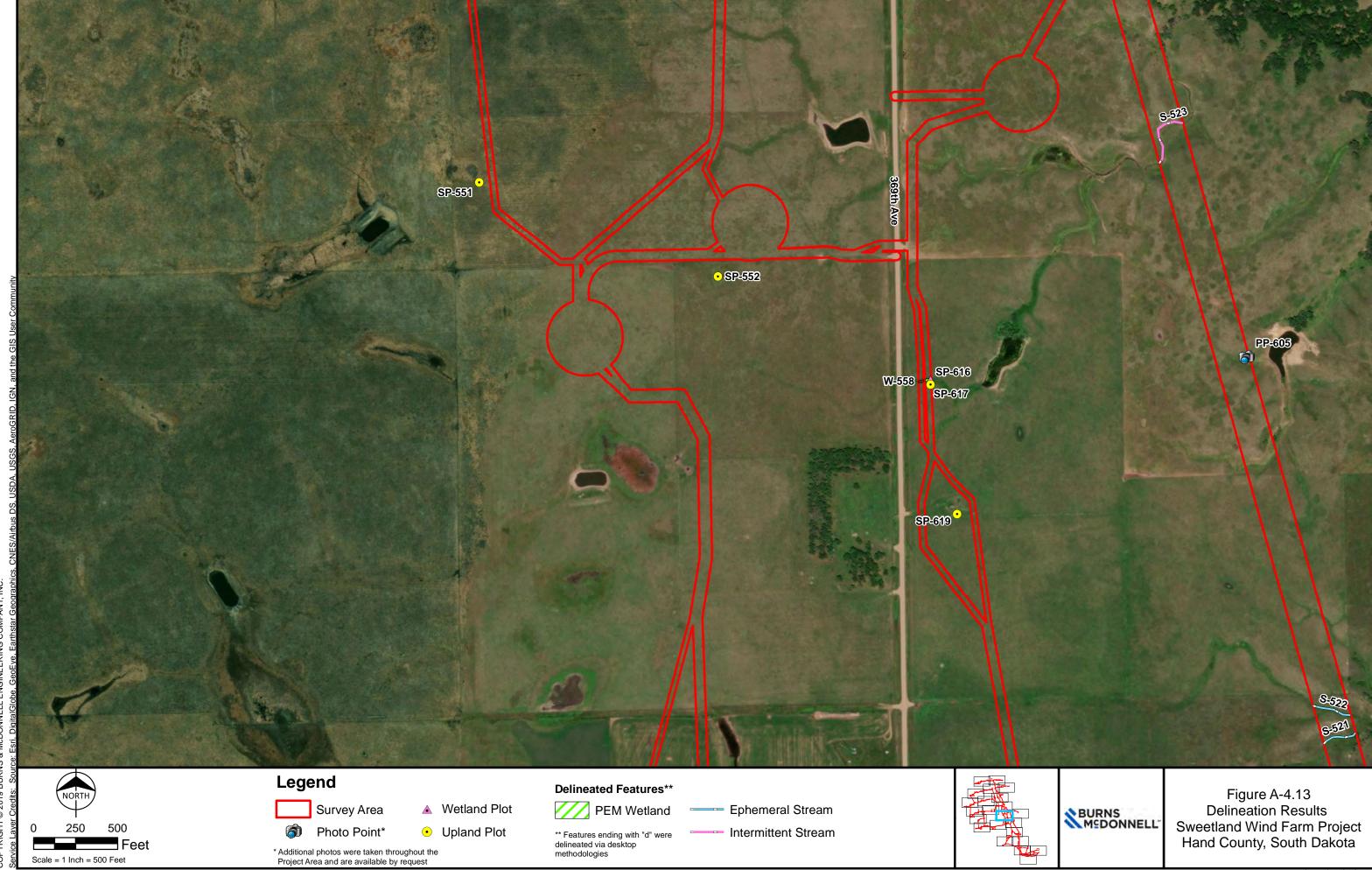




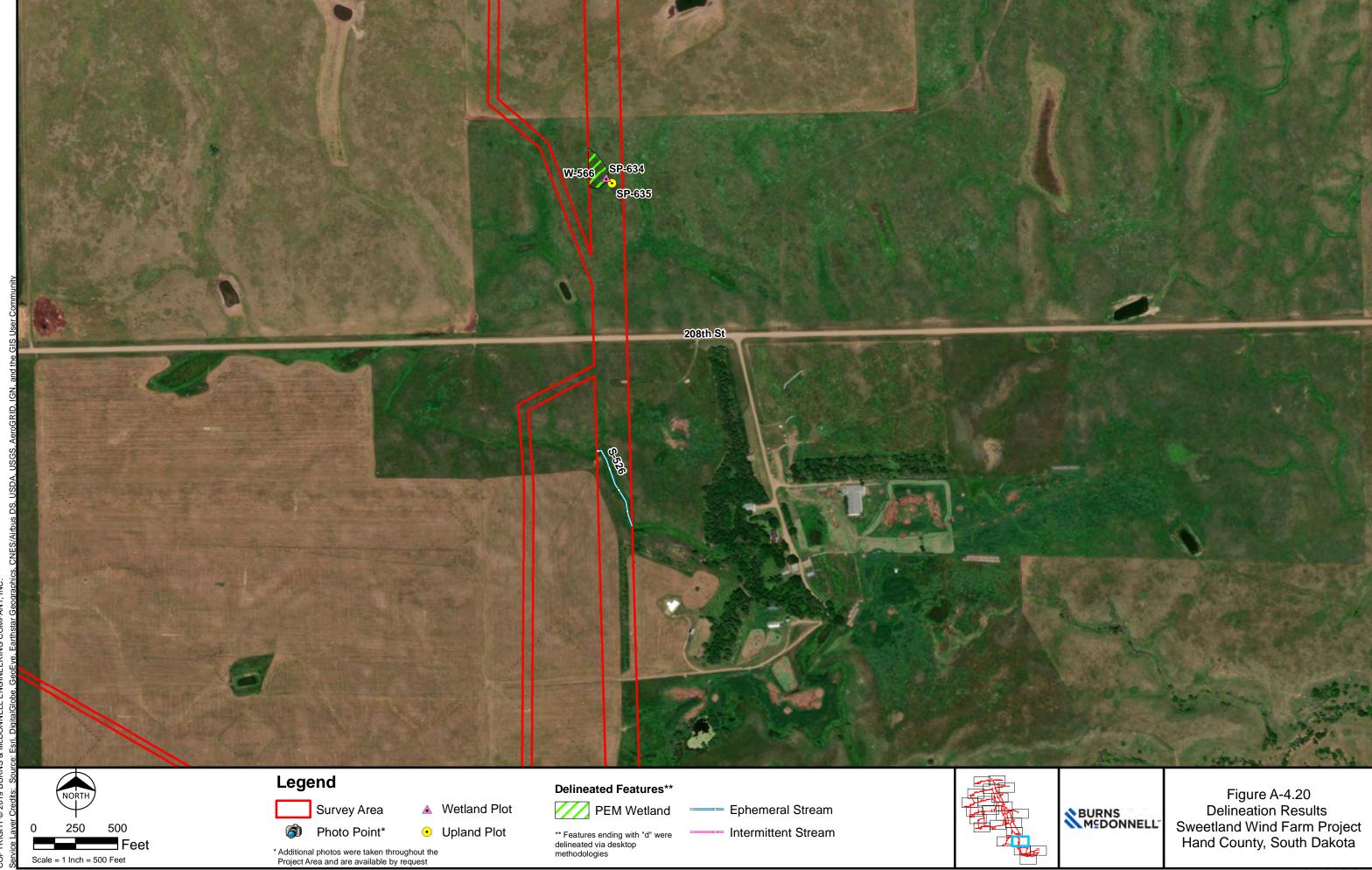








Scale = 1 Inch = 500 Feet



APPENDIX B - ROUTINE WETLAND DETERMINATION DATA FORMS, **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
Investigator(s): _ R. Williams; A. Woehler	Section, Township, Range: S3, T110N, R66W	
Landform (hillslope, terrace, etc.) toeslope		lope (%): <u>5 %</u>
Subregion (LRR): Northern Great Plains Spring Wheat R	tegion Lat: 44.355968 Long: -98.756745 Dat	um: NAD83
	NWI Classification: NA	
Are climate/hydrologic conditions on the site typical for this t year?		
Vegetation Soil Hydrold	Pgy Are "Normal Circumstances" present? ☐ Yes	□ No
Significantly Disturbed? Naturally Problematic?	(If needed, explain any answers in Rer	narks)
·	g sampling point locations, transects, important feature	es, etc.
Hydrophytic Vegetation Present?	Remarks: Upland confirmation plot adjacent to PEM W-004.	
VEGETATION – Use scientific names of plants		
Tree Stratum (Plot size: 30')	Absolute Dominant Indicator Dominance Test Workshee Scover Species? Status	:t:
1	% Number of Dominant Specie	s that
2	are OBL, FACW, or FAC (excluding FAC-):	0_(A)
3	I LOTAL NUMBER OF LIGHTNANT	, , ,
4	——————————————————————————————————————	1_(B)
	0 % = Total Cover Percent of Dominant Specie	s that
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	are OBL, FACW, or FAC:	0%_(A/B)
1	% Providence Index Worksho	
2. 3.	Frevalence index workshe	et:
4.	% Total % Cover of:	Multiply by:
5.	% OBL species	% x 1 = <u>0</u>
	0 % = Total Cover FACW species	% x 2 = <u>0</u>
Herb Stratum (Plot size: <u>5'</u>)		% x 3 = <u>0</u> % x 4 = 0
1. <u>Bromus inermis</u>		%
2. Persicaria sp. *	5 % N FAC Column Totals: 0	% (A) 0 (B)
3. Bromus arvensis	5 % N FACU Prevalence Index – B/A –	.,,
4. <u>Medicago lupulina</u>	2 % N FACU	
5	Hydrophytic Vegetation Inc	dicators:
6	% 1 Rapid Test for Hydroph	ytic Vegetation
8.	% 2 Dominance Test is >50	%
9.	3 Prevalence Index is ≤3.	
10	%	
Woody Vine Stratum (Plot size: 30')	97 % = Total Cover supporting data in Remarks or	on a separate sheet)
1	Problematic Hydrophytic	
2.	% Indicators of hydric soil and must be present, unless dist	wetland hydrology
	0 % = Total Cover	and or problematic
Bare Ground in Herb Stratum	Hydrophytic Vegetation Pres	
	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	is assumed. Pnotograph U-1.	

Depth Matrix					absence of indicators.)	
, i , —			lox Features		_	
(inches) Color (moist)		Color (moist)	% Type ¹	Loc ²	Texture	Remarks
0-12 5YR 2.5/1	80	5YR 4/6	20 C	M	silty clay loam	
						
						
¹ Type: C=Concentration, D=De	pletion, RM=R	educed Matrix, CS=	=Covered or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil Indicators: (Appli	cable to all LF	RRs, unless otherv	vise noted.)		Indicators for Problem	atic Hydric Soils ³ :
☐ Histosol (A1)		☐ Sandy Gley	ed Matrix (S4)		1 cm Muck (A9) (LRF	R I, J)
☐ Histic Epipedon (A2)		☐ Sandy Redo			☐ Coast Prairie Redox	(A16) (LRR F, G, H)
☐ Black Histic (A3)		☐ Stripped Ma	atrix (S6)		☐ Dark Surface (S7) (L	RR G)
☐ Hydrogen Sulfide (A4)		☐ Loamy Muc	ky Mineral (F1)		☐ High Plains Depressi	
☐ Stratified Layers (A5) (LRR I		☐ Loamy Gley			(LRR H outside of I	•
1 cm Muck (A9) (LRR F, G, I		☐ Depleted Ma			Reduced Vertic (F18)	
Depleted Below Dark Surfac	e (A11)	Redox Dark	` ,		Red Parent Material	
☐ Thick Dark Surface (A12)			ark Surface (F7)		☐ Very Shallow Dark St☐ Other (Explain in Rer	,
☐ Sandy Mucky Mineral (S1)☐ 2.5 cm Mucky Peat or Peat (C2) /I BB C !!	Redox Depr	essions (F8) Depressions (F16)		_ ` `	•
☐ 2.5 cm Mucky Peat or Peat (, ,	,	& 73 of LRR H)		³ Indicators of hydrophyti- wetland hydrology must	
☐ 5 cm Mucky Feat of Feat (S.	o) (LKK F)	(MENA 72)	a 75 of Little II)		disturbed or problematic	
Restrictive Layer (if present):					Hydric Soil Present?	
Type: compact soil	Dei	oth (inches): 12			⊠ Yes □ No	
oompact son	<u> </u>	, , 12				
HYDROLOGY						
HYDROLOGY Wetland Hydrology Indicators	:					
		check all that apply)	1		Secondary Indicators (2	? or more required)
Wetland Hydrology Indicators Primary Indicators (minimum of			_			
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1)		☐ Salt Crust (B11			☐ Surface Soil Cracks	(B6)
Wetland Hydrology Indicators Primary Indicators (minimum of			l) ebrates (B13)			(B6) Concave Surface (B8)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2)		☐ Salt Crust (B11	brates (B13) de Odor (C1)		☐ Surface Soil Cracks ☐ Sparsely Vegetated	(B6) Concave Surface (B8) 310)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)		Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dry-Season W Oxidized Rhizo	- bbrates (B13) de Odor (C1) ater Table (C2) ospheres on Living I	Roots (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 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dry-Season W Oxidized Rhize (where not t	brates (B13) de Odor (C1) ater Table (C2) spheres on Living Filled)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Co	(B6) Concave Surface (B8) B10) res on Living Roots (C3
Wetland Hydrology Indicators 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)		Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dry-Season W Oxidized Rhize (where not t	bbrates (B13) de Odor (C1) ater Table (C2) spheres on Living F illed) educed Iron (C4)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Co	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9)
Wetland Hydrology Indicators 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)	one required;	Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dry-Season W Oxidized Rhizo (where not t Presence of Re Thin Muck Surf	bbrates (B13) de Odor (C1) ater Table (C2) spheres on Living F illed) educed Iron (C4) face (C7)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Co Saturation Visible on Geomorphic Position	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) In (D2)
Wetland Hydrology Indicators 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 I	one required;	Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dry-Season W Oxidized Rhize (where not t	bbrates (B13) de Odor (C1) ater Table (C2) spheres on Living F illed) educed Iron (C4) face (C7)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Co Saturation Visible on Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2)
Wetland Hydrology Indicators 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)	one required;	Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dry-Season W Oxidized Rhizo (where not t Presence of Re Thin Muck Sur	bbrates (B13) de Odor (C1) ater Table (C2) espheres on Living Filled) educed Iron (C4) face (C7) in Remarks)	, ,	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible on Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D7) (LRR F)
Wetland Hydrology Indicators 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 I	one required;	Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dry-Season W Oxidized Rhizo (where not t Presence of Re Thin Muck Surt Other (Explain	bbrates (B13) de Odor (C1) ater Table (C2) espheres on Living Filled) educed Iron (C4) face (C7) in Remarks)	ed Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Co Saturation Visible on Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D5) D (LRR F)
Wetland Hydrology Indicators 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 I Water-Stained Leaves (B9)	one required; defined in the second s	Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dry-Season W Oxidized Rhizo (where not t Presence of Re Thin Muck Surt Other (Explain	bbrates (B13) de Odor (C1) ater Table (C2) espheres on Living Filled) educed Iron (C4) face (C7) in Remarks) Describe Recorde	ed Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible on Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D7) (LRR F)
Wetland Hydrology Indicators 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 I Water-Stained Leaves (B9) Field Observations:	magery (B7)	Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dry-Season W Oxidized Rhizo (where not t Presence of Re Thin Muck Surt Other (Explain	bbrates (B13) de Odor (C1) ater Table (C2) espheres on Living Filled) educed Iron (C4) face (C7) in Remarks) Describe Recorde	ed Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible on Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D7) (LRR F)
Wetland Hydrology Indicators 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 I Water-Stained Leaves (B9) Field Observations: Surface Water present?	magery (B7)	Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dry-Season W Oxidized Rhizo (where not t Presence of Re Thin Muck Surt Other (Explain	bbrates (B13) de Odor (C1) ater Table (C2) espheres on Living Filled) educed Iron (C4) face (C7) in Remarks) Describe Recorde	ed Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible on Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D5) D (LRR F)
Wetland Hydrology Indicators 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 I Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present?	magery (B7) Yes No	Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dry-Season W Oxidized Rhizo (where not t Presence of Re Thin Muck Surt Other (Explain	bbrates (B13) de Odor (C1) ater Table (C2) espheres on Living Filled) educed Iron (C4) face (C7) in Remarks) Describe Recorde	ed Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible on Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D5) D (LRR F)
Wetland Hydrology Indicators 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 I Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present?	magery (B7) Yes No	Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dry-Season W Oxidized Rhizo (where not t Presence of Re Thin Muck Surt Other (Explain	bbrates (B13) de Odor (C1) ater Table (C2) espheres on Living Filled) educed Iron (C4) face (C7) in Remarks) Describe Recorde	ed Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible on Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D7) (LRR F)
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 I Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present? (includes capillary fringe)	magery (B7) Yes No	Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dry-Season W Oxidized Rhizo (where not t Presence of Re Thin Muck Surt Other (Explain	bbrates (B13) de Odor (C1) ater Table (C2) espheres on Living Filled) educed Iron (C4) face (C7) in Remarks) Describe Recorde	ed Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible on Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D7) (LRR F)
Wetland Hydrology Indicators 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 I Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present? (includes capillary fringe) Wetland Hydrology Present?	magery (B7) Yes No	Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Dry-Season W Oxidized Rhizo (where not t Presence of Re Thin Muck Surt Other (Explain	bbrates (B13) de Odor (C1) ater Table (C2) espheres on Living Filled) educed Iron (C4) face (C7) in Remarks) Describe Recorde	ed Data (streal	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (C Saturation Visible on Geomorphic Position FAC-Neutral Test (D	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D7) (LRR F)

Project/Site: Sweetland Wind Project	City/	County: F	land County	Sampling Date: <u>6/26/2018</u>
Applicant/Owner: Sweetland Wind Farm, LLC			Sta	te: SD Sampling Point: SP-011
				ange: _ S9, T110N, R66W
Landform (hillslope, terrace, etc.) depression	Local re	- elief (concav	e, convex, n	one): concave Slope (%): 2 %
Subregion (LRR): Northern Great Plains Spring Wheat				
Soil Map Unit Name:Tetonka silt loam, 0 to 1 percent s		·		
Are climate/hydrologic conditions on the site typical for this				(If no, explain in Remarks)
year? Vegetation Soil Hydrol	••	Are "No	rmal Circum	stances" present? ⊠ Yes ☐ No
Significantly Disturbed?			(If need	ed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing	ng samplin	g point lo	cations, tra	ansects, important features, etc.
Yes No Hydrophytic Vegetation Present? □ □ Hydric Soil Present? □ □ Wetland Hydrology Present? □ □ Is the Sampled Area within a Wetland? □ □	Remarks	s: Upland co	nfirmation p	lot.
VEGETATION – Use scientific names of plants				T
Tree Stratum (Plot size: <u>30')</u> 1.	Absolute % Cover <u>%</u>	Dominant Species?	Indicator Status	Dominance Test Worksheet: Number of Dominant Species that are OBL, FACW, or FAC
2				(excluding FAC-): 0 (A)
3				Total Number of Dominant
4	<u>%</u>	Tatal Car		Species Across All Strata: 1 (B)
Sapling/Shrub Stratum (Plot size: 15') 1.	<u>0 %</u> <u>%</u>	= Total Co	/er	Percent of Dominant Species that are OBL, FACW, or FAC: 0% (A/B)
2. 3.	<u>%</u>			Prevalence Index Worksheet:
4.				Total % Cover of: Multiply by:
5.				OBL species% x 1 =0
	0 %	= Total Co	/er	FACW species% x 2 =0
Herb Stratum (Plot size: <u>5'</u>)	·			FAC species% x 3 =0
1. Bromus arvensis	60 %	Υ	<u>FACU</u>	FACU species% x 4 =0 UPL species
2. Xanthium strumarium		N	FAC	Column Totals: 0% (A) 0 (B)
3. Eleocharis compressa	5 %	<u>N</u>	FACW	
4	<u>%</u>			Prevalence Index = B/A =
5	%			Hydrophytic Vegetation Indicators:
6.	<u>%</u>			☐ 1 Rapid Test for Hydrophytic Vegetation
7	<u>%</u>			2 Dominance Test is >50%
8. 9.	<u> %</u> %			-
10.				3 Prevalence Index is ≤3.0¹
	70 %	= Total Co	/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	<u>%</u> %			¹ Indicators of hydric soil and wetland hydrology
2.	0 %	= Total Cov	/er	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 60 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photography	oh C-2.			1

Profile Desc	ription: (Describe	to the de	pth needed to docu	ment th	e indicator o	r 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 2/1	95	10YR 3/3	5	C	M	clay	
								
								
		-						
¹Type: C=Co	ncentration, D=De	oletion, RM	I=Reduced Matrix, C	S=Cove	red or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil I	ndicators: (Appli	cable to al	I LRRs, unless othe	rwise n	oted.)		Indicators for Problem	atic Hydric Soils³:
☐ Histosol (A	\1)		☐ Sandy Gle	eyed Ma	trix (S4)		1 cm Muck (A9) (LRI	R I, J)
☐ Histic Epip	pedon (A2)		☐ Sandy Re	dox (S5)		☐ Coast Prairie Redox	(A16) (LRR F, G, H)
☐ Black Hist	` '		☐ Stripped N				☐ Dark Surface (S7) (L	RR G)
☐ Hydrogen			☐ Loamy Mu	-			☐ High Plains Depressi	
	ayers (A5) (LRR F		Loamy GI	-			(LRR H outside of	•
	k (A9) (LRR F, G, F		☐ Depleted	•	,		Reduced Vertic (F18	•
-	Below Dark Surface	e (A11)	□ Redox Da		` '		Red Parent Material	, ,
	Surface (A12)		☐ Depleted				☐ Very Shallow Dark S☐ Other (Explain in Rer	
	cky Mineral (S1)	CO) /I DD /	Redox De	•	` '			
	icky Peat or Peat (\$3 ky Peat or Peat (\$3				of LRR H)		³ Indicators of hydrophyti wetland hydrology must	
5 cm wac	ty real or real (St) (LIXIX I)	(-		disturbed or problematic	;
Restrictive L	ayer (if present):						Hydric Soil Present?	
Type:			Depth (inches):					
	dric soil indicator F	·						
HYDROLOG	Υ							
Wetland Hyd	rology Indicators	:						
Primary Indic	ators (minimum of	one require	ed; check all that app	ly)			Secondary Indicators (2	2 or more required)
☐ Surface W	ater (A1)		☐ Salt Crust (B	11)			☐ Surface Soil Cracks	(B6)
☐ High Wate			☐ Aquatic Inve	,	s (B13)		☐ Sparsely Vegetated	` '
☐ Saturation			☐ Hydrogen Su				☐ Drainage Patterns (F	
☐ Water Mai	rks (B1)		☐ Dry-Season \				☐ Oxidized Rhizosphe	res on Living Roots (C3)
☐ Sediment	Deposits (B2)		Oxidized Rhi		es on Living I	Roots (C3)	(where tilled)	
☐ Drift Depo	sits (B3)		(where no	,			Crayfish Burrows (C	
☐ Algal Mat	or Crust (B4)		☐ Presence of		` ,		☐ Saturation Visible or	
☐ Iron Depo	, ,		☐ Thin Muck S		,		☐ Geomorphic Position	
	Visible on Aerial I	magery (B	7) Dother (Explain	ın ın Rei	marks)		☐ FAC-Neutral Test (□	,
☐ Water-Sta	ined Leaves (B9)						☐ Frost-Heave Hummo	OCKS (D7) (LKK F)
Field Observ	rations:	Yes	Depth No (inches)		cribe Record ections, etc.)		m gauge, monitoring well,	aerial photos, previous
Surface Water	r present?							
Water Table	present?							
Saturation Pr	esent?							
(includes cap	illary fringe)	=	<u>-</u>					
Wetland Hyd	rology Present?		\boxtimes					
Remarks: We	tland hydrology inc	dicator D2 i	s present.	•				
	, 3,		•					

Project/Site: Sweetland Wind Project		City/County: H	and Count	у	Sampling	Date: 6/25/2018	
Applicant/Owner: Sweetland Wind Farm, LLC			S	tate: S	D Samp	oling Point: SP-501	
Investigator(s): T. Beemer, W. Hirst		Section,	Township,	Range:	S6, T111N, R66V	v	
Landform (hillslope, terrace, etc.) swale		Local relief (concar	ve, convex	, none):	concave	Slope (%): 5 %	
Subregion (LRR): Northern Great Plains Spring Wheat	t Region	Lat: 44.4540	69	Long:	-98.813009	Datum: NAD83	
Soil Map Unit Name: Betts-Java loams, steep	trogion		00	-	IWI Classification:	NA	
Are climate/hydrologic conditions on the site typical for this	s time of	year? X Yes	□No	(If no. 6	explain in Remarks.		
у по от того о				(,		,	
Vegetation Soil Hydro	ology	Are "Norn	nal Circum	stances"	present? X Yes	s □ No	
· , — — — —]	(If needed	d, explain a	ny answ	ers in Remarks.)		
,		·	•		,		
SUMMARY OF FINDINGS – Attach site map showi	ing sam	pling point locat	ions, tra	nsects,	important featur	es, etc.	
Yes N	lo R	emarks: Upland sam	nple plot.				
Hydrophytic Vegetation Present?	☑						
•	⊠						
	⊠						
Is the Sampled Area within a Wetland?	◁						
VEGETATION – Use scientific names of plants							
T 01 / (DI / : 00)	Absol		Indicator	Domina	ance Test Worksho	eet:	
Tree Stratum (Plot size: <u>30'</u>)	% Co	ver Species? <u>%</u>	Status	Numbe	r of Dominant Speci	ies that	
1 2		<u>%</u>			L, FACW, or FAC	0 (4)	
3.		<u>%</u>		(exclud	ing FAC-):	0_(A)	
4.		%			umber of Dominant		
	0	% = Total Cover			s Across All Strata:	1_(B)	
Sapling/Shrub Stratum (Plot size: 15')					t of Dominant Speci L, FACW, or FAC:	es that0%_(A/E	۵۱
1		<u>%</u>		are Obi	L, I AGW, OI I AG.	(A/L	رد
2.		<u>%</u>		Prevale	ence Index Worksh	ieet:	
3.		<u>%</u>	_	T	otal % Cover of:	Multiply by:	
4 5.	-	<u>%</u> <u>%</u>		OBL s		% x1 = 0	
5		<u>%</u> = Total Cover			species	$-\% \times 2 = 0$	
Herb Stratum (Plot size: 5')		<u>70</u> = 10tal 00vel		FAC sp		% x 3 = 0	
1. Poa pratensis	100)% Y	FACU		species	% x 4 =0	
2.		%		UPL sp		$_{0}$ % x 5 = $_{0}$	
3		<u>%</u>				<u>0</u> % (A) <u>0</u> (B)
4		<u>%</u>		Prevale	ence Index = B/A =		
5		<u>%</u>		Hydrop	hytic Vegetation I	ndicators:	
6 7.		<u>%</u>		☐ 1 Ra	apid Test for Hydrop	hytic Vegetation	
7 8		<u>%</u>			ominance Test is >5	-	
9		%		 □ 3 Pr	evalence Index is ≤	3.0 ¹	
10		<u>%</u>		_	orphological Adapta		
Woody Vine Stratum (Plot size: 30')	100) % = Total Cover				or on a separate sheet)	
1		<u>%</u>		☐ Prob	olematic Hydrophytic	c Vegetation¹ (explain)	
2		%Total Cover		1 Indica must be	tors of hydric soil ar	nd wetland hydrology sturbed or problematic	
		<u> </u>			<u> </u>	esent? Yes No	
Bare Ground in Herb Stratum 0 %				,	,		
Remarks: Hydrophytic vegetation is not present. Photogra	ph C-3.						

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	Redox (A16) (LRR F, G, I (S7) (LRR G) epressions (F16) side of MLRA 72 & 73) ic (F18)
0-6 10YR 3/2 100 Silt Loam 6-18 10YR 3/3 100 Silt Loam Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Plydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Gleyed Matrix (S4) Indicators for Prilibration Histosol (A2) Sandy Redox (S5) Coast Prairie Fill Black Histic (A3) Stripped Matrix (S6) Dark Surface (Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) High Plains Degleted Layers (A5) (LRR F, G, H) Depleted Matrix (F2) Reduced Vertic Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Red Parent Mill Depleted Dark Surface (A12) Depleted Dark Surface (F6) Red Parent Mill Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) Other (Explain 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) Indicators of hydrology wetland hydrology wetland hydrology wetland hydrology	roblematic Hydric Soils ³ 9) (LRR I, J) Redox (A16) (LRR F, G, I (S7) (LRR G) epressions (F16) side of MLRA 72 & 73) ic (F18) laterial (TF2)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Capacition: Pt.	roblematic Hydric Soils ³ 9) (LRR I, J) Redox (A16) (LRR F, G, I (S7) (LRR G) epressions (F16) side of MLRA 72 & 73) ic (F18) laterial (TF2)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Indicators for Proceedings of Proceedings of Procedings of Proced	roblematic Hydric Soils ³ 9) (LRR I, J) Redox (A16) (LRR F, G, I (S7) (LRR G) epressions (F16) side of MLRA 72 & 73) ic (F18) laterial (TF2)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2 Location: PL ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	roblematic Hydric Soils ³ 9) (LRR I, J) Redox (A16) (LRR F, G, I (S7) (LRR G) epressions (F16) side of MLRA 72 & 73) ic (F18) laterial (TF2)
Indicators for Proceedings of the Procedure of Occasion of Procedure of Procedure of Procedure of Occasion of Procedure of Procedure of Occasion of Procedure of Procedure of Occasion of Procedure of Procedure of Procedure of Occasion of Procedure of Occ	roblematic Hydric Soils ³ 9) (LRR I, J) Redox (A16) (LRR F, G, I (S7) (LRR G) epressions (F16) side of MLRA 72 & 73) ic (F18) laterial (TF2)
Histosol (A1)	roblematic Hydric Soils ³ 9) (LRR I, J) Redox (A16) (LRR F, G, I (S7) (LRR G) epressions (F16) side of MLRA 72 & 73) ic (F18) laterial (TF2)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Coast Prairie F Stripped Matrix (S6) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) I coamy Mucky Mineral (F1) Stratified Layers (A9) (LRR F, G, H) Depleted Matrix (F2) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Redox Depressions (F8) Coast Prairie F Cast Cast Cast Cast Cast Cast Cast Cast	roblematic Hydric Soils ³ 9) (LRR I, J) Redox (A16) (LRR F, G, I (S7) (LRR G) epressions (F16) side of MLRA 72 & 73) ic (F18) laterial (TF2)
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Bandy Redox (S5) Coast Prairie F Loamy Mucky Mineral (F1) High Plains De (LRR H outsi (LRR H outsi Reduced Verti Redox Dark Surface (F6) Red Parent Ma Very Shallow I Redox Depressions (F8) Coast Prairie F Coast Prairie F Dark Surface (A12) High Plains Depressions (F16) JIN Coast Prairie F Redox Surface (F1) Reduced (CHR H outsi Reduced Verti Redox Depressions (F8) JIN Coast Prairie F Redox Surface (F1) Reduced (LRR H outsi Reduced Verti Redox Dark Surface (F6) Red Parent Ma Very Shallow I Redox Depressions (F8) JIN Ciactors of hydrology MLRA 72 & 73 of LRR H) Wetland hydrology	Redox (A16) (LRR F, G, I (S7) (LRR G) epressions (F16) side of MLRA 72 & 73) ic (F18) laterial (TF2)
□ Black Histic (A3) □ Stripped Matrix (S6) □ Dark Surface (□ Hydrogen Sulfide (A4) □ Loamy Mucky Mineral (F1) □ High Plains De (LRR Houtsing Deptember of Lark Surface (A5) □ 1 cm Muck (A9) (LRR F, G, H) □ Depleted Matrix (F2) □ Reduced Verting Reduced Ver	(S7) (LRR G) epressions (F16) side of MLRA 72 & 73) ic (F18) laterial (TF2)
□ Black Histic (A3) □ Stripped Matrix (S6) □ Dark Surface (□ Hydrogen Sulfide (A4) □ Loamy Mucky Mineral (F1) □ High Plains De (LRR Houtsing Deptember of Lark Houts	(S7) (LRR G) epressions (F16) side of MLRA 72 & 73) ic (F18) laterial (TF2)
Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depleted Matrix (F2) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Red Parent Matrix (F3) Depleted Dark Surface (F7) Redox Depressions (F8) Utry Shallow I High Plains Depressions (F16) Jandicators of hydrology Wetland hydrology	epressions (F16) ide of MLRA 72 & 73) ic (F18) laterial (TF2)
□ Stratified Layers (A5) (LRR F) □ Loamy Gleyed Matrix (F2) (LRR H outsing the control of the	side of MLRA 72 & 73) ic (F18) laterial (TF2)
1 cm Muck (A9) (LRR F, G, H) □ Depleted Matrix (F3) □ Reduced Verting Reduced Verting Redox Dark Surface (F6) □ Red Parent Matrix (F3) □ Red Parent Matrix (F3) □ Red Parent Matrix (F3) □ Very Shallow In the part of the p	ic (F18) laterial (TF2)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) Some Mucky Peat or Peat (S3) (LRR F) Redox Dark Surface (F6) Redox Dark Surface (F7) Wery Shallow I Redox Dark Surface (F7) Redox Dark Surface (F7) Wery Shallow I Redox Dark Surface (F7) Redox Dark Surface (F6) Wery Shallow I Redox Dark Surface (F7) Redox Dark Surface (F7) Wery Shallow I Redox Dark Surface (F7) Redox Dark Surface (F7) Wery Shallow I Redox Dark Surface (F7) Redox Dark Surface (F7) Wery Shallow I Redox Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F7)	laterial (TF2)
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) Some Mucky Peat or Peat (S3) (LRR F) Depleted Dark Surface (F7) Redox Depressions (F8) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H) Very Shallow I Other (Explain	, ,
Sandy Mucky Mineral (S1) Som Mucky Peat or Peat (S2) (LRR G, H) Som Mucky Peat or Peat (S3) (LRR F) Control Peat (S3) (LRR F)	- a a (
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) ☐ High Plains Depressions (F16) Indicators of hydrology ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology	
5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology	•
	Irophytic vegetation and
disturbed or probl	
estrictive Layer (if present): Hydric Soil Prese	ent?
ype: Depth (inches): ☐ Yes ☑ No	
/DROLOGY	
Wetland Hydrology Indicators:	_
	ators (2 or more required)
· · · · · · · · · · · · · · · · · · ·	
L Surface Mater (A1) L Sulf Cruet (B11)	
_	` '
High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vege	getated Concave Surface
☐ High Water Table (A2) ☐ Aquatic Invertebrates (B13) ☐ Sparsely Vego ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Drainage Patt	getated Concave Surface (terns (B10)
High Water Table (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patt Dry-Season Water Table (C2) Oxidized Rhiz	getated Concave Surface (terns (B10) zospheres on Living Roots
☐ High Water Table (A2) ☐ Aquatic Invertebrates (B13) ☐ Sparsely Vego ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Drainage Patt ☐ Water Marks (B1) ☐ Dry-Season Water Table (C2) ☐ Oxidized Rhiz ☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres on Living Roots (C3) (where tilledent table)	getated Concave Surface (terns (B10) zospheres on Living Roots ed)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Drainage Patt Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Crayfish Burro	getated Concave Surface (terns (B10) zospheres on Living Roots ed) ows (C8)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Drainage Patt Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Presence of Reduced Iron (C4) Saturation Vision	getated Concave Surface (terns (B10) zospheres on Living Roots ed) ows (C8) sible on Aerial Imagery (C
High Water Table (A2) ☐ Aquatic Invertebrates (B13) ☐ Sparsely Vegation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Drainage Patt ☐ Water Marks (B1) ☐ Dry-Season Water Table (C2) ☐ Oxidized Rhiz Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Presence of Reduced Iron (C4) ☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ Sparsely Vegation Sparsely Vegat	getated Concave Surface (terns (B10) zospheres on Living Roots ed) rows (C8) sible on Aerial Imagery (C Position (D2)
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) Aquatic Invertebrates (B13) Pry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burro Geomorphic F Geomorphic F FAC-Neutral	getated Concave Surface (terns (B10) zospheres on Living Roots ed) rows (C8) sible on Aerial Imagery (C Position (D2) Test (D5)
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) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Crayfish Burro Mayer Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Crayfish Burro Saturation Vis Geomorphic F FAC-Neutral	getated Concave Surface (terns (B10) zospheres on Living Roots ed) rows (C8) sible on Aerial Imagery (C Position (D2)
High Water Table (A2) Aquatic Invertebrates (B13) Baturation (A3) Water Marks (B1) Coxidized Rhizospheres on Living Roots (C3) Algal Mat or Crust (B4) Inon Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burro Mere tilled Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burro Crayfish Burro Depth Describe Recorded Data (stream gauge, monitoring	petated Concave Surface (terns (B10) zospheres on Living Roots ed) rows (C8) sible on Aerial Imagery (C Position (D2) Test (D5) Hummocks (D7) (LRR F)
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) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burro Mere tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Geomorphic Formula Table (C2) Depth (inches) Describe Recorded Data (stream gauge, monitoring inspections, etc.), if available:	petated Concave Surface (terns (B10) zospheres on Living Roots ed) rows (C8) sible on Aerial Imagery (C Position (D2) Test (D5) Hummocks (D7) (LRR F)
High Water Table (A2)	petated Concave Surface (terns (B10) zospheres on Living Roots ed) rows (C8) sible on Aerial Imagery (C Position (D2) Test (D5) Hummocks (D7) (LRR F)
High Water Table (A2)	petated Concave Surface (terns (B10) zospheres on Living Roots ed) rows (C8) sible on Aerial Imagery (C Position (D2) Test (D5) Hummocks (D7) (LRR F)
High Water Table (A2)	petated Concave Surface (terns (B10) zospheres on Living Roots ed) rows (C8) sible on Aerial Imagery (C Position (D2) Test (D5) Hummocks (D7) (LRR F)
High Water Table (A2)	petated Concave Surface (terns (B10) zospheres on Living Roots ed) rows (C8) sible on Aerial Imagery (C Position (D2) Test (D5) Hummocks (D7) (LRR F)

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-502
Investigator(s): T. Beemer, W. Hirst	Section, Townsh	
Landform (hillslope, terrace, etc.) swale	Local relief (concave, conv	-
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.454681	Long: -98.820307 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 y	year? ⊠ Yes □ No	
Vegetation Soil Hydrology	Are "Normal Circ	umstances" present? ⊠ Yes
Significantly Disturbed?	(If needed, explain	n any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	nling point locations t	ransects important features etc
Yes No Re Hydrophytic Vegetation Present? □ ⊠	emarks: Upland sample plot	L.
Hydric Soil Present?		
Wetland Hydrology Present? □ ⊠		
Is the Sampled Area within a Wetland?		
VEGETATION – Use scientific names of plants		
Absolu	ute Dominant Indicato	r Dominance Test Worksheet:
Tree Stratum (Plot size: <u>30')</u> % Cov		
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>70</u> = 10tai 00vei	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>	_
4	<u>%</u>	
5	% = Total Cover	OBL species% x1 =0 FACW species % x2 = 0
Herb Stratum (Plot size: 5')	76 = Total Cover	FAC species
1. Poa pratensis 10	% Y FACU	FACU species% x 4 =0
2	%	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>	- ☐ 1 Rapid Test for Hydrophytic Vegetation
7	<u>%</u>	2 Dominance Test is >50%
9.	<u>%</u>	- ☐ 3 Prevalence Index is ≤3.0¹
10	<u> </u>	4 Morphological Adaptations¹ (Provide
	% = Total Cover	supporting data in Remarks or on a separate sheet)
1	<u>%</u>	☐ Problematic Hydrophytic Vegetation¹ (explain)
2	<u>%</u>	Indicators of hydric soil and wetland hydrology
_ 0	<u>%</u> = Total Cover	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.		

Profile Desc	cription: (Describe	to the dep	th needed to docu	ment th	e indicator o	or confirm the	absence of indicators.)	
Depth	Matrix		R	edox Fe	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=C	oncentration, D=De	pletion, RM=	Reduced Matrix, C	S=Cove	red or Coated	d Sand Grains	² Location: PL=Pore	Lining M=Matrix
	Indicators: (Applic						Indicators for Problem	<u> </u>
☐ Histosol		ouble to un	☐ Sandy Gle		-		1 cm Muck (A9) (LRI	•
☐ Histoson	,		☐ Sandy Re	•	. ,		☐ Coast Prairie Redox	
☐ Black His			☐ Stripped N				☐ Dark Surface (S7) (L	
	n Sulfide (A4)		☐ Loamy M	•	•		☐ High Plains Depress	,
		=)	·	-			(LRR H outside of	
☐ Stratified Layers (A5) (LRR F) ☐ Loamy Gleyed Matrix (F2) (LRR H outside of MLRA 7) ☐ 1 cm Muck (A9) (LRR F, G, H) ☐ Depleted Matrix (F3) ☐ Reduced Vertic (F18)								
	Below Dark Surface	☐ Red Parent Material						
	rk Surface (A12)	- (/)		☐ Very Shallow Dark S				
	ucky Mineral (S1)	Other (Explain in Re						
-	ucky Peat or Peat (S2) (LRR G .	Redox De				³ Indicators of hydrophyti	ic vegetation and
	cky Peat or Peat (S		,		of LRR H)		wetland hydrology must	
	`	, ,	-		-		disturbed or problematic	
Restrictive	Layer (if present):						Hydric Soil Present?	
Type:		С	epth (inches):					
HYDROLOG								
_	drology Indicators							
	cators (minimum of	one required					Secondary Indicators (2	
Surface \	` '		Salt Crust (B	,			Surface Soil Cracks	` '
	er Table (A2)		Aquatic Inve		` '		☐ Sparsely Vegetated	
☐ Saturatio	` '		Hydrogen Su		. ,		Drainage Patterns (I	•
☐ Water Ma	` '		☐ Dry-Season		, ,			res on Living Roots (C3)
	t Deposits (B2)		Oxidized Rhi (where no		es on Living	Roots (C3)	(where tilled) Crayfish Burrows (C	۵/
☐ Drift Dep			☐ Presence of		d Iron (C4)		☐ Saturation Visible or	•
	or Crust (B4)		☐ Thin Muck S				☐ Saturation Visible of ☐ Geomorphic Position	
☐ Iron Depo	` '	magany (B7)					☐ FAC-Neutral Test (□	
	n Visible on Aerial I ained Leaves (B9)	magery (b7)	out of (Expla		namo,		☐ Frost-Heave Humm	,
	. ,		Donth		" 5	15 / / /		
Field Obser	vations:	Yes 1	Depth No (inches)			ed Data (streai , if available:	m gauge, monitoring well,	aerial photos, previous
Surface Wat	er present?		\boxtimes			,,		
Water Table	·		<u> </u>					
Saturation P	•							
	oillary fringe)		△					
	drology Present?		\boxtimes					
kemarks: W	etland hydrology ind	JICATOF D'2 IS	met.					

Project/Site: Sweetland Wind Project		City/County: _ F	land Coun	ty	Sampling	Date: 6/25/2018
Applicant/Owner: Sweetland Wind Farm, LLC			S	tate: SD	Samp	oling Point: SP-503
Investigator(s): T. Beemer, W. Hirst		Section,	Township	, Range: S	 1, T111N, R67V	v
Landform (hillslope, terrace, etc.) swale	L	ocal relief (conca		, —	oncave	Slope (%): 2 %
Subregion (LRR): Northern Great Plains Spring Wheat	Region	Lat: 44.4521	87	· · · ·	98.827746	Datum: NAD83
Soil Map Unit Name: Betts-Java loams, steep	rtogion	44.4021	01	- · <u> </u>	Classification:	R4SBC
Are climate/hydrologic conditions on the site typical for this	time of vea	ar? 🛛 Yes	□No	(If no. expl	ain in Remarks.	
,	,		_	(-, -		,
Vegetation Soil Hydro	ology	Are "Nor	mal Circun	nstances" pre	esent? 🛛 Yes	☐ No
Significantly Disturbed?	_	(If neede	d, explain a	any answers	in Remarks.)	
Naturally Problematic?	_		•		•	
SUMMARY OF FINDINGS – Attach site map showing	ng sampl	ing point loca	tions, tra	nsects, im	portant featur	es, etc.
Yes No	o Rem	narks: Sample plo	ot located i	n PEM W-50	1.	
Hydrophytic Vegetation Present?						
Hydric Soil Present?]					
Wetland Hydrology Present?]					
Is the Sampled Area within a Wetland?]					
VEGETATION – Use scientific names of plants						
	Absolute	e Dominant	Indicator	Dominance	e Test Workshe	et:
Tree Stratum (Plot size: <u>30'</u>)	% Cover		Status			
1	%	· · · · · · · · · · · · · · · · · · ·			Dominant Speci ACW, or FAC	es that
2	%			(excluding		(A)
3.	%			Total Numb	per of Dominant	
4	0 %			Species Ac	ross All Strata:	(B)
Sapling/Shrub Stratum (Plot size: 15')				Percent of	Dominant Speci	es that
1.	%	•		are OBL, F.	ACW, or FAC:	(A/B)
2.	%					
3.	%			Prevalence	e Index Worksh	eet:
4	%	<u> </u>		Total	% Cover of:	Multiply by:
5	%			OBL speci		_% x 1 = <u>0</u>
	0 %	= Total Cove	r	FACW speci		$-\%$ \times 2 = 0 \times 3 = 0
Herb Stratum (Plot size: <u>5'</u>)		.,	=	FACU speci		-%
1. Spartina pectinata	90 %		FACW	UPL speci		% x 5 = 0
2. <u>Carex sp.*</u>	10_% %		<u>FAC</u>	Column To	otals:	0 % (A) 0 (B)
3 4	<u></u>			Prevalence	e Index = B/A =	
5	%				ic Vegetation I	
6.	%			Пушорпус	ic vegetation i	idicators.
7	%	<u> </u>		□ 1 Rapid	Test for Hydrop	hytic Vegetation
8	%			2 Domir	nance Test is >5	0%
9	%			☐ 3 Preva	lence Index is ≤	3.0 ¹
10.	% 100 %		<u> </u>		nological Adapta data in Remarks d	tions ¹ (Provide or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%	•		☐ Problem	natic Hydrophytic	c Vegetation¹ (explain)
2	%	· ·		1 Indicators	of hydric soil ar	nd wetland hydrology
	0 %	= Total Cove	r			sturbed or problematic
Bare Ground in Herb Stratum0 %				Hydrophytic	c Vegetation Pre	esent? 🛛 Yes 🗌 No
Remarks: Rapid test for hydrophytic vegetation is met. * Ca			lentified pa	ast genus. Mo	ost Carex specie	s in this region
are Facultative or wetter, therefore, an indicator of FAC is a	assumed. F	Photograph C-5.				

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)											
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) ☐ 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)	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 presence 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)										
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)										
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)										
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 (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 No (inches) Describe Recorded Data (stream inspections, etc.), if available Surface Water 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?	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)										
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) Dry-Season Water Table (C2) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Depth (inches) Describe Recorded Data (stream) Inspections, etc.), if available Surface Water present? Saturation Present? Saturation Present? Winder Table present? Saturation Present? Simple Mater apply) Aquatic Invertebrates (B13) Aquatic Invertebrates	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) □ 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? □ □ Depth (inches) Water Table present? □ □ Depth (inches) Saturation Present? □ □ Depth (inches) (includes capillary fringe) □ □ Depth (inches) Wetland Hydrology Present? □ □ Depth (inches)	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)										

Project/Site: Sweetland Wind Project	(City/County: 1	Hand Coun	ty	Sampling	Date: 6/25/2018			
Applicant/Owner: Sweetland Wind Farm, LLC State: SD Sampling Point: SP-504									
Investigator(s): T. Beemer, W. Hirst		Section			S1, T111N, R67W				
Landform (hillslope, terrace, etc.) toeslope	Lo	cal relief (conc		_	none	Slope (%): 3 %			
Subregion (LRR): Northern Great Plains Spring Whea		Lat: 44.452		Long:	-98.827764	Datum: NAD83			
Soil Map Unit Name: Betts-Java loams, steep	it Negion	44.452	243		VI Classification:	NA NA			
Are climate/hydrologic conditions on the site typical for this	s time of year	r? 🛛 Yes	□No		xplain in Remarks.)				
7 to diffication of the disc typical for the	o timo or you	. 🔼 100		(11 110, 02	Aprairi i i recinante.	,			
Vegetation Soil Hydr	rology	Are "Noi	rmal Circun	nstances" p	oresent? 🛛 Yes	☐ No			
Significantly Disturbed?		(If neede	ed, explain	any answe	rs in Remarks.)				
				-					
SUMMARY OF FINDINGS – Attach site map show	ing sampli	ng point loca	ations, tra	ınsects, i	mportant featur	es, etc.			
Yes	No Rema	arks: An upland	plot adiace	ent to PEM	W-501.				
Yes No Remarks: An upland plot adjacent to PEM W-501. Hydrophytic Vegetation Present?									
Hydric Soil Present?	\boxtimes								
Wetland Hydrology Present?									
Is the Sampled Area within a Wetland?	\boxtimes								
VEGETATION – Use scientific names of plants	'								
VEGETATION - Ose scientific flames of plants									
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Domina	nce Test Workshe	et:			
1(Flot \$12e. <u>50</u>)	0/	Species:	Status		of Dominant Speci	es that			
2.					, FACW, or FAC ng FAC-):	0 (A)			
3.						<u>U_</u> (A)			
4.	%				mber of Dominant Across All Strata:	1_(B)			
	0 %	= Total Cove	er	-		·			
Sapling/Shrub Stratum (Plot size: 15')					of Dominant Specie , FACW, or FAC:	es tnat 0%_(A/B)			
1.	%					(
2				Prevaler	nce Index Worksh	eet:			
3. 4.				Tot	al % Cover of:	Multiply by:			
4 5.	<u> </u>			OBL spe		% x 1 = 0			
	0 %	= Total Cove	er	FACW s	species	% x 2 = 0			
Herb Stratum (Plot size: 5')				FAC spe		_% x 3 =0			
1. Poa pratensis	70 %	Y	FACU	FACU s		% x 4 = 0			
2. Euphorbia sp.*	10 %	<u>N</u>		UPL spe		_% x 5 =0 _0% (A)0 (B)			
3	%					<u> </u>			
4	%			Prevalei	nce Index = B/A =				
5				Hydroph	ytic Vegetation Ir	ndicators:			
6				☐ 1 Rap	oid Test for Hydrop	hytic Vegetation			
8.				☐ 2 Dor	ninance Test is >5	0%			
9.	0.4				valence Index is ≤3				
10	%			_					
Woody Vine Stratum (Plot size: 30')	80 %	= Total Cove	er		phological Adaptat g data in Remarks o	or on a separate sheet)			
1	%			☐ Proble	ematic Hydrophytic	Vegetation1 (explain)			
2	<u>%</u> 0 %	= Total Cove				d wetland hydrology turbed or problematic			
Bare Ground in Herb Stratum 20 %				Hydrophy	ytic Vegetation Pre	sent? Yes No			
Remarks: Hydrophytic vegetation is not present. * Euphor	rbia species o	could not be ide	entified nas	taenus na	indicator is given	Photograph C-6			
Lupitol	spooloo (. 90/100, 110		g. april 0 0.			

Profile Desc	ription: (Describe	to the de	oth needed	to docum	ent the	indicator or	confirm the	absence of indicators.)	
Depth	Matrix			Rec	lox Fea	tures			
(inches)	Color (moist)	%	Color (r	noist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 3/2	100	,					Silt Loam	
6-18	10YR 4/3	100						Silt Loam	
								<u> </u>	
- 7 '	oncentration, D=De						Sand Grains	² Location: PL=Pore	
I	ndicators: (Applic	cable to al				-		Indicators for Problem	•
☐ Histosol (,			Sandy Gley		rix (S4)		1 cm Muck (A9) (LRI	
☐ Histic Epi				Sandy Red				☐ Coast Prairie Redox	
☐ Black Hist	` '			Stripped Ma				☐ Dark Surface (S7) (L	,
Hydrogen				Loamy Muc	-			☐ High Plains Depressi (LRR H outside of	
	Layers (A5) (LRR F			Loamy Gley				•	•
	k (A9) (LRR F, G, F			Depleted M	,	•		☐ Reduced Vertic (F18)	
	Below Dark Surface	e (A11)		Redox Dark		` '		☐ Red Parent Material☐ Very Shallow Dark S	
	k Surface (A12)			Depleted D				Other (Explain in Rer	
_	icky Mineral (S1)	20) // DD /		Redox Dep		` '			
	ucky Peat or Peat (\$3 ky Peat or Peat (\$3		∍ , ਜ) ⊔	High Plains (MLRA 72		sions (F16)		³ Indicators of hydrophyti	
	ky Peat of Peat (53) (LKK F)		(MLIXA 12	Q 73 01	LIXIX II)		wetland hydrology must disturbed or problematic	
Restrictive L	ayer (if present):							Hydric Soil Present?	
Type:			Depth (inch	nes):				☐ Yes ☐ No	
.,,,		_	(
Remarks: No	hydric soil indicato	r is presen	t.						
HYDROLOG	Υ								
Wetland Hyd	Irology Indicators	:							
Primary Indic	ators (minimum of	one require	ed; check a	ll that apply	<u>)</u>			Secondary Indicators (2	or more required)
☐ Surface V	/ater (A1)		□Sal	t Crust (B1	1)			☐ Surface Soil Cracks	(B6)
☐ High Wate	` '			uatic Inverte	,	(B13)		☐ Sparsely Vegetated	'
☐ Saturation				drogen Sulf				☐ Drainage Patterns (E	
☐ Water Ma	rks (B1)		-	-Season W				_ •	res on Living Roots (C3)
☐ Sediment	Deposits (B2)		☐ Oxi	dized Rhizo	sphere	s on Living R	loots (C3)	(where tilled)	. ,
☐ Drift Depo	sits (B3)		()	where not t	illed)	•		☐ Crayfish Burrows (C	
☐ Algal Mat	or Crust (B4)			sence of R		` '		☐ Saturation Visible or	n Aerial Imagery (C9)
☐ Iron Depo	sits (B5)			n Muck Sur	•	,		Geomorphic Position	
☐ Inundation	n Visible on Aerial I	magery (B	$r_{)} \square \text{ Oth }$	ner (Explain	in Rem	arks)		FAC-Neutral Test (D	,
☐ Water-Sta	ined Leaves (B9)							☐ Frost-Heave Hummo	ocks (D7) (LRR F)
Field Observ	/ations:	V		Depth				m gauge, monitoring well,	aerial photos, previous
		Yes	`	nches)	inspe	ections, etc.),	if available:		
Surface Water	er present?								
Water Table			\boxtimes						
Saturation Pr									
(includes cap	illary fringe)								
Wetland Hyd	drology Present?		\boxtimes						
Remarks: Hy	drology indicators a	are not pres	sent.						
1									

Project/Site: Sweetland Wind Project		City/County:	Hand Coun	ty	Sampling Date: 6/25/2018	
Applicant/Owner: Sweetland Wind Farm, LLC		_		State: SD	Sampling Point: SP-505	
Investigator(s): T. Beemer, W. Hirst		Section	n, Township		T111N, R67W	
Landform (hillslope, terrace, etc.) depression	L	ocal relief (cond	cave, conve	,	cave Slope (%): 0 %	
Subregion (LRR): Northern Great Plains Spring Wheat Re	eaion	Lat: 44.453	3695	Long: 98.8		
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 percentage of the second seco					lassification: PEM1A	
Are climate/hydrologic conditions on the site typical for this tim			□No	(If no, explair	n in Remarks.)	
Vegetation Soil Hydrolog	gy	Are "No	rmal Circun	nstances" prese	ent? ⊠ Yes □ No	
Significantly Disturbed? Naturally Problematic?		(If need	ed, explain	any answers in	Remarks.)	
, – – –	campl	ing point loc	ations tra	neacte impo	ortant foatures, etc	
SUMMARY OF FINDINGS – Attach site map showing					Train realures, etc.	
Yes No Hydrophytic Vegetation Present?	Rem	arks: Upland co	onfirmation	plot.		
Hydric Soil Present?						
Wetland Hydrology Present?						
Is the Sampled Area within a Wetland?						
VECETATION . Has acientific names of plants						_
VEGETATION – Use scientific names of plants	A l l1 -	D	La alla a ta a	B	T(M/	
	Absolute % Cover		Indicator Status		Test Worksheet:	
1	%	•		Number of Do	ominant Species that	
2.	%	<u> </u>		(excluding FA	•	
3	%			Total Number		
4	%			Species Acros		
Continue/Charle Ctuations (District AC)	0 %	= Total Cove	er	Percent of Do	ominant Species that	
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1	%			are OBL, FAC		3)
2.	%					
3.	%				ndex Worksheet:	
4	<u>%</u>	! <u></u>		Total %	Cover of: Multiply by:	
5	%			OBL species		
	0 %	= Total Cove	er	FACW species FAC species		
Herb Stratum (Plot size: <u>5'</u>)	400.0/	V	FAOLI	FACU species		
1. <u>Poa pratensis</u> 2.	100 % %		<u>FACU</u>	UPL species	% x 5 = 0	
3				Column Tota	als: <u>0</u> % (A) <u>0</u> (B))
4.	%			Prevalence I	ndex = B/A =	
5	%			Hydrophytic	Vegetation Indicators:	
6	%				_	
7	%				est for Hydrophytic Vegetation	
8 9	<u>%</u>				nce Test is >50%	
9					nce Index is ≤3.01	
Woody Vine Stratum (Plot size: 30')	100 %		er		ogical Adaptations ¹ (Provide a in Remarks or on a separate sheet)	
1	%			☐ Problemat	tic Hydrophytic Vegetation ¹ (explain)	
2.	0 %		er		f hydric soil and wetland hydrology ent, unless disturbed or problematic	
Dave Crewal in Horb Chroture 2007				Hydrophytic V	/egetation Present? ☐ Yes 🛛 No	,
Bare Ground in Herb Stratum 0 %						
Remarks: No test is met. Photograph C-7.						

		in needed to docum	ient the indicator c	or confirm the	absence of indicators.)	
Depth Matri:	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	ntic Hydric Soils ³ :
☐ Histosol (A1)		☐ Sandy Gley	yed Matrix (S4)		1 cm Muck (A9) (LRR	l, 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 Dari	, ,		☐ 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	
	, (<u></u> ,	`	,		disturbed or problematic	oo processi, assees
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 of Surface Water (A1)		☐ Salt Crust (B1	1)		Surface Soil Cracks ([B6)
Wetland Hydrology Indicator Primary Indicators (minimum of 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)
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)
Wetland Hydrology Indicators Primary Indicators (minimum of the content of the c		☐ 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 Indicators Primary Indicators (minimum of the content of the c		☐ 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 content of the co		☐ 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) 3) Aerial Imagery (C9)
Wetland Hydrology Indicator Primary Indicators (minimum of the content of the co	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) 3) Aerial Imagery (C9) (D2)
Wetland Hydrology Indicator Primary Indicators (minimum of the content of the co	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) 3) Aerial Imagery (C9) (D2) 5)
Wetland Hydrology Indicator Primary Indicators (minimum of the content of the co	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) educed 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) (B) Aerial Imagery (C9) (D2) (D2) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C
Wetland Hydrology Indicator Primary Indicators (minimum of the 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 Aeria Water-Stained Leaves (B9)	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) educed 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) (B) Aerial Imagery (C9) (D2) (D2) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C
Wetland Hydrology Indicator Primary Indicators (minimum of the 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 Aeria Water-Stained Leaves (B9)	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) (B) Aerial Imagery (C9) (D2) (D2) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C
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	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) (B) Aerial Imagery (C9) (D2) (D2) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C
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 Aeria 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) (B) Aerial Imagery (C9) (D2) (D2) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C
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) (B) Aerial Imagery (C9) (D2) (D2) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C
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 Aeria 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) (B) Aerial Imagery (C9) (D2) (D2) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C
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) (B) Aerial Imagery (C9) (D2) (D2) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C
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) (B) Aerial Imagery (C9) (D2) (D2) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C

Project/Site: Sweetland Wind Project	Ci	ty/County: I	Hand Coun	ty	Sampling l	Date: 6/25/2018
Applicant/Owner: Sweetland Wind Farm, LLC		_		State: SD	Samp	ling Point: SP-515
Investigator(s): T. Beemer, W. Hirst		Section	, Township	, Range:	S6, T111N, R66W	
Landform (hillslope, terrace, etc.) depression	Loc	al relief (conc		, –	concave	Slope (%): 10 %
Subregion (LRR): Northern Great Plains Spring Wheat		Lat: 44.442		_	-98.820747	Datum: NAD83
C 114	rtogion		314		/I Classification:	NA NA
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 p Are climate/hydrologic conditions on the site typical for this			П №		plain in Remarks.)	
7 to similate riyare legic contailers on the cite typical for the	timo or your.			(11 110, 04)	piam in reomane.)	
Vegetation Soil Hydro	ology	Are "No	rmal Circun	nstances" pı	resent? X Yes	☐ No
Significantly Disturbed?		(If neede	ed, explain	any answers	s in Remarks.)	
Naturally Problematic?	_			-		
SUMMARY OF FINDINGS – Attach site map showi	ng samplin	g point loca	ations, tra	ınsects, in	nportant featur	es, etc.
Yes N	o Remar	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 - 03e scientific fiames of plants				Τ		
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominan	ce Test Workshe	et:
1	<u>%</u>				of Dominant Specie	es that
2	<u>%</u>			(excluding	FACW, or FAC a FAC-):	0 (A)
3	<u>%</u>				nber of Dominant	(/
4	%				Across All Strata:	1_(B)
	0 %	= Total Cove	er		of Dominant Specie	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	0/				FACW, or FAC:	0%_(A/B)
1 2	<u>%</u> <u>%</u>					
3.				Prevalen	ce Index Worksh	eet:
4.	%			Tota	al % Cover of:	Multiply by:
5.	%			OBL spe		% x 1 =0
	0 %	= Total Cove	er	FACW sp		_% x 2 =0
Herb Stratum (Plot size: <u>5'</u>)				FAC spe		_% x 3 = <u>0</u> % x 4 = 0
1. Poa pratensis	<u>90 %</u>	<u>Y</u>	<u>FACU</u>	UPL spec		$-\frac{70}{8} \times 5 = 0$
2. <u>Salvia sp.*</u>	<u>5 %</u> %	<u>N</u>		Column 7		0 (A) 0 (B)
3.	%			Prevalen	ce Index = B/A =	
4 5					ytic Vegetation In	
6.	%			пуагорпу	ytic vegetation in	idicators:
7	<u>%</u>			☐ 1 Rapi	id Test for Hydropl	hytic Vegetation
8	%			2 Dom	ninance Test is >50	0%
9	<u>%</u>			☐ 3 Prev	alence Index is ≤3	3.0 ¹
10.	<u>%</u> 95 %	= Total Cove	er		ohological Adaptat g data in Remarks o	tions ¹ (Provide or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%			☐ Proble	matic Hydrophytic	Vegetation ¹ (explain)
2.	// 0			1 Indicator	rs of hydric soil an	d wetland hydrology
	0 %	= Total Cove	er			turbed or problematic
Bare Ground in Herb Stratum5 %				Hydrophy	tic Vegetation Pre	sent? 🗌 Yes 🛛 No
Remarks: Hydrophytic vegetation is not present. * Salvia s	pecies could	not be identific	ed beyond	genus, there	efore, no indicator	status is
listed. Photograph C-8.						

Profile Desc	ription: (Describe	to the dep	th needed to docu	ment the	e indicator o	or confirm the	absence of indicators.)	
Depth	Matrix		Re	edox Fea				
(inches)	Color (moist)	<u>%</u>	Color (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=C	oncentration, D=De	pletion, RM=	Reduced Matrix, C	S=Cover	ed or Coate	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil	Indicators: (Applie	cable to all	LRRs, unless othe	rwise n	oted.)		Indicators for Problem	natic Hydric Soils ³ :
☐ Histosol (☐ Sandy Gle		-		1 cm Muck (A9) (LR	R I. J)
☐ Histic Epi	,		☐ Sandy Re	•	, ,		☐ Coast Prairie Redox	
☐ Black His			☐ Stripped N				☐ Dark Surface (S7) (L	
☐ Hydroger	Sulfide (A4)		☐ Loamy Mu	•	•		☐ High Plains Depress	ions (F16)
	Layers (A5) (LRR F	=)	☐ Loamy Gl	-			(LRR H outside of	MLRA 72 & 73)
	k (A9) (LRR F, G, I		☐ Depleted I	-			Reduced Vertic (F18	
	Below Dark Surface		☐ Redox Da				Red Parent Material	, ,
☐ Thick Dar	k Surface (A12)		☐ Depleted I		` '		☐ Very Shallow Dark S	
☐ Sandy Mi	ucky Mineral (S1)		☐ Redox De				☐ Other (Explain in Re	marks)
	ucky Peat or Peat (, ,		³ Indicators of hydrophyt	ic vegetation and
5 cm Muc	ky Peat or Peat (S3	B) (LRR F)	(MLRA 7	2 & 73 o	f LRR H)		wetland hydrology must disturbed or problematic	be present, unless
Restrictive	_ayer (if present):						Hydric Soil Present?	
Type:		D	epth (inches):				☐ Yes ☐ No	
HYDROLOG								
_	drology Indicators							
	•	one required	l; check all that appl				Secondary Indicators (2	
Surface V	` '		Salt Crust (B	,			Surface Soil Cracks	` '
_	er Table (A2)		☐ Aquatic Inver		` ,		☐ Sparsely Vegetated	
☐ Saturation	` '		☐ Hydrogen Su				☐ Drainage Patterns (•
☐ Water Ma	` '		☐ Dry-Season \		` ,	D 1 - (OO)	(where tilled)	res on Living Roots (C3)
	Deposits (B2)		Oxidized Rhiz		es on Living	Roots (C3)	☐ Crayfish Burrows (C	:8)
Drift Depo	or Crust (B4)		☐ Presence of	•	l Iron (C4)		☐ Saturation Visible or	
☐ Rigal Mat			☐ Thin Muck St				☐ Geomorphic Positio	
	n Visible on Aerial I	magery (B7)					FAC-Neutral Test (
	ained Leaves (B9)						☐ Frost-Heave Humm	ocks (D7) (LRR F)
Field Obser	vations:	., .	Depth	Des	cribe Record	ed Data (strear	m gauge, monitoring well,	aerial photos, previous
	_		No (inches)	insp	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 ind	dicator D2 is	present.					

Project/Site: Sweetland Wind Project	С	ty/County:	Hand Coun	ty Sampling Date: 6/25/2018
Applicant/Owner: Sweetland Wind Farm, LLC	<u></u>			State: SD Sampling Point: SP-516
Investigator(s): T. Beemer, W. Hirst		Section	, Township	
Landform (hillslope, terrace, etc.) depression	Loc	al relief (conc		
Subregion (LRR): Northern Great Plains Spring Wheat		Lat: 44.443		Long: -98.819913 Datum: NAD83
- North of Gat Figure Opining Wilload			000	NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this to			□ No	(If no, explain in Remarks.)
The difficulty divided to the site typical for this t	anno or your	. 🖂 100	□ 140	(II no, explain in remaine.)
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	ng samplin	g point loca	ations, tra	insects, important features, etc.
Yes No	Rema	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	
1	<u></u>			Number of Dominant Species that are OBL, FACW, or FAC
2	%			(excluding FAC-):(A)
3.	<u>%</u>			Total Number of Dominant
4	%	T-1-1-0		Species Across All Strata:(B)
Conline/Chruh Ctrotum (Diet size, 45')	0 %	= Total Cove	er	Percent of Dominant Species that
Sapling/Shrub Stratum (Plot size: 15') 1	%			are OBL, FACW, or FAC:(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 % x 4 =0
1. <u>Spartina pectinata</u>	90 %	<u> </u>	<u>FACW</u>	UPL species
2	<u>%</u>			Column Totals: 0 % (A) 0 (B)
3	<u>%</u>			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	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>)	0/			☐ Problematic Hydrophytic Vegetation¹ (explain)
1	<u>%</u> %			Indicators of hydric soil and wetland hydrology
2.	0 %	= Total Cove	er	must be present, unless disturbed or problematic
				Hydrophytic Vegetation Present? ⊠ Yes ☐ No
Bare Ground in Herb Stratum				,
Remarks: Rapid test for hydrophytic vegetation is met. Pho-	tograph C-9	•		

Profile Desc	cription: (Describe	to the dep	oth needed to docu	ment th	e indicator o	or confirm the	absence of indicators.)	
Depth	Matrix		R	edox Fe				
(inches)	Color (moist)	<u>%</u>	Color (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=C	oncentration, D=De	pletion, RM	=Reduced Matrix, C	S=Cove	red or Coate	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless other	rwise n	oted.)		Indicators for Problem	atic Hydric Soils ³ :
☐ Histosol (A1)		☐ Sandy Gle	eved Ma	trix (S4)		1 cm Muck (A9) (LRI	R I. J)
☐ Histic Epi	•		☐ Sandy Re	•	` '		☐ Coast Prairie Redox	
☐ Black His			Stripped N				☐ Dark Surface (S7) (L	
☐ Hydroger	Sulfide (A4)		☐ Loamy Mı	ucky Min	neral (F1)		☐ High Plains Depressi	
☐ Stratified	Layers (A5) (LRR F	=)	☐ Loamy GI	eyed Ma	atrix (F2)		(LRR H outside of	· · · · · · · · · · · · · · · · · · ·
1 cm Mud	ck (A9) (LRR F, G, I	H)	□ Depleted	Matrix (F	=3)		Reduced Vertic (F18	
	Below Dark Surface	e (A11)	🛛 Redox Da		` '		Red Parent Material	` '
	rk Surface (A12)		□ Depleted				☐ Very Shallow Dark S	
-	ucky Mineral (S1)		☐ Redox De				Other (Explain in Rer	marks)
	ucky Peat or Peat (, ,		³ Indicators of hydrophyti	
☐ 5 cm Mud	cky Peat or Peat (S	3) (LRR F)	(MLRA /	2 & 73 0	of LRR H)		wetland hydrology must disturbed or problemation	be present, unless
Restrictive	Layer (if present):						Hydric Soil Present?	
Type:		I	Depth (inches):				⊠ Yes □ No	
HYDROLOG								
_	drology Indicators						0 1 1 1 7 7	
	•	one require	d; check all that app				Secondary Indicators (2	
☐ Surface V	` '		☐ Salt Crust (B	,			☐ Surface Soil Cracks	` '
	er Table (A2)		☐ Aquatic Inve		` ,		☐ Sparsely Vegetated	
☐ Saturatio	` '		☐ Hydrogen Su				☐ Drainage Patterns (,
☐ Water Ma	` '		☐ Dry-Season '☐ Oxidized Rhi		, ,	Doots (C2)	(where tilled)	res on Living Roots (C3)
☐ Drift Dep	Deposits (B2)		(where no		es on Living	Roots (C3)	☐ Crayfish Burrows (C	8)
-	or Crust (B4)		☐ Presence of		d Iron (C4)		☐ Saturation Visible or	
☐ Iron Depo	` '		☐ Thin Muck S				☐ Geomorphic Position	
	n Visible on Aerial I	magery (B7) Dther (Expla	in in Rer	marks)			
	ained Leaves (B9)		,				☐ Frost-Heave Hummo	ocks (D7) (LRR F)
Field Obser	vations:		Depth	Des	cribe Record	led Data (strea	m gauge, monitoring well,	aerial photos, previous
		Yes	No (inches)	insp	ections, etc.), if available:		
Surface Wat	er present?							
Water Table	present?		⊠					
Saturation P	resent?							
(includes cap	oillary fringe)							
Wetland Hy	drology Present?	\boxtimes						
Remarks: W	etland hydrology ind	dicators D2	and D5 are present.					
I								

Project/Site: Sweetland Wind Project	Ci	ty/County: _ _F	land Coun	ty	Sampling	Date: 6/25/2018
Applicant/Owner: Sweetland Wind Farm, LLC				tate: SD	Samp	oling Point: SP-517
Investigator(s): T. Beemer, W. Hirst		Section,	Township	, Range: S6, T		
Landform (hillslope, terrace, etc.) toeslope	Loc	 al relief (conca				Slope (%): 1 %
Subregion (LRR): Northern Great Plains Spring Whea		Lat: 44.4438		1	19407	Datum: NAD83
Soil Map Unit Name: Glenham-Propser loams, 1 to 6) + 1		ssification:	NA NA
Are climate/hydrologic conditions on the site typical for this			□No	(If no, explain	-	
, and diminate, it, and easily produces the		<u></u>		(, 5,4,5,5,		
Vegetation Soil Hydroxide	rology	Are "Nor	mal Circun	nstances" presen	it? 🛛 Yes	☐ No
Significantly Disturbed?		(If neede	d, explain	any answers in R	temarks.)	
SUMMARY OF FINDINGS – Attach site map show	ing samplin	g point loca	tions, tra	nsects, impor	tant featur	es, etc.
Yes	No Remar	ks: An upland	plot adjace	ent to PEM W-50	7 and PEM V	V-508.
	\boxtimes					
,						
Is the Sampled Area within a Wetland?						
VEGETATION – Use scientific names of plants						
·	Absolute	Dominant	Indicator	Dominance Te	est Workshe	et:
Tree Stratum (Plot size: <u>30'</u>)	% Cover	Species?	Status			
1	%			Number of Don are OBL, FACV		es that
2				(excluding FAC	,	0_(A)
3.				Total Number of	of Dominant	
4	<u>%</u> 0 %	= Total Cove	,	Species Across	s All Strata:	1_(B)
Sapling/Shrub Stratum (Plot size: 15')		= Total Cove		Percent of Don		
1	<u></u> %			are OBL, FACV	N, or FAC:	0%_(A/B)
2.	%			Prevalence Inc	day Warksh	oot
3	<u>%</u>					eet.
4				Total % C	Cover of:	Multiply by:
5	<u>%</u>			OBL species FACW species		_% x 1 = <u>0</u> % x 2 = 0
(5)	0 %	= Total Cove	ſ	FACW species	·	-%
Herb Stratum (Plot size: <u>5'</u>) 1. Poa pratensis	95 %	Υ	FACU	FACU species		% x 4 = 0
1. Poa pratensis 2	95 % %		TACO	UPL species		% x 5 = 0
3	<u></u>			Column Totals	3: <u> </u>	<u>0</u> % (A) <u>0</u> (B)
4	%			Prevalence Inc	dex = B/A =	·
5	<u></u> %			Hydrophytic V	/egetation Ir	ndicators:
6				□ 1 Donid Too	at for Usalron	hytia Vagatatian
7				_ '	, ,	hytic Vegetation
8 9.	0.1			2 Dominano		
9	<u> </u>			3 Prevalenc		
Woody Vine Stratum (Plot size: 30')	95 %	= Total Cove	·	4 Morpholog supporting data		tions ¹ (Provide or on a separate sheet)
1	<u></u> %			☐ Problemation	: Hydrophytic	C Vegetation ¹ (explain)
2.	%					d wetland hydrology
	0 %	= Total Cove	r	must be preser	nt, unless dis	turbed or problematic
Bare Ground in Herb Stratum5 %				Hydrophytic Ve	getation Pre	esent? 🗌 Yes 🛛 No
Remarks: Hydrophytic vegetation is not present. Photogra	aph C-10.					

Profile Desc	ription: (Describe	to the dep	th needed to docur	nent th	e indicator o	r confirm the	absence of indicators.)	
Depth	Matrix		Re	dox Fe	atures			
(inches)	Color (moist)	%	Color (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=Co	oncentration, D=De	pletion, RM	=Reduced Matrix, CS	S=Cove	red or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless other	rwise n	oted.)		Indicators for Problems	atic Hydric Soils³:
☐ Histosol (A1)		☐ Sandy Gle	yed Ma	atrix (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	
	Sulfide (A4)		Loamy Mu	-			☐ High Plains Depression	ons (F16)
	Layers (A5) (LRR F		Loamy Gle	-			(LRR H outside of I	•
	ck (A9) (LRR F, G, F		☐ Depleted N				☐ Reduced Vertic (F18)☐ Red Parent Material (
	Below Dark Surface	e (A11)	Redox Dai		, ,		☐ Very Shallow Dark St	,
	k Surface (A12)		☐ Depleted [☐ Redox De		, ,		☐ Other (Explain in Ren	, ,
	ucky Mineral (S1) ucky Peat or Peat (S2) (I DD C			` '			
	cky Peat or Peat (S		(MLRA 72				³ Indicators of hydrophytic wetland hydrology must	
3 cm wac	oky real of real (50	o) (LIXIX I)	(J		disturbed or problematic	
Restrictive I	Layer (if present):						Hydric Soil Present?	
Type:		[Depth (inches):				☐ Yes ☐ No	
D	data a a 9 ta ata a rada a							
Remarks.ny	dric soil indicators a	ile noi presi	zn.					
HYDROLOG	·V							
_	drology Indicators		d; check all that appl	v)			Secondary Indicators (2	or more required)
_	•	one require					_	
☐ Surface V	` '		☐ Salt Crust (B ²	,	(D.10)		☐ Surface Soil Cracks	` '
	er Table (A2)		☐ Aquatic Inver		, ,		☐ Sparsely Vegetated	
☐ Saturation☐ Water Ma	` '		☐ Hydrogen Su☐ Dry-Season V				☐ Drainage Patterns (B	res on Living Roots (C3)
	Deposits (B2)		Oxidized Rhiz		, ,	Poots (C3)	(where tilled)	les on Living Roots (C3)
☐ Drift Depo			(where not		es on Living i	(0013 (03)	☐ Crayfish Burrows (C	8)
	or Crust (B4)		☐ Presence of F	-	d Iron (C4)		☐ Saturation Visible on	
☐ Iron Depo			☐ Thin Muck Su	urface (0	C7)		☐ Geomorphic Position	• • • •
	n Visible on Aerial I	magery (B7) Dther (Explain	n in Rei	marks)		☐ FAC-Neutral Test (D	5)
☐ Water-Sta	ained Leaves (B9)	3 , (,				☐ Frost-Heave Hummo	ocks (D7) (LRR F)
Field Obser	vations:	.,	Depth				m gauge, monitoring well,	aerial photos, previous
		_	No (inches)	insp	pections, etc.)	, if available:		
Surface Wat	er present?							
Water Table	•		⊠					
Saturation P			⊠					
(includes cap		_	_					
Wetland Hy	drology Present?							
Remarks: No	hydrology indicato	r present.						

Project/Site: Sweetland Wind Project	City/County: Hand Cou	nty Sampling Date: 6/25/2018
Applicant/Owner: Sweetland Wind Farm, LLC	- ''	State: SD Sampling Point: SP-518
Investigator(s): T. Beemer, W. Hirst	Section, Townshi	
Landform (hillslope, terrace, etc.) depression	Local relief (concave, conve	
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	111110002	NWI Classification: PEM1A
Are climate/hydrologic conditions on the site typical for this time of y		
, ,		,
Vegetation Soil Hydrology	Are "Normal Circu	ımstances" present? ⊠ Yes ☐ No
Significantly Disturbed?	(If needed, explain	any answers in Remarks.)
	uliuu usiut laastisus tu	anneate immediate features at
SUMMARY OF FINDINGS – Attach site map showing sam		
	emarks: Wetland sample plo	t located in PEM W-508.
Hydrophytic Vegetation Present? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐		
Wetland Hydrology Present?		
Is the Sampled Area within a Wetland?		
VEGETATION – Use scientific names of plants		
Absolu Tree Stratum (Plot size: 30') % Cov		Dominance Test Worksheet:
1	%	Number of Dominant Species that
2.	%	are OBL, FACW, or FAC (excluding FAC-): (A)
3.	%	
4	%	Total Number of Dominant Species Across All Strata: (B)
0	<u>%</u> = Total Cover	Percent of Dominant Species that
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	0/	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
1. Spartina pectinata 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>	
8	<u>%</u>	☐ 2 Dominance Test is >50%
9	<u>%</u>	☐ 3 Prevalence Index is ≤3.0¹
90		☐ 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	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. Photograph	C-11.	

Profile Desc	ription: (Describe	to the dept	h needed to docu	ment th	e indicator c	or confirm the	absence of indicators.)	
Depth								
(inches)	Color (moist)	%	Color (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=C	oncentration, D=Dep	oletion, RM=	Reduced Matrix, C	S=Cove	red or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil	Indicators: (Applic	cable to all I	RRs, unless othe	erwise n	oted.)		Indicators for Problema	ntic Hydric Soils ³ :
☐ Histosol (A1)		☐ Sandy Gle	eyed Ma	trix (S4)		1 cm Muck (A9) (LRR	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	6)		☐ Dark Surface (S7) (LF	RR G)
	Sulfide (A4)		☐ Loamy Mi	-			☐ High Plains Depression	
	Layers (A5) (LRR F		☐ Loamy GI				(LRR H outside of M	/ILRA 72 & 73)
	k (A9) (LRR F, G, F		Depleted				Reduced Vertic (F18)	TEO)
	Below Dark Surface	e (A11)	Redox Da		` '		Red Parent Material (•
	k Surface (A12)		☐ Depleted		, ,		☐ Very Shallow Dark St☐ Other (Explain in Rem	, ,
	ucky Mineral (S1)	CO) / DD C	Redox De				•	,
	ucky Peat or Peat (\$3				essions (F16) of LRR H)		³ Indicators of hydrophytic	
5 Cm Muc	ky Peat or Peat (S3	5) (LKK F)	(INLIXA I	2 0 73 0	or ERRY II)		wetland hydrology must l disturbed or problematic	be present, unless
Restrictive	_ayer (if present):						Hydric Soil Present?	
Type:		D	epth (inches):				⊠ Yes □ No	
HYDROLOG	Υ							
Wetland Hy	drology Indicators	:						
Primary India	cators (minimum of	one required	check all that app	ly)			Secondary Indicators (2	or more required)
☐ Surface V	Vater (A1)		☐ Salt Crust (B	311)			☐ Surface Soil Cracks	B6)
	er Table (A2)		☐ Aquatic Inve	,	s (B13)		☐ Sparsely Vegetated (,
☐ Saturation			☐ Hydrogen Su				☐ Drainage Patterns (B	
☐ Water Ma			☐ Dry-Season				Oxidized Rhizospher	
☐ Sediment	Deposits (B2)		Oxidized Rhi	izospher	es on Living	Roots (C3)	(where tilled)	. ,
☐ Drift Depo	osits (B3)		(where no				Crayfish Burrows (C8	•
☐ Algal Mat	or Crust (B4)		☐ Presence of				☐ Saturation Visible on	0 , (,
☐ Iron Depo			☐ Thin Muck S				☐ Geomorphic Position	
_	n Visible on Aerial Ir	magery (B7)	☐ Other (Expla	ın ın Rer	narks)		☐ FAC-Neutral Test (D	,
☐ Water-Sta	ained Leaves (B9)						☐ Frost-Heave Hummo	CKS (D7) (LRR F)
Field Obser	vations:	Yes N	Depth lo (inches)		cribe Record ections, etc.)		am gauge, monitoring well, a	aerial photos, previous
Surface Wat	er present?		3					
Water Table	present?		<u> </u>					
Saturation P			<u> </u>					
(includes cap		•						
	drology Present?							
	etland hydrology inc		nd D5 are present.					
	,,		,					

Project/Site: Sweetland Wind Project	Ci	ty/County: _	Hand Coun	ty Sampling Date: 6/25/2018
Applicant/Owner: Sweetland Wind Farm, LLC	<u></u>			State: 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		·
Subregion (LRR): Northern Great Plains Spring Wheat R		Lat: 44.445		Long: -98.808208 Datum: NAD83
Soil Map Unit Name: Betts-Java loams, steep	egion	44.443	210	NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this tir	me of vear	? 🛛 Yes	□ No	(If no, explain in Remarks.)
The difficulty dividegle containent of the dice typical for the th	ino or your.			(ii iie, explain iii realiane.)
Vegetation Soil Hydrolo	ogy	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	g samplin	g point loca	ations, tra	insects, important features, etc.
Yes No	Remar	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				
·	Absolute	Dominant	Indicator	Dominance Test Worksheet:
	% Cover	Species?	Status	Number of Deminant Species that
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> 0 %	= Total Cove		Species Across All Strata: 1 (B)
Sapling/Shrub Stratum (Plot size: 15')	0 70	- Total Cove	ž1	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
	0 %	= Total Cove	er	FACW species% x 2 =0 FAC species
Herb Stratum (Plot size: <u>5'</u>)	100.0/	V	EACH	FACU species
1. <u>Poa pratensis</u>	100 % %	<u> </u>	<u>FACU</u>	UPL species % x 5 = 0
2				Column Totals:0% (A)0 (B)
4	%			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 10	<u>%</u> %			☐ 3 Prevalence Index is ≤3.0¹
	95 %	= 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.	// 0			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-12.			

Profile Desc	ription: (Describe	to the de	oth needed to docur	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
0-20	10YR 3/2	100					Clay Loam	
-		- ——						
	-						_	
-								
-								
¹Type: C=Co	oncentration, D=De	pletion, RM	=Reduced Matrix, CS	S=Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil I	ndicators: (Applie	cable to all	LRRs, unless other	rwise no	oted.)		Indicators for Problems	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				☐ Coast Prairie Redox (. , ,
☐ Black His	` '		Stripped M	•	•		Dark Surface (S7) (LI	
Hydrogen		_	Loamy Mu	-			High Plains Depression	ons (F16)
	Layers (A5) (LRR F		☐ Loamy Gle	-			(LRR H outside of I	•
	k (A9) (LRR F, G, I		☐ Depleted N				Red Parent Material (
	Below Dark Surface	e (A11)	☐ Redox Dai		. ,			,
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF 12) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8) ☐ Other (Explain in Remarks)							, ,	
	ucky Peat or Peat (S2) (I RR (` '		³ Indicators of hydrophytic	
	ky Peat or Peat (S3		(MLRA 72				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 presen	i.					
HADBOLOG								
HYDROLOG								
_	drology Indicators		d. ab a al. all th at a a a	\			Casaadam, ladiaataa (O	
	•	one require	d; check all that appl				Secondary Indicators (2	
Surface V	` '		☐ Salt Crust (B1	,	(5.46)		☐ Surface Soil Cracks	` '
☐ High Wat			☐ Aquatic Inver		, ,		☐ Sparsely Vegetated	
☐ Saturation	` '		☐ Hydrogen Sul				☐ Drainage Patterns (E	,
☐ Water Ma	Deposits (B2)		☐ Dry-Season V☐ Oxidized Rhiz		, ,	Poots (C3)	(where tilled)	res on Living Roots (C3)
☐ Drift Depo			(where not		55 OII LIVIIIG I	(C3)	☐ Crayfish Burrows (C8	8)
	or Crust (B4)		☐ Presence of F	-	d Iron (C4)		☐ Saturation Visible on	
☐ Iron Depo			☐ Thin Muck Su	ırface (C	C7)		☐ Geomorphic Position	• • • •
	n Visible on Aerial I	magery (B7) Dther (Explain	n in Ren	narks)		☐ FAC-Neutral Test (D	5)
☐ Water-Sta	ained Leaves (B9)	3 , (,				☐ 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 P								
(includes cap		_	_					
Wetland Hyd	drology Present?							
Remarks: Wo	etland hydrology ind	dicator D2 i	s met.					
ĺ								

Project/Site: Sweetland Wind Project	City/County:	Hand Count	y Sampling D	Date: 6/26/2018
Applicant/Owner: Sweetland Wind Farm, LLC	<u> </u>			ng Point: SP-522
Investigator(s): T. Beemer, W. Hirst	Section		Range: S12, T111N, R67W	<i></i>
Landform (hillslope, terrace, etc.) depression	Local relief (cond			Slope (%): 2 %
Subregion (LRR): Northern Great Plains Spring Wheat Region	_{in Lat: 44.440}	352	Long: -98.829151	Datum: NAD83
Soil Map Unit Name: Hoven silt loam, 0 to 1 percent slopes				PEM1C
Are climate/hydrologic conditions on the site typical for this time o	of year? X Yes	□ No	(If no, explain in Remarks.)	
Vegetation Soil Hydrology	Are "No	rmal Circum	stances" present? X Yes	☐ No
Significantly Disturbed?	(If need	ed, explain a	ny answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing sa	mpling point loc	ations tra	nsects important feature	es etc
			<u> </u>	
			ocated in PEM W-510. No uple ent agricultural fields.	and sample plot was
Hydric Soil Present?		•	· ·	
Wetland Hydrology Present? □				
Is the Sampled Area within a Wetland? □				
VEGETATION – Use scientific names of plants				
•	olute Dominant	Indicator	Dominance Test Workshee	
	Cover Species?	Status		
1	<u>%</u>		Number of Dominant Species are OBL, FACW, or FAC	s that
2	<u>%</u>		(excluding FAC-):	(A)
3	<u>%</u>		Total Number of Dominant	
4	<u>%</u> 0 % = Total Cove		Species Across All Strata:	(B)
Sapling/Shrub Stratum (Plot size: 15')	<u>0 %</u> = 10tal Cove	eı	Percent of Dominant Species	s that
1	<u> </u>		are OBL, FACW, or FAC:	(A/B)
2.	%		Dravalance Index Werkeho	
3	<u> </u>		Prevalence Index Workshe	
4	<u>%</u>		Total % Cover of:	Multiply by:
5	<u>%</u>			
	0 % = Total Cove	er		%
Herb Stratum (Plot size: <u>5'</u>) 1. <i>Alisma triviale</i> 8	80 % Y_	OBL		% x 4 = 0
2	<u>%</u>	OBL	· — —	% 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	<u>%</u>			
10.	%		3 Prevalence Index is ≤3.	
Woody Vine Stratum (Plot size: 30')	80 % = Total Cove	er	☐ 4 Morphological Adaptation supporting data in Remarks or	on a separate sheet)
1	<u>%</u>		☐ Problematic Hydrophytic	Vegetation ¹ (explain)
2	<u>%</u>		¹ Indicators of hydric soil and	
(0 % = Total Cove	er	must be present, unless distr	arbed or problematic
Bare Ground in Herb Stratum			Hydrophytic Vegetation Pres	ent? ⊠ Yes □ No
Remarks: Rapid test for hydrophytic vegetation is met. Photograp	oh C-13.			

	ription: (Describe		otti ileeded to dood			or committee	absence of maleators.		
Depth	Matrix		R	edox Feat					
(inches)	Color (moist)	<u>%</u>	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		
j 									
		· ——							
¹Type: C=Cc	ncentration D-Der	oletion PM	=Reduced Matrix, C	S-Covere	nd or Coate	4 Sand Grains	² Location: PL=Pore	Lining M-Matrix	
	· · · · · · · · · · · · · · · · · · ·		LRRs, unless othe				Indicators for Problem		
☐ Histosol (/		ouble to u			-			•	
☐ Histic Epip	,		☐ Sandy Gle ☐ Sandy Re	-	IX (34)		☐ 1 cm Muck (A9) (LRI ☐ Coast Prairie Redox		
					١				
☐ Black Hist	, ,		☐ Stripped N	•	•		☐ Dark Surface (S7) (L	•	
☐ Hydrogen		٠,	☐ Loamy Mu				☐ High Plains Depressi (LRR H outside of	ONS (F 10)	
	Layers (A5) (LRR F		☐ Loamy GI	-			Reduced Vertic (F18	-	
	k (A9) (LRR F, G, F		☐ Depleted				☐ Red Parent Material		
	Below Dark Surface	(A I I)	☐ Redox Da		` ,				
	k Surface (A12)		☐ Depleted		. ,		☐ Very Shallow Dark Surface (TF 12) ☐ Other (Explain in Remarks)		
	icky Mineral (S1)	20) /I PP /	Redox De				• •	,	
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) ☐ High Plains Depressions (F16) ☐ 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless									
☐ 5 cm iviuc	ky Peat of Peat (53	(LKK F)	(WENA /	2 & 73 01	LKK II)		disturbed or problemation		
Restrictive L	ayer (if present):						Hydric Soil Present?		
Type:			Depth (inches):				⊠ Yes □ No		
HYDROLOG									
_	Irology Indicators								
Primary Indic	ators (minimum of o	one require							
☐ Surface W	/ater (A1)		ed; check all that app	ly)			Secondary Indicators (2	or more required)	
☐ High Wate	_						Secondary Indicators (2		
ingli wat	High Water Table (A2) ☐ Aquatic Invertebrates (B13) Saturation (A3) ☐ Hydrogen Sulfide Odor (C1)						☐ Surface Soil Cracks	(B6)	
☐ Saturation			☐ Salt Crust (B	11) rtebrates			-	(B6) Concave Surface (B8)	
	n (A3)		☐ Salt Crust (B	11) rtebrates ılfide Odo	r (C1)		☐ Surface Soil Cracks☐ Sparsely Vegetated	(B6) Concave Surface (B8) 310)	
☐ Saturation☐ Water Ma	n (A3)		☐ Salt Crust (B☐ Aquatic Invel☐ Hydrogen Su	 11) rtebrates ulfide Odo Water Tal	r (C1) ole (C2)	Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I	(B6) Concave Surface (B8) 310)	
☐ Saturation☐ Water Ma☐ Sediment	n (A3) rks (B1) Deposits (B2)		☐ Salt Crust (B☐ Aquatic Inver☐ Hydrogen Su☐ Dry-Season	ntebrates ulfide Odo Water Tal zosphere	r (C1) ole (C2)	Roots (C3)	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (I □ Oxidized Rhizosphe	(B6) Concave Surface (B8) 310) res on Living Roots (C3	
☐ Saturation☐ Water Ma☐ Sediment☐ Drift Depo	n (A3) rks (B1) Deposits (B2)		Salt Crust (B Aquatic Inveit Hydrogen St Dry-Season	ntebrates ulfide Odo Water Tal zosphere t tilled)	r (C1) ble (C2) s on Living	Roots (C3)	☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (I ☐ Oxidized Rhizosphe (where tilled)	(B6) Concave Surface (B8) B10) res on Living Roots (C3	
☐ Saturation☐ Water Ma☐ Sediment☐ Drift Depo☐ Algal Mat	n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4)		Salt Crust (B Aquatic Invertigent Surpry-Season 1 Oxidized Rhi (where no	ntebrates of lifide Odo Water Tal zosphere: t tilled)	r (C1) ble (C2) s on Living Iron (C4)	Roots (C3)	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (I □ Oxidized Rhizosphe (where tilled) □ Crayfish Burrows (C	(B6) Concave Surface (B8) B10) res on Living Roots (C3 B) A Aerial Imagery (C9)	
Saturation Water Ma Sediment Drift Depo	n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4)	magery (B7	Salt Crust (B Aquatic Invel Hydrogen Su Dry-Season Oxidized Rhi (where no Presence of Thin Muck Si	ntebrates of the state of the s	r (C1) ble (C2) s on Living Iron (C4)	Roots (C3)	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (It □ Oxidized Rhizosphe	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2)	
Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation	n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4) sits (B5)	magery (B7	Salt Crust (B Aquatic Invel Hydrogen Su Dry-Season Oxidized Rhi (where no Presence of Thin Muck Si	ntebrates of the state of the s	r (C1) ble (C2) s on Living Iron (C4)	Roots (C3)	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (I □ Oxidized Rhizosphe	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) In (D2)	
Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation	n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial In		Salt Crust (B Aquatic Invertible Hydrogen St. Dry-Season 1 Oxidized Rhi (where no Presence of Thin Muck St. Other (Expla)	ntebrates of liftide Odo Water Tal zospheres tilled) Reduced urface (Cin in Rem	r (C1) ble (C2) s on Living Iron (C4) 7) arks)	ed Data (strea	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (It □ Oxidized Rhizosphe	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D7) (LRR F)	
Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta	n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial In the distribution of the companion of t	Yes	Salt Crust (B Aquatic Invertible Hydrogen Suther Su	ntebrates of liftide Odo Water Tal zospheres tilled) Reduced urface (Cin in Rem	r (C1) ble (C2) s on Living Iron (C4) 7) arks)	. ,	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (I □ Oxidized Rhizosphe	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D7) (LRR F)	
Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta	n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial In the distribution of the companion of t		Salt Crust (B Aquatic Invertible Hydrogen St. Dry-Season 1 Oxidized Rhi (where no Presence of Thin Muck St. Other (Expla)	ntebrates of liftide Odo Water Tal zospheres tilled) Reduced urface (Cin in Rem	r (C1) ble (C2) s on Living Iron (C4) 7) arks)	ed Data (strea	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (I □ Oxidized Rhizosphe	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D7) (LRR F)	
Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta	n (A3) rks (B1) Deposits (B2) posits (B3) or Crust (B4) sits (B5) n Visible on Aerial In ained Leaves (B9) vations:	Yes	Salt Crust (B Aquatic Invertible Hydrogen Suther Su	ntebrates of liftide Odo Water Tal zospheres tilled) Reduced urface (Cin in Rem	r (C1) ble (C2) s on Living Iron (C4) 7) arks)	ed Data (strea	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (I □ Oxidized Rhizosphe	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D7) (LRR F)	
Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ	n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial In ained Leaves (B9) vations: er present? present?	Yes	Salt Crust (B	ntebrates of liftide Odo Water Tal zospheres tilled) Reduced urface (Cin in Rem	r (C1) ble (C2) s on Living Iron (C4) 7) arks)	ed Data (strea	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (I □ Oxidized Rhizosphe	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D7) (LRR F)	
Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Water Water Table	n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial Interest (B9) vations: er present? present?	Yes	Salt Crust (B Aquatic Invertible Adjusted Progression of Control Contr	ntebrates of liftide Odo Water Tal zospheres tilled) Reduced urface (Cin in Rem	r (C1) ble (C2) s on Living Iron (C4) 7) arks)	ed Data (strea	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (I □ Oxidized Rhizosphe	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D7) (LRR F)	
Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Water Water Table Saturation Pr (includes cap	n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial Interest (B9) vations: er present? present?	Yes	Salt Crust (B Aquatic Invertible Adjusted Progression of Control Contr	ntebrates of liftide Odo Water Tal zospheres tilled) Reduced urface (Cin in Rem	r (C1) ble (C2) s on Living Iron (C4) 7) arks)	ed Data (strea	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (I □ Oxidized Rhizosphe	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) D (D2) D (D7) (LRR F)	
Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Water Water Table Saturation Pr (includes cap Wetland Hyd	n (A3) rks (B1) Deposits (B2) posits (B3) or Crust (B4) sits (B5) n Visible on Aerial In sined Leaves (B9) vations: er present? present? esent? drology Present?	Yes	Salt Crust (B Aquatic Invertible Adjustic Inve	ntebrates of the street of the	r (C1) ble (C2) s on Living lron (C4) 7) arks) ribe Record ctions, etc.)	ed Data (strea , if available:	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (I □ Oxidized Rhizosphe	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) A (D2) Docks (D7) (LRR F) aerial photos, previous	
Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Water Water Table Saturation Pr (includes cap Wetland Hyc	n (A3) rks (B1) Deposits (B2) posits (B3) or Crust (B4) sits (B5) n Visible on Aerial In sined Leaves (B9) vations: er present? present? esent? drology Present?	Yes □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Salt Crust (B Aquatic Invertible Adjusted Rhit (Where no) Presence of Thin Muck Str.) Depth (inches) 8 and D5 present. Alth	ntebrates of the street of the	r (C1) ble (C2) s on Living lron (C4) 7) arks) ribe Record ctions, etc.)	ed Data (strea , if available:	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (I □ Oxidized Rhizosphe	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) A (D2) Docks (D7) (LRR F) aerial photos, previous	
Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Water Water Table Saturation Pr (includes cap Wetland Hyc	n (A3) rks (B1) Deposits (B2) posits (B3) or Crust (B4) sits (B5) n Visible on Aerial Interpretations: er present?	Yes □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Salt Crust (B Aquatic Invertible Adjusted Rhit (Where no) Presence of Thin Muck Str.) Depth (inches) 8 and D5 present. Alth	ntebrates of the street of the	r (C1) ble (C2) s on Living lron (C4) 7) arks) ribe Record ctions, etc.)	ed Data (strea , if available:	□ Surface Soil Cracks □ Sparsely Vegetated □ Drainage Patterns (I □ Oxidized Rhizosphe	(B6) Concave Surface (B8) B10) res on Living Roots (C3 8) A Aerial Imagery (C9) A (D2) Docks (D7) (LRR F) aerial photos, previous	

Project/Site: Sweetland Wind Project		City/County:	Hand Coun	ty	Sampling	Date: 6/26/2018
Applicant/Owner: Sweetland Wind Farm, LLC				State: S	SD Sam	pling Point: SP-536
Investigator(s): T. Beemer, W. Hirst		Section	, Township	, Range:	S23, T111N, R67	~W
Landform (hillslope, terrace, etc.) drainage		Local relief (conc				Slope (%): 2 %
Subregion (LRR): Northern Great Plains Spring Whe	at Region	Lat: 44.409	783	Long:	-98.853713	Datum: NAD83
Soil Map Unit Name: Water	at region		700	_	NWI Classification:	PABFh
Are climate/hydrologic conditions on the site typical for the	nis time of	year? X Yes	□ No		explain in Remarks	
				(-,		,
	drology	Are "No	rmal Circun	nstances	" present? 🛛 Yes	s 🔲 No
Significantly Disturbed?		(If neede	ed, explain	any ansv	vers in Remarks.)	
Naturally Problematic?						
SUMMARY OF FINDINGS – Attach site map show	wing sam	pling point loca	ations, tra	nsects	, important featu	res, etc.
Yes	No R	emarks: Wetland s	ample plot	located i	n 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						
	Absol	uto Dominant	Indicator	Domin	ance Test Worksh	
Tree Stratum (Plot size: 30')	Absol % Co		Status			
1		<u>%</u>			er of Dominant Spec BL, FACW, or FAC	ies that
2		%			ding FAC-):	(A)
3		<u>%</u>		Total N	Number of Dominant	, , ,
4		<u>%</u>			s Across All Strata:	(B)
0 1: (0) 1 0: (0) (0) (1: (5)	0	<u>%</u> = Total Cove	er	Percer	nt of Dominant Spec	ies that
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1.		0/			BL, FACW, or FAC:	(A/B)
1 2		<u>%</u>				
3.		%		Preval	ence Index Worksl	neet:
4.		%		T	otal % Cover of:	Multiply by:
5.		%			species	% x 1 =0
	0	<u>%</u> = Total Cove	er	l l	/ species	% x 2 = <u>0</u>
Herb Stratum (Plot size: <u>5'</u>)					species species	$-\%$ \times 3 = 0 \times 4 = 0
1. Hordeum jubatum	60		FACW		pecies	$-\frac{70}{8} \times 4 = \frac{0}{0}$
2. Persicaria maculosa	30		FACW			0 % (A) 0 (B)
3. Phalaris arundinacea	20		FACW	Preva	lence Index = B/A =	
4 5		<u>%</u>				
6.		<u>%</u>		Hydro	phytic Vegetation I	ndicators:
7.		%		⊠ 1 R	apid Test for Hydrop	ohytic Vegetation
8		<u></u>		☐ 2 D	ominance Test is >5	50%
9		<u>%</u>		□ 3P	revalence Index is ≤	3.0 ¹
10		<u>%</u>		I П 4 М	lorphological Adapta	ations1 (Provide
Moody Vino Stratum (Diet size, 20')	110	1 = Total Cove	er			or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>) 1		%		☐ Pro	blematic Hydrophyti	c Vegetation ¹ (explain)
2	_	%		1 Indica	ators of hydric soil a	nd wetland hydrology
	0	% = Total Cove	er			sturbed or problematic
Bare Ground in Herb Stratum0 %				Hydrop	ohytic Vegetation Pro	esent? ⊠ Yes □ No
Remarks: Rapid test for hydrophytic vegetation is met. F	hotograph	C-14.				

Profile Desci	iption: (Describe	to the de	pth ne	eded to docur	nent th	e indicator o	r confirm the	absence of indicators.)		
Depth	Matrix			Re	dox Fe	atures				
(inches)	Color (moist)	%	Co	lor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10YR 3/2	100						Clay Loam		
4-10	10YR 3/2	95		0YR 4/6	5	C	M	Clay Loam		
10-20	10YR 3/2	90	1	0YR 4/6	10	<u>C</u>	M	Clay Loam		
			-			·				
¹Type: C=Co	ncentration, D=De	pletion, RN	/I=Red	uced Matrix, CS	S=Cove	red or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil I	ndicators: (Appli	cable to a	II LRR	s, unless other	wise n	oted.)		Indicators for Problem	natic Hydric Soils ³ :	
☐ Histosol (A	\1)			☐ Sandy Gle	yed Ma	trix (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	, ,			☐ Stripped IV	•	•		☐ Dark Surface (S7) (L	•	
Hydrogen	, ,			Loamy Mu	-			☐ High Plains Depress		
	ayers (A5) (LRR F			Loamy Gle	-			(LRR H outside of	•	
	(A9) (LRR F, G, F	•		☐ Depleted N				☐ Reduced Vertic (F18☐ Red Parent Material		
	Below Dark Surface	e (A11)		□ Redox Dar		` '		☐ Very Shallow Dark S		
	Surface (A12)			☐ Depleted ☐ Redox Dep		, ,		Other (Explain in Re		
	cky Mineral (S1)	S2) (I DD (2 ⊔/			` '				
	☐ 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) ☐ 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless									
O GITI WIGGI	ty real or real (Oc) (L ITIT)		(,		disturbed or problematic		
Restrictive L	ayer (if present):							Hydric Soil Present?		
Type:			Depth	(inches):				⊠ Yes □ No		
				· ,						
Remarks: Hyd	dric soil indicator F	6 is preser	nt.							
HYDROLOG	′									
Wetland Hyd	rology Indicators	:								
Primary Indica	ators (minimum of	one require	ed; che	eck all that apply	<u>y)</u>			Secondary Indicators (2	2 or more required)	
☐ Surface W	ater (A1)		Г	Salt Crust (B1	l1)			☐ Surface Soil Cracks	(B6)	
☐ High Wate	` '		_	Aquatic Invert	,	s (B13)		☐ Sparsely Vegetated Concave Surface (B8)		
☐ Saturation	, ,			Hydrogen Sul				☐ Sparsely Vegetated Concave Surface (Bo) ☐ Drainage Patterns (B10)		
☐ Water Mai	ks (B1)			Dry-Season V				Oxidized Rhizosphe	res on Living Roots (C3)	
☐ Sediment	Deposits (B2)			Oxidized Rhiz	ospher	es on Living I	Roots (C3)	(where tilled)		
☐ Drift Depo	sits (B3)			(where not	-			Crayfish Burrows (C	•	
☐ Algal Mat	or Crust (B4)		_	Presence of F		` ,		☐ Saturation Visible of	• • • •	
☐ Iron Depos			_	Thin Muck Su				☐ Geomorphic Positio		
	Visible on Aerial I	magery (B	7) L	Other (Explain	n in Rer	narks)		☐ FAC-Neutral Test ([,	
☐ Water-Sta	ined Leaves (B9)							☐ Frost-Heave Humm	ocks (D/) (LRR F)	
Field Observ	ations:	Yes	No	Depth (inches)		cribe Record ections, etc.)		m gauge, monitoring well,	aerial photos, previous	
Surface Water	r present?		\boxtimes			,	,			
Water Table		$\overline{\sqcap}$	\boxtimes							
Saturation Pro										
(includes cap		Ш								
	rology Present?	\boxtimes								
				and DE are pre-	cont					
Nemarks. We	tland hydrology inc	aicat∪IS B`l	U, DZ	and Do are pres	ociil.					

Project/Site: Sweetland Wind Project	City/County: Hand Cou	Inty Sampling Date: 6/26/2018
Applicant/Owner: Sweetland Wind Farm, LLC	=":	State: SD Sampling Point: SP-537
Investigator(s): T. Beemer, W. Hirst	Section, Townsh	
Landform (hillslope, terrace, etc.) toeslope	Local relief (concave, conv	
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.409805	Long: -98.853890 Datum: NAD83
Soil Map Unit Name: Water		NWI Classification: PABFh
Are climate/hydrologic conditions on the site typical for this time of y	year? ⊠ Yes □ No	
Vegetation Soil Hydrology	Are "Normal Circu	umstances" present? ☐ Yes ☐ No
Significantly Disturbed?	(If needed, explain	n any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	nling point locations t	ransacts important foatures atc
Yes No Re Hydrophytic Vegetation Present? □ ⊠	emarks: Upland sample plot	adjacent to PEM W-518.
Hydric Soil Present?		
Wetland Hydrology Present?		
Is the Sampled Area within a Wetland?		
<u> </u>		
VEGETATION – Use scientific names of plants		To
Absolu Tree Stratum (Plot size: 30') % Cov		Dominance Test Worksheet:
1	<u>%</u>	Number of Dominant Species that are OBL, FACW, or FAC
2	<u> </u>	die OBL, FACW, 01 FAC - (excluding FAC-):
3	<u> </u>	Total Number of Dominant
4	<u>%</u>	Species Across All Strata: 1 (B)
Ocalian (Charle Stratum (Plat size: 45))	<u>%</u> = Total Cover	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	<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% x 3 =0
Herb Stratum (Plot size: <u>5'</u>)	0/	FACIL species % v.4 = 0
1. Poa pratensis 90 2. Solidago canadensis 15		UPL species % x 5 = 0
3.	% <u>1ACO</u> %	Column Totals:0% (A)0 (B)
4	%	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>	-
Woody Vine Stratum (Plot size: 30')		4 Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
1	%	☐ Problematic Hydrophytic Vegetation¹ (explain)
2	<u> </u>	Indicators of hydric soil and wetland hydrology must be present upless disturbed or problematics.
_ 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-15.		

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)					
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF 12) ☐ 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)						
☐ 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					
(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)					
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)					
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) Water-Stained Leaves (B9)	□ 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) Water-Stained Leaves (B9)	□ 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) Rlgal 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) 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)					
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)					
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 (street inspections, etc.), if available: 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)					
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 (street inspections, etc.), if available: Surface Water present? □ □ Describe Recorded Data (street inspections, etc.), if available: Saturation Present? □ □ Describe Recorded Data (street inspections) Saturation Present? □ □ Describe Recorded Data (street inspections) Saturation Present? □ □ Describe Recorded Data (street inspections) Saturation Present? □ □ Describe Recorded Data (street inspections)	□ 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) High Water Table (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) 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: Presence of Reduced Iron (C4) Thin Muck Surface (C7) Other (Explain in Remarks) Depth (inches) Describe Recorded Data (street inspections, etc.), if available: Surface Water present? Water Table present? Saturation Present? Saturation Present? Ves No (includes capillary fringe)	□ 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: Pepth (inches) Surface Water present? □ Depth (inches) Water Table present? □ Depth (inches) Saturation Present? □ Depth (inches) Saturation Present? □ Depth (inches) Wetland Hydrology Present? □ Depth (inches)	□ Surface Soil Cracks (B6) □ Sparsely Vegetated Concave Surface (B8) □ Drainage Patterns (B10) □ Oxidized Rhizospheres on Living Roots (C3)					

Project/Site: Sweetland Wind Project	City/County: Ha	and County	Sampling Date: 6/27/2018	
Applicant/Owner: Sweetland Wind Farm, LLC	<u> </u>	State: SD Sampling Poin		
Investigator(s): T. Beemer, W. Hirst	Section,	 Township, Ran	· · · · · · · · · · · · · · · · · · ·	
Landform (hillslope, terrace, etc.) swale	Local relief (concav			
Subregion (LRR): Northern Great Plains Spring Wheat Region	-		ng: -98.790429 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 time of	of year? X Yes	□ No (If	no, explain in Remarks.)	
, , , , , , , , , , , , , , , , , , , ,		_	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Vegetation Soil Hydrology	Are "Norm	nal Circumstan	ces" present? ☐ Yes ☐ No	
Significantly Disturbed? Naturally Problematic?	(If needed	, explain any a	nswers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing sa	ampling point locati	ions, transec	ets, important features, etc.	
Yes No	Remarks: Wetland sar	mple plot locate	ed in PEM W-520.	
Hydrophytic Vegetation Present?				
Hydric Soil Present? Wetland Hydrology Present? □				
Is the Sampled Area within a Wetland?				
is the Sampled Area within a Welland!				
VEGETATION – Use scientific names of plants				
			minance Test Worksheet:	
	•	Status Nur	mber of Dominant Species that	
1	<u>%</u>		OBL, FACW, or FAC	
3.	%	(exc	cluding FAC-):(A)	
4.	%		al Number of Dominant ecies Across All Strata: (B)	
<u> </u>	0 % = Total Cover	1	·· ·	
Sapling/Shrub Stratum (Plot size: 15')			cent of Dominant Species that OBL, FACW, or FAC: (A/B)	
1	<u>%</u>		(772)	
2	<u>%</u>	Pre	valence Index Worksheet:	
3	<u>%</u>		Total % Cover of: Multiply by:	
4	<u>%</u>	OE	BL species	
	0 % = Total Cover		.CW species % x 2 =0	
Herb Stratum (Plot size: <u>5'</u>)			.C species % x 3 = 0	
1. Carex vulpinoidea 1	00 % Y		CU species % x 4 = 0 % x 5 = 0	
2	<u>%</u>		Ilumn Totals: 0 % (A) 0 (B)	
3	<u>%</u>	 Dr	evalence Index = B/A =	
4	<u>%</u>			
5	<u>%</u> %	——— Нус	drophytic Vegetation Indicators:	
7	<u>%</u>		1 Rapid Test for Hydrophytic Vegetation	
8	%	🗆 :	2 Dominance Test is >50%	
9	<u>%</u>	:	3 Prevalence Index is ≤3.0¹	
10	% Total Cover	—— I 🗖 .	4 Morphological Adaptations¹ (Provide	
Woody Vine Stratum (Plot size: 30')	00 % = Total Cover	sup	porting data in Remarks or on a separate sheet)	
1	<u> </u>		Problematic Hydrophytic Vegetation ¹ (explain)	
2	<u>%</u>		dicators of hydric soil and wetland hydrology	
_ _	0 % = Total Cover	mus	st be present, unless disturbed or problematic	
Bare Ground in Herb Stratum 0 %		Hyd	drophytic Vegetation Present? ⊠ Yes ☐ No	
Remarks: Rapid test for hydrophytic vegetation is met. Photogra	ph C-16.	1		

Profile Desc	ription: (Describe	to the dep	th needed to docur	nent the	e indicator o	r confirm the	absence of indicators.)			
Depth	Matrix		Re	dox Fe	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	<u>C</u>	M	Clay Loam			
12-20	10YR 5/1	85	10YR 5/6	15	C	M	Clay Loam			
		·								
		· —— -								
		· —— -								
¹Type: C=Co	ncentration, D=Dep	oletion, RM=	Reduced Matrix, CS	S=Cove	red or Coated	Sand Grains	² Location: PL=Pore	e Lining, M=Matrix		
Hydric Soil I	ndicators: (Applie	cable to all	LRRs, unless other	rwise n	oted.)		Indicators for Problem	atic 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) (L	•		
Hydrogen	, ,		Loamy Mu	-			☐ High Plains Depress (LRR H outside of			
	ayers (A5) (LRR F		☐ Loamy Gle	-			Reduced Vertic (F18	•		
	k (A9) (LRR F, G, F Below Dark Surface	•	□ Depleted N □ Redox Dar				☐ Red Parent Material			
	selow Dark Surface (Surface (A12)	÷ (A11)	☐ Redox Dai				☐ Very Shallow Dark S			
	cky Mineral (S1)		☐ Redox De		, ,		☐ Other (Explain in Re			
	icky Peat or Peat (S2) (LRR G .			` '					
☐ 5 cm Mucky Peat or Peat (S2) (LRR G, H) ☐ High Plains Depressions (F16) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic								be present, unless		
Restrictive L	ayer (if present):						Hydric Soil Present?			
Type:	, (Г	epth (inches):				⊠ Yes □ No			
Турс.										
Remarks: Hy	dric soil indicator F	3 is present.								
HYDROLOG	Υ									
Wetland Hyd	rology Indicators	•								
Primary Indic	ators (minimum of	one required	l; check all that appl	<u>y)</u>			Secondary Indicators (2	2 or more required)		
Surface W	ater (A1)		☐ Salt Crust (B1	11)			☐ Surface Soil Cracks	(B6)		
☐ High Wate	er Table (A2)		Aquatic Inver	tebrates	s (B13)		☐ Sparsely Vegetated Concave Surface (B8)			
	, ,		☐ Hydrogen Su				☐ Sparsery vegetated Concave Surface (Bo) ☐ Drainage Patterns (B10)			
☐ Water Mai	ks (B1)		☐ Dry-Season V	Vater 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	-			☐ Crayfish Burrows (C	•		
Algal Mat	, ,		☐ Presence of F		` '		☐ Saturation Visible or			
☐ Iron Depo			Thin Muck Su				☐ Geomorphic Positio			
	Visible on Aerial I	magery (B7)	Other (Explain	n in Kei	narks)			,		
☐ Water-Sta	ined Leaves (B9)			1				UCKS (D1) (EKK F)		
Field Observ	ations:	Yes 1	Depth No (inches)		cribe Record ections, etc.)		ım gauge, monitoring well,	aerial photos, previous		
Surface Water	r present?		<u> </u>							
Water Table	present?		0							
Saturation Pr	esent?	\boxtimes [
(includes cap	illary fringe)									
Wetland Hyd	rology Present?	\boxtimes (
Remarks: We	tland hydrology inc	licators A1.	A2, A3, B10, D2 and	D5 pre	esent.					
	,	,	, , ,	, -						

Project/Site: Sweetland Wind Project		City/County:	Hand Coun	ty	Sampling Da	ate: 6/27/2018	
Applicant/Owner: Sweetland Wind Farm, LLC	State: SD	Samplir	ng Point: SP-539)			
Investigator(s): T. Beemer, W. Hirst		Section	n, Township	, Range: S20,	— T111N, R66W		
Landform (hillslope, terrace, etc.) hillslope		Local relief (cond				Slope (%): 10 %	%
Subregion (LRR): Northern Great Plains Spring Whe	at Region	Lat: 44.411	1369	Long: -98.79	90267 C	Datum: NAD83	
Soil Map Unit Name: Betts-Java loams, steep	J					NA	
Are climate/hydrologic conditions on the site typical for the	is time of y	/ear? ⊠ Yes	☐ No	(If no, explain i			
					_	_	
<u> </u>	drology —	Are "No	ormal Circun	nstances" presen	t? ⊠ Yes	☐ No	
Significantly Disturbed? Naturally Problematic?		(If need	ed, explain	any answers in R	emarks.)		
SUMMARY OF FINDINGS – Attach site map show	_	nling point loc	ations tra	insects impor	tant feature	s etc	
<u> </u>						<u>,, c.c.</u>	
Yes Hydrophytic Vegetation Present?	No Re	emarks: Upland sa	ampie piot a	lajacent to PEIVI V	V-52U.		
Hydric Soil Present?							
Wetland Hydrology Present?	\boxtimes						
Is the Sampled Area within a Wetland?	\boxtimes						
VEGETATION – Use scientific names of plants							
	Absolu	ute Dominant	Indicator	Dominance Te	est Worksheet		
Tree Stratum (Plot size: <u>30'</u>)	% Cov		Status				
1		<u></u>		Number of Don are OBL, FACV		tnat	
2.		<u>%</u>		(excluding FAC	>-):	0_(A	١)
34.		<u>%</u> %		Total Number of			
4			<u></u>	Species Across	s All Strata:	2_(B	3)
Sapling/Shrub Stratum (Plot size: 15')		<u>70</u> . G.a GG	.	Percent of Dom			. (5)
1. <u>Lonicera japonica</u>	20	<u>%</u> Y_	FACU	are OBL, FACV	V, or FAC:	<u> </u>	√B)
2		<u></u>		Prevalence Inc	dex Workshee		
3		<u></u>		Total % C			
4.		<u>%</u>		OBL species		$\frac{\text{Multiply by:}}{\text{%} \text{x 1} = 0}$	
5	20	% % = Total Cove		FACW species			
Herb Stratum (Plot size: 5')		<u>70</u> = 10tai 00W	Ci	FAC species	9	% x 3 = 0	
1. Poa pratensis	80	<u>%</u> Y	FACU	FACU species		% x 4 = <u>0</u>	
2. Solidago canadensis	10	% N	FACU	UPL species Column Totals		% x = 0 $% (A) 0$	(B)
3		<u></u>				6 (A) <u> </u>	,Β)
4		<u></u>		Prevalence Inc	dex = B/A = _		
5		<u>%</u>		Hydrophytic V	egetation Ind	icators:	
6 7		<u>%</u> <u></u>		☐ 1 Rapid Tes	st for Hydrophy	tic Vegetation	
8.		<u>%</u>		☐ 2 Dominand	e Test is >50%	6	
9.		<u></u>		☐ 3 Prevalenc			
10		<u>%</u>		4 Morpholog			
Woody Vine Stratum (Plot size: 30')	90	<u>%</u> = Total Cove	er	supporting data	in Remarks or o	on a separate sheet	:)
1.		<u></u>			, , ,	egetation ¹ (explair	,
2		% % = Total Cove	 er	Indicators of h must be preser	nydric soil and nt, unless distu	wetland hydrology rbed or problemation	ic
David Oracinal in Hash Obstaces 40.00				-		ent? ☐ Yes ☒ N	
Bare Ground in Herb Stratum 10 % Remarks: Hydrophytic vegetation is not present. Photogi	ranh C 17						
remarks. Hydrophytic vegetation is not present. Photogr	ιαριι Ο-17.						

	ription. (Describe	to the dep	itn neeaea to aocur	nent the ir	naicator o	or confirm the	absence of indicators.)	
Depth	Matrix		Re	dox Featu	res			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 3/2	100					Clay Loam	
6-18	10YR 3/3	100					Clay Loam	
l ———							-	_
	-							
-								
¹Type: C=Co	oncentration, D=Dep	oletion, RM	=Reduced Matrix, CS	S=Covered	or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil I	ndicators: (Applic	able to all	LRRs, unless other	rwise note	ed.)		Indicators for Problems	atic Hydric Soils ³ :
☐ Histosol (/	A1)		☐ Sandy Gle	yed Matrix	(S4)		1 cm Muck (A9) (LRF	R I, J)
☐ Histic Epip	pedon (A2)		☐ Sandy Re				☐ Coast Prairie Redox (. , ,
Black Hist	` '		Stripped N	, ,			Dark Surface (S7) (LI	
Hydrogen		_	Loamy Mu				☐ High Plains Depression	ons (F16)
	Layers (A5) (LRR F		Loamy Gle		(F2)		(LRR H outside of I	•
	k (A9) (LRR F, G, F		☐ Depleted I		(50)		Red Parent Material (
	Below Dark Surface	(ATT)	☐ Redox Da		. ,			'
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF 12) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8) ☐ Other (Explain in Remarks)							, ,	
	ucky Peat or Peat (\$	S2) (I RR G			,		³ Indicators of hydrophytic	
	ky Peat or Peat (S3			2 & 73 of L			wetland hydrology must	
		, (,	·				disturbed or problematic	
Restrictive L	_ayer (if present):						Hydric Soil Present?	
Type:		[Depth (inches):				☐ Yes ☒ No	
Pomarks: No	hydric soil indicato	r ie procont						
Nemarks. No	Trydric Son maicato	i is present	•					
HYDROLOG	Υ							
	drology Indicators	1						
_			d; check all that appl	v)			Secondary Indicators (2	or more required)
☐ Surface W	•	7.10 10 quito	☐ Salt Crust (B				☐ Surface Soil Cracks	
☐ High Wate	` '		☐ Aquatic Inver	,	113)		☐ Sparsely Vegetated	` '
☐ Saturation			•	•	•			
_	` '							
	ater Marks (B1)						□ Drainage Patterns (B	310)
	` '		☐ Dry-Season \	Vater Table	e (C2)	Roots (C3)	□ Drainage Patterns (B	310)
Sediment	Deposits (B2)		☐ Dry-Season \	Vater Table zospheres	e (C2)	Roots (C3)	☐ Drainage Patterns (E☐ Oxidized Rhizospher	s10) res on Living Roots (C3)
☐ Sediment ☐ Drift Depo	Deposits (B2) osits (B3)		☐ Dry-Season \☐ Oxidized Rhiz	Vater Table zospheres tilled)	e (C2) on Living I	Roots (C3)	☐ Drainage Patterns (E☐ Oxidized Rhizospher (where tilled)	310) res on Living Roots (C3) 3)
Sediment	Deposits (B2) osits (B3) or Crust (B4)		☐ Dry-Season \ ☐ Oxidized Rhiz (where not	Vater Table zospheres tilled) Reduced Ire	e (C2) on Living I on (C4)	Roots (C3)	☐ Drainage Patterns (E☐ Oxidized Rhizospher (where tilled)☐ Crayfish Burrows (C&	310) res on Living Roots (C3) 3) Aerial Imagery (C9)
Sediment Drift Depo	Deposits (B2) osits (B3) or Crust (B4)	magery (B7	☐ Dry-Season N☐ Oxidized Rhiz (where not ☐ Presence of I☐ Thin Muck Su	Vater Table zospheres tilled) Reduced Ire urface (C7)	e (C2) on Living I on (C4)	Roots (C3)	☐ Drainage Patterns (E☐ Oxidized Rhizospher (where tilled)☐ Crayfish Burrows (Cd☐ Saturation Visible on☐ Geomorphic Position☐ FAC-Neutral Test (D	es on Living Roots (C3) Aerial Imagery (C9) (D2) 5)
Sediment Drift Depo Algal Mat Iron Depo Inundation	Deposits (B2) osits (B3) or Crust (B4) osits (B5)	magery (B7	☐ Dry-Season N☐ Oxidized Rhiz (where not ☐ Presence of I☐ Thin Muck Su	Vater Table zospheres tilled) Reduced Ire urface (C7)	e (C2) on Living I on (C4)	Roots (C3)	☐ Drainage Patterns (E☐ Oxidized Rhizospher (where tilled)☐ Crayfish Burrows (C€☐ Saturation Visible on☐ Geomorphic Position☐	es on Living Roots (C3) Aerial Imagery (C9) (D2) 5)
Sediment Drift Depo Algal Mat Iron Depo Inundation	Deposits (B2) posits (B3) or Crust (B4) posits (B5) on Visible on Aerial III ained Leaves (B9)		☐ Dry-Season N ☐ Oxidized Rhiz (where not ☐ Presence of I ☐ Thin Muck St) ☐ Other (Explai	Vater Table zospheres tilled) Reduced Ir urface (C7) n in Remai	e (C2) on Living I on (C4) rks)	ed Data (strea	☐ Drainage Patterns (E☐ Oxidized Rhizospher (where tilled)☐ Crayfish Burrows (Cd☐ Saturation Visible on☐ Geomorphic Position☐ FAC-Neutral Test (D	ato) res on Living Roots (C3) Aerial Imagery (C9) (D2) boks (D7) (LRR F)
Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta	Deposits (B2) posits (B3) or Crust (B4) posits (B5) n Visible on Aerial II pained Leaves (B9) positions:	Yes	☐ Dry-Season N ☐ Oxidized Rhiz	Vater Table zospheres tilled) Reduced Ir urface (C7) n in Remai	e (C2) on Living I on (C4) rks)	. ,	☐ Drainage Patterns (E☐ Oxidized Rhizospher (where tilled)☐ Crayfish Burrows (Cf☐ Saturation Visible on☐ Geomorphic Position☐ FAC-Neutral Test (D☐ Frost-Heave Hummo	ato) res on Living Roots (C3) Aerial Imagery (C9) (D2) boks (D7) (LRR F)
Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ	Deposits (B2) posits (B3) or Crust (B4) posits (B5) on Visible on Aerial Interpretation pained Leaves (B9) positions: er present?	Yes	☐ Dry-Season N ☐ Oxidized Rhiz (where not ☐ Presence of I ☐ Thin Muck St) ☐ Other (Explai Depth No (inches) ☐	Vater Table zospheres tilled) Reduced Ir urface (C7) n in Remai	e (C2) on Living I on (C4) rks)	ed Data (strea	☐ Drainage Patterns (E☐ Oxidized Rhizospher (where tilled)☐ Crayfish Burrows (Cf☐ Saturation Visible on☐ Geomorphic Position☐ FAC-Neutral Test (D☐ Frost-Heave Hummo	ato) res on Living Roots (C3) Aerial Imagery (C9) (D2) boks (D7) (LRR F)
Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Water Water Table	Deposits (B2) posits (B3) or Crust (B4) posits (B5) or Visible on Aerial Interpretation posits (B9) positions: er present?	Yes	□ Dry-Season N □ Oxidized Rhiz (where not □ Presence of I □ Thin Muck St) □ Other (Explai) Depth No (inches) □	Vater Table zospheres tilled) Reduced Ir urface (C7) n in Remai	e (C2) on Living I on (C4) rks)	ed Data (strea	☐ Drainage Patterns (E☐ Oxidized Rhizospher (where tilled)☐ Crayfish Burrows (Cf☐ Saturation Visible on☐ Geomorphic Position☐ FAC-Neutral Test (D☐ Frost-Heave Hummo	ato) res on Living Roots (C3) Aerial Imagery (C9) (D2) boks (D7) (LRR F)
Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Wate Water Table Saturation Pr	Deposits (B2) posits (B3) or Crust (B4) posits (B5) or Visible on Aerial Interpretation prize present? present?	Yes	☐ Dry-Season N ☐ Oxidized Rhiz (where not ☐ Presence of I ☐ Thin Muck St) ☐ Other (Explai Depth No (inches) ☐	Vater Table zospheres tilled) Reduced Ir urface (C7) n in Remai	e (C2) on Living I on (C4) rks)	ed Data (strea	☐ Drainage Patterns (E☐ Oxidized Rhizospher (where tilled)☐ Crayfish Burrows (Cf☐ Saturation Visible on☐ Geomorphic Position☐ FAC-Neutral Test (D☐ Frost-Heave Hummo	ato) res on Living Roots (C3) Aerial Imagery (C9) (D2) boks (D7) (LRR F)
Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Water Water Table Saturation Pr (includes cap	Deposits (B2) posits (B3) or Crust (B4) posits (B5) or Visible on Aerial In pained Leaves (B9) positions: er present? present? present? present? positions:	Yes	□ Dry-Season N □ Oxidized Rhiz (where not □ Presence of I □ Thin Muck St) □ Other (Explai) Depth No (inches) □ □	Vater Table zospheres tilled) Reduced Ir urface (C7) n in Remai	e (C2) on Living I on (C4) rks)	ed Data (strea	☐ Drainage Patterns (E☐ Oxidized Rhizospher (where tilled)☐ Crayfish Burrows (Cf☐ Saturation Visible on☐ Geomorphic Position☐ FAC-Neutral Test (D☐ Frost-Heave Hummo	ato) res on Living Roots (C3) Aerial Imagery (C9) (D2) boks (D7) (LRR F)
Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Water Water Table Saturation Pr (includes cap Wetland Hyd	Deposits (B2) posits (B3) or Crust (B4) posits (B5) or Visible on Aerial II pained Leaves (B9) prations: er present? present? present? present? present? present? present? present? present?	Yes	□ Dry-Season N □ Oxidized Rhiz (where not □ Presence of I □ Thin Muck Su) □ Other (Explai) □ Depth (inches) □ □ □	Vater Table zospheres tilled) Reduced Ir urface (C7) n in Remai	e (C2) on Living I on (C4) rks)	ed Data (strea	☐ Drainage Patterns (E☐ Oxidized Rhizospher (where tilled)☐ Crayfish Burrows (Cf☐ Saturation Visible on☐ Geomorphic Position☐ FAC-Neutral Test (D☐ Frost-Heave Hummo	ato) res on Living Roots (C3) Aerial Imagery (C9) (D2) boks (D7) (LRR F)
Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Water Water Table Saturation Pr (includes cap Wetland Hyd	Deposits (B2) posits (B3) or Crust (B4) posits (B5) or Visible on Aerial In pained Leaves (B9) positions: er present? present? present? present? positions:	Yes	□ Dry-Season N □ Oxidized Rhiz (where not □ Presence of I □ Thin Muck Su) □ Other (Explai) □ Depth (inches) □ □ □	Vater Table zospheres tilled) Reduced Ir urface (C7) n in Remai	e (C2) on Living I on (C4) rks)	ed Data (strea	☐ Drainage Patterns (E☐ Oxidized Rhizospher (where tilled)☐ Crayfish Burrows (Cf☐ Saturation Visible on☐ Geomorphic Position☐ FAC-Neutral Test (D☐ Frost-Heave Hummo	ato) res on Living Roots (C3) Aerial Imagery (C9) (D2) boks (D7) (LRR F)
Sediment Drift Depo Algal Mat Iron Depo Inundation Water-Sta Field Observ Surface Water Water Table Saturation Pr (includes cap Wetland Hyd	Deposits (B2) posits (B3) or Crust (B4) posits (B5) or Visible on Aerial II pained Leaves (B9) prations: er present? present? present? present? present? present? present? present? present?	Yes	□ Dry-Season N □ Oxidized Rhiz (where not □ Presence of I □ Thin Muck Su) □ Other (Explai) □ Depth (inches) □ □ □	Vater Table zospheres tilled) Reduced Ir urface (C7) n in Remai	e (C2) on Living I on (C4) rks)	ed Data (strea	☐ Drainage Patterns (E☐ Oxidized Rhizospher (where tilled)☐ Crayfish Burrows (Cf☐ Saturation Visible on☐ Geomorphic Position☐ FAC-Neutral Test (D☐ Frost-Heave Hummo	ato) res on Living Roots (C3) Aerial Imagery (C9) (D2) boks (D7) (LRR F)

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: SP-541
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	<u>%</u> = 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.			

(inches) Color (moist) 0-6 10YR 3/1 6-18 10YR 3/2								
	% C	Color (moist)	% Type ¹	Loc ²	Texture	Remarks		
6-18 10YR 3/2	100				Clay Loam			
	100				Clay Loam			
				·				
		 _		·				
Type: C=Concentration, D=Dep	olotion PM-Ps	duood Motrix, CS	Covered or Cost	ad Sand Crains	2l coation: DI – Dara	Lining M-Matrix		
lydric Soil Indicators: (Applic				d Saliu Glailis	² Location: PL=Pore Indicators for Problema			
☐ Histosol (A1)			yed Matrix (S4)		1 cm Muck (A9) (LRR	•		
☐ Histic Epipedon (A2)		☐ Sandy Red	• • • •		☐ Coast Prairie Redox (
Black Histic (A3)		☐ Stripped M			☐ Dark Surface (S7) (LF			
☐ Hydrogen Sulfide (A4)			cky Mineral (F1)		☐ High Plains Depression			
☐ Stratified Layers (A5) (LRR F)	1		(LRR H outside of N	ILRA 72 & 73)				
1 cm Muck (A9) (LRR F, G, H			Reduced Vertic (F18)	,				
Depleted Below Dark Surface		☐ Red Parent Material (TF2)					
_ '		☐ Very Shallow Dark Su	*					
Thick Dark Surface (A12)		☐ Redox Dep	Dark Surface (F7)		Other (Explain in Rem			
Sandy Mucky Mineral (S1)			, ,	,				
2.5 cm Mucky Peat or Peat (S		-	S Depressions (F16	5)	³ Indicators of hydrophytic			
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)	(WLRA /2	2 & 73 of LRR H)		wetland hydrology must be disturbed or problematic	oe present, unless		
lestrictive Layer (if present):					Hydric Soil Present?			
ype:	Depf	h (inches):			☐ Yes ⊠ No			
(DDOLOGY								
/DROLOGY Vetland Hydrology Indicators:								
Primary Indicators (minimum of c		neck all that apply	/)		Secondary Indicators (2	or more required)		
•						•		
☐ Surface Water (A1) ☐ Salt Crust (B11)					Surface Soil Cracks (B6)			
_		Aquatic Invert	` ,		☐ Sparsely Vegetated Concave Surface (B8			
☐ High Water Table (A2)								
☐ High Water Table (A2) ☐ Saturation (A3)			fide Odor (C1)		☐ Drainage Patterns (B	10)		
High Water Table (A2) Saturation (A3) Water Marks (B1)		☐ Dry-Season V	Vater Table (C2)	5 (00)	Oxidized Rhizosphere	10)		
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		☐ Dry-Season V ☐ Oxidized Rhiz	Vater Table (C2) cospheres on Living	Roots (C3)	Oxidized Rhizosphere (where tilled)	10) es on Living Roots		
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		☐ Dry-Season V☐ Oxidized Rhiz (where not	Vater Table (C2) cospheres on Living tilled)	Roots (C3)	☐ Oxidized Rhizosphero (where tilled) ☐ Crayfish Burrows (C8	10) es on Living Roots (
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		☐ Dry-Season V☐ Oxidized Rhiz (where not) ☐ Presence of F	Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4)	Roots (C3)	☐ Oxidized Rhizosphere (where tilled) ☐ Crayfish Burrows (C8 ☐ Saturation Visible on	10) es on Living Roots :) Aerial Imagery (C9		
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		☐ Dry-Season V ☐ Oxidized Rhiz (where not) ☐ Presence of F ☐ Thin Muck Su	Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) rface (C7)	Roots (C3)	☐ Oxidized Rhizosphere (where tilled) ☐ Crayfish Burrows (C8 ☐ Saturation Visible on ☑ Geomorphic Position	10) es on Living Roots c) Aerial Imagery (C9 (D2)		
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		☐ Dry-Season V☐ Oxidized Rhiz (where not) ☐ Presence of F	Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) rface (C7)	Roots (C3)	□ Oxidized Rhizosphere (where tilled) □ Crayfish Burrows (C8 □ Saturation Visible on ☑ Geomorphic Position □ FAC-Neutral Test (D8)	10) es on Living Roots b) Aerial Imagery (C9 (D2) b)		
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 In		☐ Dry-Season V ☐ Oxidized Rhiz (where not) ☐ Presence of F ☐ Thin Muck Su	Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) rface (C7)	Roots (C3)	☐ Oxidized Rhizosphere (where tilled) ☐ Crayfish Burrows (C8 ☐ Saturation Visible on ☑ Geomorphic Position	10) es on Living Roots b) Aerial Imagery (C9 (D2) b)		
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 In Water-Stained Leaves (B9)		☐ Dry-Season V ☐ Oxidized Rhiz (where not) ☐ Presence of F ☐ Thin Muck Su	Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks) Describe Recor	ded Data (streal	□ Oxidized Rhizosphere (where tilled) □ Crayfish Burrows (C8 □ Saturation Visible on ☑ Geomorphic Position □ FAC-Neutral Test (D8)	10) es on Living Roots c) Aerial Imagery (C9 (D2) c) cks (D7) (LRR F)		
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 In Water-Stained Leaves (B9)	nagery (B7) Yes No	☐ Dry-Season V☐ Oxidized Rhiz (where not ☐ Presence of F☐ Thin Muck Su☐ Other (Explain ☐ Depth	Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks)	ded Data (streal	☐ Oxidized Rhizosphere (where tilled) ☐ Crayfish Burrows (C8 ☐ Saturation Visible on ☐ Geomorphic Position ☐ FAC-Neutral Test (D8 ☐ Frost-Heave Hummon	10) es on Living Roots Aerial Imagery (C9 (D2) b) cks (D7) (LRR F)		
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 In Water-Stained Leaves (B9) Gield Observations:	nagery (B7) Yes No □ ⊠	☐ Dry-Season V☐ Oxidized Rhiz (where not ☐ Presence of F☐ Thin Muck Su☐ Other (Explain ☐ Depth	Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks) Describe Recor	ded Data (streal	☐ Oxidized Rhizosphere (where tilled) ☐ Crayfish Burrows (C8 ☐ Saturation Visible on ☐ Geomorphic Position ☐ FAC-Neutral Test (D8 ☐ Frost-Heave Hummon	10) es on Living Roots Aerial Imagery (C9 (D2) b) cks (D7) (LRR F)		
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 In Water-Stained Leaves (B9) Water-Stained Leaves (B9) Gield Observations: Surface Water present?	nagery (B7) Yes No	☐ Dry-Season V☐ Oxidized Rhiz (where not ☐ Presence of F☐ Thin Muck Su☐ Other (Explain ☐ Depth	Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks) Describe Recor	ded Data (streal	☐ Oxidized Rhizosphere (where tilled) ☐ Crayfish Burrows (C8 ☐ Saturation Visible on ☐ Geomorphic Position ☐ FAC-Neutral Test (D8 ☐ Frost-Heave Hummon	10) es on Living Roots Aerial Imagery (C9 (D2) b) cks (D7) (LRR F)		
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 In Water-Stained Leaves (B9) Water-Stained Leaves (B9) Field Observations: Surface Water present? Vater Table present?	nagery (B7) Yes No □ ⊠	☐ Dry-Season V☐ Oxidized Rhiz (where not ☐ Presence of F☐ Thin Muck Su☐ Other (Explain ☐ Depth	Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks) Describe Recor	ded Data (streal	☐ Oxidized Rhizosphere (where tilled) ☐ Crayfish Burrows (C8 ☐ Saturation Visible on ☐ Geomorphic Position ☐ FAC-Neutral Test (D8 ☐ Frost-Heave Hummon	10) es on Living Roots c) Aerial Imagery (C9 (D2) c) cks (D7) (LRR F)		
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 In Water-Stained Leaves (B9) Field Observations: Surface Water present? Vater Table present? Saturation Present? Includes capillary fringe)	Yes No	☐ Dry-Season V☐ Oxidized Rhiz (where not ☐ Presence of F☐ Thin Muck Su☐ Other (Explain ☐ Depth	Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks) Describe Recor	ded Data (streal	☐ Oxidized Rhizosphere (where tilled) ☐ Crayfish Burrows (C8 ☐ Saturation Visible on ☐ Geomorphic Position ☐ FAC-Neutral Test (D8 ☐ Frost-Heave Hummon	10) es on Living Roots c) Aerial Imagery (C9 (D2) c) cks (D7) (LRR F)		
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 In Water-Stained Leaves (B9) Water-Stained Leaves (B9) Field Observations: Surface Water present? Vater Table present?	nagery (B7) Yes No	☐ Dry-Season V☐ Oxidized Rhiz (where not ☐ Presence of F☐ Thin Muck Su☐ Other (Explain ☐ Depth	Vater Table (C2) cospheres on Living tilled) Reduced Iron (C4) rface (C7) n in Remarks) Describe Recor	ded Data (streal	☐ Oxidized Rhizosphere (where tilled) ☐ Crayfish Burrows (C8 ☐ Saturation Visible on ☐ Geomorphic Position ☐ FAC-Neutral Test (D8 ☐ Frost-Heave Hummon	10) es on Living Roots Aerial Imagery (C9 (D2) b) cks (D7) (LRR F)		

Project/Site: Sweetland Wind Project		City/County: 1	Hand Coun	ty	Sampling	Date: 6/27/2018
Applicant/Owner: Sweetland Wind Farm, LLC		_		State: SD	 Samp	ling Point: SP-544
Investigator(s): T. Beemer, W. Hirst		Section		, Range: S18	—— 3, T111N, R66	w
Landform (hillslope, terrace, etc.) depression	L	 ocal relief (conca		,	ncave	Slope (%): 0 %
Subregion (LRR): Northern Great Plains Spring Whe	eat Region	Lat: 44.417	732		.815380	Datum: NAD83
Soil Map Unit Name: Glenham-Propser loams, 1 to			. 02		lassification:	PABFh
Are climate/hydrologic conditions on the site typical for the			□No	(If no, explai	n in Remarks.)	
, ,	•				,	
<u> </u>	drology	Are "Nor	rmal Circun	nstances" prese	ent? 🛚 Yes	☐ No
Significantly Disturbed?		(If neede	ed, explain	any answers in	Remarks.)	
, – –						
SUMMARY OF FINDINGS – Attach site map sho	wing sampl	ing point loca	ations, tra	ansects, impo	ortant featur	es, etc.
Yes	No Rem	arks: Wetland s	ample plot	located in PEM	I W-524.	
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 Workshe	et:
Tree Stratum (Plot size: <u>30'</u>)	% Cover	•	Status	Number of D	ominant Speci	es that
1.				are OBL, FA		es triat
2. 3.				(excluding FA	√C-) :	(A)
3. 4.		·			r of Dominant	
T	0 %	·		Species Acro	ss All Strata:	(B)
Sapling/Shrub Stratum (Plot size: <u>15'</u>)					ominant Specie	
1.	%	·		are OBL, FA	CW, or FAC:	(A/B)
2	%	<u> </u>		Prevalence I	Index Worksh	eet·
3		· · · · · · · · · · · · · · · · · · ·				
4						Multiply by: % x 1 = 0
5	<u>%</u> 0 %			FACW species		% x 2 = 0
Herb Stratum (Plot size: 5')		- Total Cove	1 1	FAC species		% x 3 = 0
1. Typha latifolia	50 %	Υ	OBL	FACU specie		% x 4 = 0
2. Carex vulpinoidea	40 %		FACW	UPL species		_% x5= <u>0</u>
3	%	·		Column Tota		<u>0</u> % (A) <u>0</u> (B)
4				Prevalence I	Index = B/A =	
5				Hydrophytic	Vegetation Ir	ndicators:
6	0/			☑ 1 Ranid T	est for Hydron	hytic Vegetation
7 8	0.4				nce Test is >5	, ,
9	0/					
10.	0/				nce Index is ≤3	
Woody Vine Stratum (Plot size: 30')	90 %	= Total Cove	er		logical Adaptat ta in Remarks c	tions (Provide or on a separate sheet)
1	%	. <u></u>		☐ Problemat	tic Hydrophytic	Vegetation¹ (explain)
2.	%	. <u> </u>		¹ Indicators o	f hydric soil an	d wetland hydrology
	0 %	= Total Cove	er	must be pres	ent, unless dis	turbed or problematic
Bare Ground in Herb Stratum 10 %				Hydrophytic \	Vegetation Pre	sent? X Yes No
Remarks: Rapid test for hydrophytic vegetation is met. P	hotograph C-	19.				

Profile Desc	ription: (Describe	to the dep	th needed to docui	ment the	e indicator o	r confirm the	absence of indicators.)					
Depth	Matrix		Re	edox Fea	atures							
(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	oncentration, D=De	oletion, RM=	Reduced Matrix, C	S=Cove	red or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix				
Hydric Soil I	ndicators: (Appli	cable to all	LRRs, unless othe	rwise n	oted.)		Indicators for Problem	atic Hydric Soils³:				
☐ Histosol (/	A1)		☐ Sandy Gle	eyed Ma	trix (S4)		1 cm Muck (A9) (LRF	R I, J)				
☐ Histic Epip	pedon (A2)		☐ Sandy Re	dox (S5))		☐ Coast Prairie Redox	(A16) (LRR F, G, H)				
☐ Black Hist	, ,		☐ Stripped N	•	•		Dark Surface (S7) (L	,				
☐ Hydrogen			Loamy Mu	-			☐ High Plains Depressi					
	Layers (A5) (LRR F		☐ Loamy Gle	-			(LRR H outside of	•				
	k (A9) (LRR F, G, F		☐ Depleted I				Reduced Vertic (F18	,				
	Below Dark Surface	e (A11)	⊠ Redox Da		` '		☐ Red Parent Material☐ Very Shallow Dark S	•				
	k Surface (A12)		☐ Depleted I		` '		☐ Other (Explain in Rer	, ,				
	icky Mineral (S1) ucky Peat or Peat (52) (I DD G	☐ Redox De , H) ☐ High Plain	•	, ,							
	ky Peat or Peat (S		(MLRA 7				³ Indicators of hydrophyti wetland hydrology must					
	ky r cat or r cat (oc) (Little)	(,		disturbed or problematic					
Restrictive L	ayer (if present):						Hydric Soil Present?					
Type:		С	epth (inches):				⊠ Yes □ No					
	Type Deptir (inches)											
Remarks: Hy	dric soil indicator F	6 is present.										
HYDROLOG	Υ											
Wetland Hyd	Irology Indicators	:										
Primary Indic	ators (minimum of	one required	d; check all that appl	ly)			Secondary Indicators (2	? or more required)				
Surface W	/ater (A1)		☐ Salt Crust (B	 11)			☐ Surface Soil Cracks	(B6)				
☐ High Wate	` '		☐ Aquatic Inver	,	(B13)		☐ Sparsely Vegetated	` '				
			☐ Hydrogen Su				☐ Drainage Patterns (E					
☐ Water Ma	` '		☐ Dry-Season \				Oxidized Rhizosphe	res on Living Roots (C3)				
☐ Sediment	Deposits (B2)		Oxidized Rhiz		, ,	Roots (C3)	(where tilled)	,				
☐ Drift Depo	sits (B3)		(where not	tilled)			☐ Crayfish Burrows (C					
☐ Algal Mat	or Crust (B4)		Presence of I				Saturation Visible or					
☐ Iron Depo	` '		☐ Thin Muck Su		•		☐ Geomorphic Position					
_	n Visible on Aerial I	magery (B7)	Other (Explai	n in Rer	marks)		☐ FAC-Neutral Test (□	•				
☐ Water-Sta	ined Leaves (B9)						☐ Frost-Heave Hummo	ocks (D7) (LRR F)				
Field Observ	ations:	Yes 1	Depth No (inches)		cribe Record		ım gauge, monitoring well,	aerial photos, previous				
Surface Water	er present?	\boxtimes	□ 2		,							
Water Table			0									
Saturation Pr			0									
(includes cap												
	drology Present?	⊠ I										
				are pres	cont							
INCINIALKS. WE	and Hydrology Inc	iicaiOIS A I,	72, 73, DZ, AND DS	are pres	ociii.							

Project/Site: Sweetland Wind Project		City/County:	Hand Coun	ty	Sampling	Date: 6/27/2018	
Applicant/Owner: Sweetland Wind Farm, LLC				State: SD	e: SD Sampling Point: SP-545		
Investigator(s): T. Beemer, W. Hirst		Section	n, Township	, Range:	S18, T111N, R66	:W	
Landform (hillslope, terrace, etc.) roadside ditch		Local relief (cond	ave, conve	_	concave	Slope (%): 3 %	
Subregion (LRR): Northern Great Plains Spring Whea	at Region	Lat: 44.417	7936	Long:	-98.815433	Datum: NAD83	
Soil Map Unit Name: Glenham-Propser loams, 1 to 6		_	000		VI Classification:	NA	
Are climate/hydrologic conditions on the site typical for thi			□No		xplain in Remarks.		
, , , , , , , , , , , , , , , , , , ,				(,	,	,	
	rology	Are "No	rmal Circun	nstances" p	oresent? 🛛 Yes	i □ No	
· · · · · · · · · · · · · · · · · · ·		(If need	ed, explain	any answei	rs in Remarks.)		
, – –				-			
SUMMARY OF FINDINGS – Attach site map show	ing sam	pling point loc	ations, tra	ınsects, i	mportant featur	es, etc.	
Yes I	No Re	emarks: Upland sa	ample plot a	djacent to	PEM W-524.		
Hydrophytic Vegetation Present?	\boxtimes						
•	\boxtimes						
Is the Sampled Area within a Wetland?	\boxtimes						
VEGETATION – Use scientific names of plants							
T. O (DL	Absolu		Indicator	Dominar	nce Test Workshe	eet:	
Tree Stratum (Plot size: <u>30'</u>) 1.	% Cov	ver Species? <u>%</u>	Status	Number	of Dominant Speci	ies that	
1		<u>%</u>			, FACW, or FAC	0 (4)	
3.		<u>%</u>		(excludin	ng FAC-):	0_(A)	
4.		%			mber of Dominant		
	0		er	· ·	Across All Strata:	1_(B)	
Sapling/Shrub Stratum (Plot size: 15')					of Dominant Speci , FACW, or FAC:	es that0%_(A/l	B١
1		<u>%</u>		are OBL,	, I ACVV, OI I AC.	(A/I	
2.		<u>%</u>		Prevaler	nce Index Worksh	ieet:	
3.		<u>%</u>		Tot	tal % Cover of:	Multiply by:	
4 5.		<u>%</u> <u>%</u>		OBL spe		% x 1 = 0	
J	0			FACW s		$-\frac{70}{9}$ x 2 = $\frac{0}{0}$	
Herb Stratum (Plot size: 5')		<u> </u>	0 1	FAC spe	ecies	% x 3 = 0	
1. Poa pratensis	95	% Y	FACU	FACU s		% x 4 = <u>0</u>	
2. <u>Toxicodendron radicans</u>	5	% N	FACU	UPL spe		$_{0}$ % x 5 = $_{0}$ 0 (B	٥١
3		%				<u>0</u> % (A) <u> 0 (</u> B	")
4		<u>%</u>		Prevaler	nce Index = B/A =		
5	-	<u>%</u>		Hydroph	nytic Vegetation II	ndicators:	
6		<u>%</u>		│ │	oid Test for Hydrop	hytic Vegetation	
7 8.		<u>%</u> <u>%</u>			minance Test is >5	-	
8 9		<u>%</u>					
10.		%			valence Index is ≤		
Woody Vine Stratum (Plot size: 30')	100		er		rphological Adapta g data in Remarks o	tions¹ (Provide or on a separate sheet)	
1		<u> </u>		☐ Proble	ematic Hydrophytic	c Vegetation ¹ (explain)	1
2		%		1 Indicate	ors of hydric soil ar	nd wetland hydrology sturbed or problematic	
	0	<u>%</u> = Total Cove	er		·	i	
Bare Ground in Herb Stratum0 %				Hydrophy	ytic Vegetation Pre	esent? 🗌 Yes 🛛 No)
Remarks: Hydrophytic vegetation is not present. Photogra	aph C-20.						

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				
		,	<u> </u>					disturbed or problematic				
Restrictive I	ayer (if present):							Hydric Soil Present?				
Type:			Depth (inches):	:				☐ Yes ☐ No				
Remarks: No	Remarks: No hydric soil indicator is present.											
HADBOI OC												
HYDROLOG												
_	drology Indicators							0)			
	ators (minimum of	one require						Secondary Indicators (2				
☐ 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	City/County: Hand	County Sampling Date: 6/27/2018	Sampling Date: 6/27/2018		
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-548			
Investigator(s): T. Beemer, W. Hirst	Section, Tow	rnship, Range: S19, T111N, R66W			
Landform (hillslope, terrace, etc.) depression	Local relief (concave, c				
Subregion (LRR): Northern Great Plains Spring Wheat Region		Long: -98.810003 Datum: NAD83			
Soil Map Unit Name: Tetonka silt loam, 0 to 1 percent slopes	44.412000	NWI Classification: PEM1C			
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 C	Circumstances" present? ⊠ Yes ☐ No			
Significantly Disturbed?	(If needed, exp	plain any answers in Remarks.)			
, – – – –					
SUMMARY OF FINDINGS – Attach site map showing sam					
	emarks: Wetland sample	e plot located in PEM W-526.			
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					
Tree Stratum (Plot size: <u>30'</u>)	ver Species? Sta <u>%</u>	Number of Dominant Species that			
2.	%	are OBL, FACW, or FAC (excluding FAC-): (A)	١		
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/I	/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			
1. <u>Spartina pectinata</u> 100		<u>CW</u> UPL species			
2	<u>%</u>	Column Totals: 0 % (A) 0 (B	B)		
3	<u>%</u>	Prevalence Index = B/A =			
4	<u>%</u>				
6.	%	—— Hydrophytic Vegetation Indicators:			
7	%				
8	<u>%</u>	2 Dominance Test is >50%			
9	<u>%</u>	— 3 Prevalence Index is ≤3.0¹			
10	% = Total Cover	4 Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	ļ		
Woody Vine Stratum (Plot size: 30') 1	<u>%</u>	☐ Problematic Hydrophytic Vegetation¹ (explain)	1)		
2.	<u>%</u>	1 Indicators of hydric soil and wetland hydrology			
	% = Total Cover	must be present, unless disturbed or problematic	>		
Bare Ground in Herb Stratum0 %		Hydrophytic Vegetation Present? ⊠ Yes ☐ No	0		
Remarks: Rapid test for hydrophytic vegetation is met. Photograph	n C-21.				

Profile Desc	cription: (Describe	to the dep	th needed to docu	ment th	e indicator o	or confirm the	absence of indicators.)			
Depth	Matrix		R	edox Fe						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-4	10YR 3/2	100					Silt Loam			
4-18	10YR 3/2	95	10YR 4/6	5	C	M	Silt Loam			
-			·							
					. ———					
			·							
-										
					· ——					
¹Type: C=C	oncentration, D=De	pletion, RM:	Reduced Matrix, C	S=Cove	red or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil	Indicators: (Applie	cable to all	LRRs, unless othe	rwise n	oted.)		Indicators for Problem	atic Hydric Soils ³ :		
☐ Histosol (A1)		☐ Sandy Gle	eved Ma	trix (S4)		1 cm Muck (A9) (LRI	R I. J)		
☐ Histic Ep	,		☐ Sandy Re	•	` '		☐ Coast Prairie Redox			
☐ Black His			-	☐ Stripped Matrix (S6) ☐ Dark Surface (S7) (LRR G)						
☐ Hydroger	Sulfide (A4)		☐ Loamy Mı	Mucky Mineral (F1) High Plains Depressions (F16)						
☐ Stratified	Layers (A5) (LRR F	=)	☐ Loamy GI	eyed Ma	atrix (F2)		(LRR H outside of	MLRA 72 & 73)		
1 cm Mud	ck (A9) (LRR F, G, I	H)	☐ Depleted	Matrix (F	=3)		Reduced Vertic (F18			
☐ Depleted	Below Dark Surface	e (A11)	🛛 Redox Da		` ,		Red Parent Material	, ,		
	rk Surface (A12)		□ Depleted		` '		☐ Very Shallow Dark S			
-	ucky Mineral (S1)		Redox De				Other (Explain in Rer	marks)		
	ucky Peat or Peat (, ,		³ Indicators of hydrophyti			
☐ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be present, disturbed or problematic										
Restrictive	Layer (if present):						Hydric Soil Present?			
Type:			epth (inches):							
HYDROLOG	· · · · · · · · · · · · · · · · · · ·									
HYDROLOG										
	drology Indicators cators (minimum of		t check all that ann	hΛ			Socondary Indicators (or more required)		
	-	one require					Secondary Indicators (2			
Surface \	` '		☐ Salt Crust (B	,	(D.40)		Surface Soil Cracks (B6)			
	er Table (A2)		☐ Aquatic Inve		` '		☐ Sparsely Vegetated			
☐ Saturatio	` '		☐ Hydrogen Su				☐ Drainage Patterns (E	,		
☐ Water Ma	t Deposits (B2)		☐ Dry-Season ¹☐ Oxidized Rhi		, ,	Poots (C3)	(where tilled)	res on Living Roots (C3)		
☐ Drift Dep			(where no		es on Living	Noois (C3)	☐ Crayfish Burrows (C	8)		
	or Crust (B4)		☐ Presence of		d Iron (C4)		☐ Saturation Visible or			
☐ Iron Depo			☐ Thin Muck S				☐ Geomorphic Position			
	n Visible on Aerial I	magery (B7	Other (Expla	in in Rer	marks)					
	ained Leaves (B9)						☐ Frost-Heave Hummo	ocks (D7) (LRR F)		
Field Obser	vations:	Voc	Depth (inches)				m gauge, monitoring well,	aerial photos, previous		
		_	No (inches)	insp	ections, etc.)	, if available:				
Surface Wat	·		<u> </u>							
Water Table	•		<u> </u>							
Saturation P			×							
	oillary fringe)	_								
Wetland Hy	drology Present?	\boxtimes								
Remarks: W	etland hydrology ind	dicator D2 a	nd D5 are present.							

Project/Site: Sweetland Wind Project	City/County: _ F	land Count	.y	Sampling Date: 6/27/2018		
Applicant/Owner: Sweetland Wind Farm, LLC			tate: SD Sampling Point: SP-549			
Investigator(s): T. Beemer, W. Hirst	Section,		Range: S19, T			
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.	%		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.					

Profile Desc	ription: (Describe	to the depti	n needed to docum	nent the	indicator c	or confirm the	absence of indicators.)		
Depth	Matrix		Re	dox Fea	atures				
(inches)	Color (moist)	%	Color (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=Dep	oletion, RM=I	Reduced Matrix, CS	S=Cover	ed or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil	Indicators: (Applic	cable to all L	RRs, unless other	wise no	oted.)		Indicators for Problema	tic Hydric Soils ³ :	
☐ Histosol (A1)		☐ Sandy Gle	yed Mat	trix (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 (S	6)		☐ Dark Surface (S7) (LF	RR G)	
	Sulfide (A4)		☐ Loamy Mu	-			☐ High Plains Depression		
	Layers (A5) (LRR F		Loamy Gle	-			(LRR H outside of N	ILRA 72 & 73)	
	k (A9) (LRR F, G, F		Depleted N				Reduced Vertic (F18)	TEO)	
	Below Dark Surface	e (A11)	Redox Dar		` '		Red Parent Material (
	k Surface (A12)		☐ Depleted □		` '		☐ Very Shallow Dark Su☐ Other (Explain in Rem		
	ucky Mineral (S1)	CO) // DD C	Redox Dep				, .	,	
	ucky Peat or Peat (\$3						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: Depth (inches):									
HYDROLOG	ìΥ								
Wetland Hy	drology Indicators	:							
Primary India	cators (minimum of	one required;	check all that apply	<u>v)</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			☐ Hydrogen Sul	fide Odd	or (C1)		□ Drainage Patterns (B		
☐ Water Ma	ırks (B1)		□ Dry-Season V	Vater Ta	able (C2)		Oxidized Rhizospher	es on Living Roots (C3)	
	Deposits (B2)		Oxidized Rhiz		es on Living	Roots (C3)	(where tilled)		
☐ Drift Depo	, ,		(where not		(0.1)		☐ Crayfish Burrows (C8	•	
	or Crust (B4)		☐ Presence of F				☐ Saturation Visible on	0, 1, 7	
☐ Iron Depo		(57)	☐ Thin Muck Su☐ Other (Explain				☐ Geomorphic Position ☐ FAC-Neutral Test (D		
_	n Visible on Aerial II	magery (B7)	☐ Other (Explain	i iii Keii	iaiks)		☐ Frost-Heave Hummo	,	
☐ water-Sta	ained Leaves (B9)						1 103t-1 leave 1 lullillillo	CRS (D1) (LIKIT I)	
Field Obser	vations:	Yes N	Depth o (inches)			ed Data (strea , if available:	m gauge, monitoring well, a	aerial photos, previous	
Surface Wat	er present?								
Water Table	present?		3						
Saturation P	resent?		<u> </u>						
(includes cap	oillary fringe)								
Wetland Hy	drology Present?		3						
Remarks: No	hydrology indicato	rs are presen	t.	•					
	. .,	•							
1									

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-551			
Investigator(s): T. Beemer, W. Hirst		Section	n, Township	_	T111N, R66W		
Landform (hillslope, terrace, etc.) toeslope	Loc	cal relief (cond	cave, conve		01 (01)		
Subregion (LRR): Northern Great Plains Spring Wheat Reg		Lat: 44.40			012115 Datum: NAD83		
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 perce				_	assification: PEM1C		
Are climate/hydrologic conditions on the site typical for this time			□ No	(If no, explain			
, ,	,	_	_	, ,	,		
Vegetation Soil Hydrology	/	Are "No	ormal Circun	nstances" presen	nt? ⊠ Yes □ No		
Significantly Disturbed? Naturally Problematic?		(If need	led, explain	any answers in R	Remarks.)		
, – – –							
SUMMARY OF FINDINGS – Attach site map showing s	samplir	ng point loc	ations, tra	insects, impor	tant features, etc.		
Yes No	Rema	rks: Upland s	ample plot.				
Hydrophytic Vegetation Present?							
Hydric Soil Present?							
Is the Sampled Area within a Wetland?							
VEGETATION – Use scientific names of plants							
	bsolute	Dominant	Indicator	Dominance Te	est Worksheet:		
	Cover	Species?	Status	Number of Dor	minant Species that		
1	<u>%</u> %			are OBL, FAC\	W, or FAC		
3.	%			(excluding FAC	C-):1_(A)		
4.	%			Total Number of			
	0 %	= Total Cov	er	Species Across			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Percent of Don are OBL, FAC\	minant Species that W, or FAC: 50% (A/B)		
1	%			are OBL, FACT	77, 011 AC. <u>30%</u> (A/B)		
2	<u>%</u>			Prevalence In	dex Worksheet:		
3	<u>%</u>			Total % C	Cover of: Multiply by:		
4	<u>%</u> %			OBL species	% x 1 = 0		
5	0 %	= Total Cov	er	FACW species			
Herb Stratum (Plot size: 5')	0 70	- 10tai 00V	O1	FAC species	% x 3 = 0		
1. Poa pratensis	60 %	<u>Y</u>	FACU	FACU species			
2. Alopecurus pratensis	20 %	Υ	FACW	UPL species Column Totals	s: ${0}$ % x 5 = ${0}$ (B)		
3	%						
4	%			Prevalence In	dex = B/A =		
5	<u>%</u>			Hydrophytic V	/egetation Indicators:		
6	<u>%</u> %			☐ 1 Rapid Tes	st for Hydrophytic Vegetation		
7	// 0 %				ce Test is >50%		
9	%			_	ce Index is ≤3.0¹		
10.	%						
Woody Vine Stratum (Plot size: 30')	80 %	= Total Cov	er	supporting data	gical Adaptations ¹ (Provide in Remarks or on a separate sheet)		
1	%			☐ Problemation	c Hydrophytic Vegetation ¹ (explain)		
2	% 0 %	= Total Cov	 rer		hydric soil and wetland hydrology nt, unless disturbed or problematic		
Bare Ground in Herb Stratum 20 %				Hydrophytic Ve	egetation Present? ☐ Yes ☒ No		
Remarks: Hydrophytic vegetation is not present. Photograph C-	;-23.			1			
The state of the s							

Profile Desc	ription: (Describe	to the dep	oth needed to docu	ment th	e indicator o	r confirm the	absence of indicators.)				
Depth	Matrix		R	edox Fe	atures						
(inches)	Color (moist)	%	Color (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=Dep	oletion, RM	=Reduced Matrix, C	S=Cove	red or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix			
Hydric Soil	Indicators: (Applic	cable to all	LRRs, unless other	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 His	` '		☐ Stripped N	,	•		☐ Dark Surface (S7) (LI				
	Sulfide (A4)		Loamy Mu	-			☐ High Plains Depression	ons (F16)			
	Layers (A5) (LRR F		☐ Loamy GI	-			(LRR H outside of I	•			
	ck (A9) (LRR F, G, F		☐ Depleted				☐ Reduced Vertic (F18)☐ Red Parent Material (
	Below Dark Surface	e (A11)	☐ Redox Da		. ,		☐ Very Shallow Dark St	,			
	k Surface (A12)		☐ Depleted ☐ Redox De		. ,		☐ Other (Explain in Ren	, ,			
	ucky Mineral (S1)	S2) (I DD G	_	•	` '						
	☐ 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										
o on was	oky i cat of i cat (oc), (L IXIX I)	(,		disturbed or problematic				
Restrictive I	Layer (if present):						Hydric Soil Present?				
Type:	Type: Depth (inches):										
Demonstra, Markovskie antilinskinger in present											
Remarks: No	Remarks: No hydric soil indicator is present.										
HYDROLOG	·V										
_	drology Indicators		di abaali all that ann	l. A			Casandari Indicatora (2	ar mara raquirad)			
_	•	one require	d; check all that app				Secondary Indicators (2				
☐ Surface V	` '		☐ Salt Crust (B	,	(= ·		☐ Surface Soil Cracks	` '			
	er Table (A2)		☐ Aquatic Inve		. ,		☐ Sparsely Vegetated				
Saturation	` '		☐ Hydrogen St				☐ Drainage Patterns (B	es on Living Roots (C3)			
☐ Water Ma	` '		☐ Dry-Season '☐ Oxidized Rhi		, ,	Pooto (C2)	(where tilled)	es on Living Roots (C3)			
☐ Drift Depo	Deposits (B2)		(where no		es on Living i	(00is (C3)	☐ Crayfish Burrows (C8	3)			
	or Crust (B4)		☐ Presence of	-	d Iron (C4)		☐ Saturation Visible on				
☐ Iron Depo			☐ Thin Muck S		` '		☐ 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 Obser	vations:		Depth	Des	cribe Record	ed Data (strea	m gauge, monitoring well,	aerial photos, previous			
		Yes	No (inches)	insp	ections, etc.)	, if available:					
Surface Wat	er present?		⊠								
Water Table	present?		⊠								
Saturation P	resent?										
(includes car	oillary fringe)										
Wetland Hy	drology Present?		\boxtimes								
Remarks: No	hydrology indicato	rs are prese	ent.								

Project/Site: Sweetland Wind Project	(City/County:	land Coun	ty	Sampling	Date: 6/27/2018
Applicant/Owner: Sweetland Wind Farm, LLC				tate: SD	 Samp	oling Point: SP-552
Investigator(s): T. Beemer, W. Hirst		Section,			 19, T111N, R66	
Landform (hillslope, terrace, etc.) depression	Lo	 ocal relief (conca		,	oncave	Slope (%): 0 %
Subregion (LRR): Northern Great Plains Spring Whea		Lat: 44.4063			98.806473	Datum: NAD83
		111.1000	001	- · <u> </u>	Classification:	NA NA
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 Are climate/hydrologic conditions on the site typical for this			□No		ain in Remarks.)	
7 to diffication of the disc typical for the	o umo or you	🔼 100		(11 110, 000	am m romano.,	'
Vegetation Soil Hydr	rology	Are "Nor	mal Circun	nstances" pre	esent? 🛛 Yes	☐ No
Significantly Disturbed?		(If neede	d, explain a	any answers i	in Remarks.)	
Naturally Problematic?		`	, ,	•	,	
SUMMARY OF FINDINGS – Attach site map show	ing sampli	ng point loca	tions, tra	ınsects, imp	portant featur	es, etc.
Yes	No Rema	arks: Upland sar	mple plot.			
Hydric Soil Present?	\boxtimes					
Wetland Hydrology Present?						
Is the Sampled Area within a Wetland?						
VEGETATION – Use scientific names of plants	•					
VEGETATION - Ose scientific flames of plants				<u> </u>		
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance	e Test Workshe	et:
1(FIOUSIZE. <u>50</u>)	0/	Species:	Status		Dominant Speci	es that
2.				are OBL, Factorian (excluding f	ACW, or FAC	1 (A)
3.				_		<u></u>
4.	%				per of Dominant cross All Strata:	2_(B)
	0 %	= Total Cove	r	-		·
Sapling/Shrub Stratum (Plot size: 15')					Dominant Specie ACW, or FAC:	es tnat50%_ (A/B)
1.						(' ' ' - ')
2				Prevalence	e Index Worksh	eet:
3. 4.				Total	% Cover of:	Multiply by:
4 5.	<u> </u>			OBL speci		% x1 = 0
9.	0 %	= Total Cove		FACW spe		% x 2 = 0
Herb Stratum (Plot size: 5')				FAC speci		_% x 3 =0
1. Poa pratensis	60 %	Y	FACU	FACU spec		_% x 4 =0
2. Alopecurus pratensis	20 %	<u> </u>	FACW	UPL specie Column To		
3. <u>Salvia sp.*</u>	10 %	<u>N</u>				<u> </u>
4	%			Prevalence	e Index = B/A =	
5				Hydrophyt	ic Vegetation Ir	ndicators:
6	0.4			☐ 1 Rapid	Test for Hydrop	hytic Vegetation
8.				□ 2 Domin	nance Test is >5	0%
9.					lence Index is ≤3	
10	%				nological Adaptat	
Woody Vine Stratum (Plot size: <u>30'</u>)	90 %	= Total Cove	r	supporting d	data in Remarks o	or on a separate sheet)
1	%			☐ Problem	natic Hydrophytic	c Vegetation ¹ (explain)
2	. <u>%</u> 0 %	= Total Cove				nd wetland hydrology sturbed or problematic
Bare Ground in Herb Stratum 10 %				Hydrophytic	vegetation Pre	esent? 🗌 Yes 🛛 No
Remarks: Hydrophytic vegetation is not present. * Salvia	species coul	d not be identifie	ed past ger	nus, therefore	, no indicator st	atus is
listed. Photograph C-24.			,, 95.	, : ::::		

Profile Desc	ription: (Describe	to the dep	oth needed to docur	nent th	e indicator c	or confirm the	absence of indicators.)		
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (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	pletion, RM	=Reduced Matrix, CS	S=Cove	red or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless other	rwise n	oted.)		Indicators for Problema	ntic Hydric Soils ³ :	
☐ Histosol (A1)		☐ Sandy Gle	yed Ma	atrix (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	, ,		☐ Stripped M	•	•		☐ Dark Surface (S7) (LF	RR G)	
	☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) ☐ High Plains Depressions (F16)								
	Layers (A5) (LRR F		Loamy Gle	-			(LRR H outside of N	ILRA 72 & 73)	
	k (A9) (LRR F, G, F		☐ Depleted N				☐ Reduced Vertic (F18)☐ Red Parent Material (TE2)	
	Below Dark Surface	e (A11)	☐ Redox Dai		` ,				
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF 12) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8) ☐ Other (Explain in Remarks)									
	ucky Milleral (ST) ucky Peat or Peat (S2) (I PP G					• •	,	
	cky Peat or Peat (S	, ,	(MLRA 72				³ Indicators of hydrophytic wetland hydrology must i		
o on was	my rear or rear (oc) (LIUIT)	(,		disturbed or problematic	oc present, unless	
Restrictive	_ayer (if present):						Hydric Soil Present?		
Type:		[Depth (inches):				☐ Yes ☒ No		
Remarks: No hydric soil indicator is present.									
Tromano. 140	Tryano son maloato	i io procent	•						
LIVERGLOG									
HYDROLOG									
_	drology Indicators		d. ab a al. all th at a a a				Casaadam Hadisatana (O		
	•	one require	d; check all that appl				Secondary Indicators (2 or more required)		
☐ Surface V	` '		☐ Salt Crust (B ²	,			Surface Soil Cracks (B6)		
	er Table (A2)		☐ Aquatic Inver				☐ Sparsely Vegetated (
☐ Saturation			☐ Hydrogen Su				☐ Drainage Patterns (B		
☐ Water Ma	` '		☐ Dry-Season V		` '	Dooto (C2)	Oxidized Rhizospher (where tilled)	es on Living Roots (C3)	
☐ Drift Depo	Deposits (B2)		Oxidized Rhiz (where not		es on Living	Roots (C3)	☐ Crayfish Burrows (C8	3)	
· ·	or Crust (B4)		☐ Presence of F	•	d Iron (C4)		☐ Saturation Visible on	•	
☐ Iron Depo			☐ Thin Muck Su				☐ Geomorphic Position	0 , (,	
	n Visible on Aerial I	magery (B7					FAC-Neutral Test (D		
	ained Leaves (B9)		,				☐ Frost-Heave Hummo	cks (D7) (LRR F)	
Field Obser	vations:	Vs -	Depth (in the se)				ım gauge, monitoring well, a	aerial photos, previous	
		Yes	No (inches)	insp	pections, etc.)	, if available:			
Surface Wat	•								
Water Table	•								
Saturation P			⊠						
(includes cap									
Wetland Hy	drology Present?								
Remarks: W	etland hydrology ind	dicator D2 is	s met.						

Project/Site: Sweetland Wind Project		City/County: _	Hand Coun	ty	Sampling	Date: 6/27/2018	
Applicant/Owner: Sweetland Wind Farm, LLC				State: SD	Samp	ling Point: SP-570	
Investigator(s): T. Beemer, W. Hirst		Section	, Township	, Range:	S18, T111N, R66		
Landform (hillslope, terrace, etc.) roadside ditch	I	 _ocal relief (conc		_	concave	Slope (%): 0 %	
Subregion (LRR): Northern Great Plains Spring Whe	_	Lat: 44,413		Long:	-98.804757	Datum: NAD83	
Soil Map Unit Name: Glenham loam, rolling	at Negion	44.413	900		VI Classification:	PEM1C	
Are climate/hydrologic conditions on the site typical for the	is time of ve	ar? 🛛 Yes	□No		xplain in Remarks.		
7 to similate riyare region contained on the cite typical for the	io unio oi ye	a <u>A</u> 100		(11 110, 0)	Aprairi i i reomane.		
Vegetation Soil Hyd	drology	Are "Noi	rmal Circun	nstances" p	oresent? 🛛 Yes	☐ No	
Significantly Disturbed?	ed, explain	any answei	rs in Remarks.)				
Naturally Problematic?				-			
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Yes	No Rer	narks: Wetland s	ample plot	located in I	PEM W-537.		
Hydric Soil Present?							
Wetland Hydrology Present?							
Is the Sampled Area within a Wetland?							
VEGETATION – Use scientific names of plants							
VEGETATION - OSC SCIENTING Harnes of plants	A 1 1 <i>i</i>		1 " .	<u> </u>	-		
Tree Stratum (Plot size: 30')	Absolut % Cove		Indicator Status	Dominar	nce Test Workshe	et:	
1	0	•			of Dominant Speci	es that	
2	_			(excludin	, FACW, or FAC na FAC-):	(A)	
3					mber of Dominant		
4					Across All Strata:	(B)	
(0.11.10)	0 9	6 = Total Cove	er	Percent of	of Dominant Speci	es that	
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1.	9	,			, FACW, or FAC:	(A/B)	
1 2							
3.				Prevaler	nce Index Worksh	eet:	
4.				Tot	al % Cover of:	Multiply by:	
5	9	<u> </u>		OBL spe		% x 1 =0	
	0 %	6 = Total Cove	er	FACW s		% x 2 = 0	
Herb Stratum (Plot size: <u>5'</u>)				FAC spe		_% x 3 = <u>0</u> % x 4 = 0	
1. <u>Typha latifolia</u>	<u>100 %</u>		<u>OBL</u>	UPL spe		$\frac{1}{2}$ % x 5 = $\frac{1}{2}$	
2				Column	Totals:	0 (A) 0 (B)	
3 4				Prevaler	nce Index = B/A =		
5				Hydroph	nytic Vegetation Ir	dicators:	
6.	9				, ,		
7					oid Test for Hydrop	hytic Vegetation	
8				2 Don	minance Test is >5	0%	
9				☐ 3 Pre	valence Index is ≤	3.0 ¹	
10(District 20)	100 %		er	4 Mor	phological Adapta g data in Remarks o	ions ¹ (Provide or on a separate sheet)	
Woody Vine Stratum (Plot size: <u>30'</u>)	9	/ 6		☐ Proble	ematic Hydrophytic	: Vegetation ¹ (explain)	
1 2	9					d wetland hydrology	
-	0 %		er			turbed or problematic	
Bare Ground in Herb Stratum0 %				Hydrophy	ytic Vegetation Pre	sent? ⊠ Yes □ No	
Remarks: Rapid test for hydrophytic vegetation is met. P	hotograph C	C-25.					

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	
0-10	10YR 5/1	80	10YR 5/6	20	C	M	Clay Loam		
10-20	10YR 6/1	80	10YR 5/6	20	C	M	Clay Loam		
					·				
					· ———				
1Tuno: C-Co	noontration D_Do	olotion DM	Reduced Matrix, CS	Cover	rod or Coaton	Sand Crains	² Location: PL=Pore	Lining M-Motrix	
			LRRs, unless other			I Sanu Granis	Indicators for Problem		
_		able to all			-			•	
Histosol (A	,		☐ Sandy Gle	-			1 cm Muck (A9) (LR		
☐ Histic Epip			☐ Sandy Red				Coast Prairie Redox		
☐ Black Hist☐ Hydrogen	, ,		☐ Stripped M☐ Loamy Mu	•	•		☐ Dark Surface (S7) (L☐ High Plains Depress	•	
	-ayers (A5) (LRR F	1	☐ Loamy Gle	-			(LRR H outside of		
	k (A9) (LRR F, G, F		☐ Loanly Gle	-			☐ Reduced Vertic (F18		
	Selow Dark Surface		☐ Redox Dar				☐ Red Parent Material		
		(7(11)			` '		☐ Very Shallow Dark S		
Depleted Bank Gandes (11)							Other (Explain in Re	, ,	
_ ,	icky Peat or Peat (S2) (LRR G .			` '		³ Indicators of hydrophyt	ic vegetation and	
	ky Peat or Peat (S3		(MLRA 72				wetland hydrology must		
	` ` `	, ,					disturbed or problemation		
Restrictive L	ayer (if present):						Hydric Soil Present?		
Type:		D	epth (inches):						
		_	,						
Remarks: Hy	dric soil indicator F	3 is met.							
HYDROLOG	Y								
Wetland Hyd	rology Indicators	:							
Primary Indic	ators (minimum of	one required	; check all that apply	y)			Secondary Indicators (2	2 or more required)	
Surface W	Jater (A1)		☐ Salt Crust (B1	11)			☐ Surface Soil Cracks (B6)		
☐ High Wate	` '		Aquatic Invert	,	: (B13)		☐ Sparsely Vegetated Concave Surface (B8)		
			☐ Hydrogen Sul				☐ Drainage Patterns (I		
☐ Water Mai	` '		☐ Dry-Season V				_	res on Living Roots (C3)	
_	Deposits (B2)		☐ Oxidized Rhiz		` '	Roots (C3)	(where tilled)	···· g · · · · · (· ·)	
☐ Drift Depo			(where not		· ·	` ,	☐ Crayfish Burrows (C	8)	
☐ Algal Mat			☐ Presence of F	Reduced	d Iron (C4)		☐ Saturation Visible or	n Aerial Imagery (C9)	
☐ Iron Depo	, ,		☐ Thin Muck Su	ırface (C	C7)		☐ Geomorphic Position	n (D2)	
☐ Inundation	Visible on Aerial I	magery (B7)	Other (Explain	n in Ren	narks)			05)	
☐ Water-Sta	ined Leaves (B9)						☐ Frost-Heave Humm	ocks (D7) (LRR F)	
Field Observ	ations:		Depth	Des	cribe Recorde	ed Data (strea	m gauge, monitoring well,	aerial photos, previous	
		Yes 1	No (inches)		ections, etc.)		33.,	,, ,	
Surface Water	r present?	\boxtimes	2						
Water Table	present?	\boxtimes	0						
Saturation Pr	esent?	\boxtimes [
(includes cap	illary fringe)								
Wetland Hyd	rology Present?	\boxtimes							
Remarks: We	tland hydrology inc	licators A1.	A2, A3, D2, and D5	are met					
	,		, , , , , , , , , , , , , , , , , , , ,						

Project/Site: Sweetland Wind Project	C	ity/County: H	and Coun	ry	Sampling Date: 6/27/2018
Applicant/Owner: Sweetland Wind Farm, LLC				tate: SD	Sampling Point: SP-571
Investigator(s): T. Beemer, W. Hirst		Section,		Range: S18, T	
Landform (hillslope, terrace, etc.) berm	Loc	 cal relief (conca			01 (01)
Subregion (LRR): Northern Great Plains Spring Whe	at Region	Lat: 44.4140	15	Long: -98.805	
Soil Map Unit Name: Glenham loam, rolling	atriogion		10	NWI Class	
Are climate/hydrologic conditions on the site typical for th	is time of year	? X Yes	□No	(If no, explain in	
, ,	•	_	_		,
• ,	drology	Are "Norr	mal Circum	stances" present?	P ⊠ Yes □ No
Significantly Disturbed?	d, explain a	any answers in Rer	marks.)		
, – –					
SUMMARY OF FINDINGS – Attach site map shov	ving samplir	ng point loca	tions, tra	nsects, importa	ant features, etc.
Yes	No Rema	rks: Upland sar	nple plot a	djacent 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					
	Absolute	Dominant	Indicator	Dominance Tes	t Worksheet:
Tree Stratum (Plot size: <u>30'</u>)	% Cover	Species?	Status	Number of Domii	nant Species that
1				are OBL, FACW,	, or FAC
3.				(excluding FAC-)	<u> </u>
4.				Total Number of	
_	0 %	= Total Cover		Species Across A	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Percent of Domir are OBL, FACW,	nant Species that , or FAC: 0% (A/B)
1		<u> </u>		are OBL, I ACW,	, OTTAC(A/B)
2.				Prevalence Inde	ex Worksheet:
3.				Total % Co	over of: Multiply by:
45.	<u>%</u> %			OBL species	% x1 = 0
J	0 %	= Total Cover		FACW species	% x 2 = 0
Herb Stratum (Plot size: <u>5'</u>)				FAC species	% x 3 =0
1. Poa pratensis	100 %	Y	FACU	FACU species	% x 4 = 0
2	%			UPL species Column Totals:	
3		<u> </u>			
4				Prevalence Inde	X = B/A =
5				Hydrophytic Ve	getation Indicators:
6 7	0/			☐ 1 Rapid Test	for Hydrophytic Vegetation
8.				☐ 2 Dominance	Test is >50%
9.	%			☐ 3 Prevalence	
10				_	cal Adaptations ¹ (Provide
Woody Vine Stratum (Plot size: 30')	<u>100 %</u>	= Total Cover	•	supporting data in	Remarks or on a separate sheet)
1.	%			☐ Problematic F	Hydrophytic Vegetation ¹ (explain)
2	<u>%</u> 	= Total Cover		¹ Indicators of hymust be present,	rdric soil and wetland hydrology , unless disturbed or problematic
Bare Ground in Herb Stratum 0 %				Hydrophytic Veg	etation Present? Yes No
Remarks: Hydrophytic vegetation is not present. Photogr	raph C-26.				
•					

				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	Έ2\				
Depleted Below Dark Surfa	ce (A11)		k Surface (F6)			,				
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF 12) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8) ☐ Other (Explain in Remarks)										
☐ Sandy Mucky Mineral (S1)☐ 2.5 cm Mucky Peat or Peat	(S2) (I PP G		s Depressions (F16	:1						
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					
Demonto. Ne le dei e atilizatione in present										
Remarks: No hydric soil indicate	tor is present.									
LIVEROLOGY										
		HYDROLOGY								
	Wetland Hydrology Indicators:									
						ar mare required)				
					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)				
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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)				
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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)				
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□ 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		City/County: H	and Coun	ty	Sampling	Date: 6/28/2018
Applicant/Owner: Sweetland Wind Farm, LLC				tate: SD	_ Samp	ling Point: SP-591
Investigator(s): T. Beemer, W. Hirst		Section,	Township	, Range: S24	 I, T111N, R67\	N
Landform (hillslope, terrace, etc.) toeslope		Local relief (conca				Slope (%): 2 %
Subregion (LRR): Northern Great Plains Spring Whe	eat Region	Lat: 44.4127	11	Long: _98.	.825603	Datum: NAD83
Soil Map Unit Name: Glenham-Propser loams, 1 to 6					lassification:	NA
Are climate/hydrologic conditions on the site typical for the			☐ No	(If no, explain	n in Remarks.)	
Vegetation Soil Hy	drology	Are "Norm	nal Circum	nstances" prese	ent? 🛛 Yes	☐ No
Significantly Disturbed?		•	_			
Naturally Problematic?		(If needed	a, explain a	any answers in	Remarks.)	
SUMMARY OF FINDINGS – Attach site map show	wing samp	oling point locat	ions, tra	nsects, impo	ortant featur	es, etc.
Yes	No Re	marks: Upland san	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 1	Test Workshe	et:
Tree Stratum (Plot size: 30')	% Cove	•	Status	Number of Do	ominant Specie	es that
1 2		<u>%</u>		are OBL, FAC	CW, or FAC	
3.		<u></u>		(excluding FA	.С-):	0_(A)
4.		<u></u>		Total Number		1 (D)
	0 9			Species Acros		1_(B)
Sapling/Shrub Stratum (Plot size: 15')				Percent of Do are OBL, FAC	ominant Specie	es that0%_(A/B)
1		<u></u>		ale ODL, I AC	, or i AC.	(A/B)
2		<u> </u>		Prevalence I	ndex Worksh	eet:
3.		<u></u>		Total %	Cover of:	Multiply by:
4 5		<u>%</u>		OBL species		% x 1 = 0
o	0 9			FACW specie		% x 2 = 0
Herb Stratum (Plot size: <u>5'</u>)		_		FAC species		% x 3 = <u>0</u>
1. Poa pratensis	80 °	<u> Y</u>	FACU	FACU specie		_% x 4 =0
2		<u> </u>		UPL species Column Tota		_% x 5 =0 (B)
3		<u> </u>				<u> </u>
4		<u></u> .		Prevalence	ndex = B/A =	
5.		<u>%</u>		Hydrophytic	Vegetation In	dicators:
6 7		<u></u>		☐ 1 Rapid Te	est for Hydrop	hytic Vegetation
8.		<u></u>		2 Dominar	nce Test is >50	0%
9		<u></u>		☐ 3 Prevaler	nce Index is ≤3	3.0 ¹
10	80 9	<u>%</u> <u>−</u> <u>%</u> = Total Cover		4 Morphole	ogical Adaptat	ions ¹ (Provide r on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>)		· ·		•		: Vegetation¹ (explain)
1 2		<u>%</u> <u></u>			, ,	• • • • • • • • • • • • • • • • • • • •
۷	0 9			must be prese	ent, unless dis	d wetland hydrology turbed or problematic
Bare Ground in Herb Stratum 20 %				Hydrophytic V	/egetation Pre	sent? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photog	raph C-27.			ı		
	•					

Profile Description: (Describe					abscrice of indicators.		
Depth Matrix		Re	edox Features				
(inches) Color (moist)	%	Color (moist)	% Туре	e ¹ Loc ²	Texture	Remarks	
0-10 10YR 3/2	100				Silt Loam		
10-2010YR 3/3	100				Silt Loam		
	- —— ·						
¹ Type: C=Concentration, D=De	pletion, RM=	Reduced Matrix, CS	S=Covered or Co	pated Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil Indicators: (Appli	cable to all	LRRs, unless othe	rwise noted.)		Indicators for Problem	atic Hydric Soils ³ :	
☐ Histosol (A1)		☐ Sandy Gle	eyed Matrix (S4)		1 cm Muck (A9) (LRF	R I, J)	
☐ Histic Epipedon (A2)		☐ Sandy Re	dox (S5)		☐ Coast Prairie Redox	(A16) (LRR F, G, H)	
☐ Black Histic (A3)		☐ Stripped N	, ,		☐ Dark Surface (S7) (L		
☐ Hydrogen Sulfide (A4)			icky Mineral (F1		☐ High Plains Depressi	ons (F16)	
Stratified Layers (A5) (LRR I			eyed Matrix (F2)		(LRR H outside of I	•	
☐ 1 cm Muck (A9) (LRR F, G , I		Depleted I			Reduced Vertic (F18)	,	
☐ Depleted Below Dark Surface (A11) ☐ Redox Dark Surface (F6) ☐ Red Parent Material (TF							
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF 12) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8) ☐ Other (Explain in Remarks)						, ,	
☐ Sandy Mucky Mineral (S1) ☐ 2.5 cm Mucky Peat or Peat (CO) /I DD C		·	T16)			
5 cm Mucky Peat or Peat (S			s Depressions (2 & 73 of LRR H		³ Indicators of hydrophyti- wetland hydrology must		
Som Mucky Feat of Feat (5.	3) (LIXIX I)	(2		•	disturbed or problematic		
Restrictive Layer (if present):					Hydric Soil Present?		
Type:		epth (inches):		<u> </u>	☐ Yes		
Demandra. Na hudria asil indicator is present							
Remarks: No hydric soil indicate	or is present.						
HADBOLOGA							
HYDROLOGY							
Wetland Hydrology Indicators					Constitution (C		
Wetland Hydrology Indicators Primary Indicators (minimum of					Secondary Indicators (2		
Wetland Hydrology Indicators Primary Indicators (minimum of ☐ Surface Water (A1)		☐ Salt Crust (B	11)		☐ Surface Soil Cracks	(B6)	
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2)		Salt Crust (B	11) tebrates (B13)		☐ Surface Soil Cracks ☐ Sparsely Vegetated	(B6) Concave Surface (B8)	
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)		☐ Salt Crust (B·☐ Aquatic Inver☐ Hydrogen Su	11) tebrates (B13) lfide Odor (C1)		Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E	(B6) Concave Surface (B8) 310)	
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season V	11) tebrates (B13) lfide Odor (C1) Vater Table (C2		Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher	(B6) Concave Surface (B8)	
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		☐ Salt Crust (B: ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season \ ☐ Oxidized Rhiz	tebrates (B13) Ifide Odor (C1) Vater Table (C2 zospheres on Liv		Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher	(B6) Concave Surface (B8) B10) res on Living Roots (C3)	
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		☐ Salt Crust (B: ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season \ ☐ Oxidized Rhiz (where not	tebrates (B13) Ifide Odor (C1) Water Table (C2 zospheres on Livetilled)	ving Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ci	(B6) Concave Surface (B8) B10) res on Living Roots (C3)	
Wetland Hydrology Indicators 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)		☐ Salt Crust (B: ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season \ ☐ Oxidized Rhiz (where not) ☐ Presence of I	tebrates (B13) Ifide Odor (C1) Vater Table (C2 zospheres on Livitilled) Reduced Iron (C	ving Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizosphet (where tilled) Crayfish Burrows (Ci Saturation Visible on	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9)	
Wetland Hydrology Indicators 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)	one required	☐ Salt Crust (B: ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season \ ☐ Oxidized Rhiz	tebrates (B13) Ifide Odor (C1) Vater Table (C2 zospheres on Livitilled) Reduced Iron (Curface (C7)	ving Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ci	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2)	
Wetland Hydrology Indicators 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)	one required	☐ Salt Crust (B: ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season \(\) ☐ Oxidized Rhiz	tebrates (B13) Ifide Odor (C1) Vater Table (C2 zospheres on Livitilled) Reduced Iron (Curface (C7)	ving Roots (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)	
Wetland Hydrology Indicators 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 I	one required magery (B7)	Salt Crust (B: Aquatic Inver Hydrogen Su Dry-Season V Oxidized Rhiz (where not Presence of I Thin Muck Su Other (Explai	tebrates (B13) Iffide Odor (C1) Vater Table (C2 zospheres on Livitilled) Reduced Iron (Curface (C7) n in Remarks)	ring Roots (C3)	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)	
Wetland Hydrology Indicators 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 I Water-Stained Leaves (B9)	one required magery (B7)	□ Salt Crust (B· □ Aquatic Inver □ Hydrogen Su □ Dry-Season \ □ Oxidized Rhiz (where not □ Presence of I □ Thin Muck Su □ Other (Explai	tebrates (B13) Ifide Odor (C1) Water Table (C2 zospheres on Livitilled) Reduced Iron (Curface (C7) n in Remarks) Describe Re	ring Roots (C3)	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)	
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Project/Site: Sweetland Wind Project		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		Section,	Township	, Range:	S13, T111N, R67	~W
Landform (hillslope, terrace, etc.) swale	L	ocal relief (conca				Slope (%): 1 %
Subregion (LRR): Northern Great Plains Spring Wheat I	Region	Lat: 44.427	160	Long:	-98.832553	Datum: NAD83
Soil Map Unit Name: Water	rtogion	77.721	100	_	NWI Classification:	PABFh
Are climate/hydrologic conditions on the site typical for this t	time of ve	ar? 🛛 Yes	□No		explain in Remarks	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,		_	, -,		,
Vegetation Soil Hydrol	logy	Are "Nor	mal Circum	nstances	" present? 🛛 Yes	s 🔲 No
Significantly Disturbed?	(If neede	d, explain a	any answ	vers in Remarks.)		
Naturally Problematic?						
SUMMARY OF FINDINGS – Attach site map showin	ng samp	ling point loca	tions, tra	nsects	, important featu	res, etc.
Yes No	o Rem	narks: Wetland sa	ample plot	located in	n PEM W-548.	
Hydrophytic Vegetation Present? □]					
Hydric Soil Present? □]					
Wetland Hydrology Present?						
Is the Sampled Area within a Wetland?]					
VEGETATION – Use scientific names of plants						
	Absolute	e Dominant	Indicator	Domin	ance Test Worksh	eet:
Tree Stratum (Plot size: 30')	% Cove		Status			
1	%				er of Dominant Spec BL, FACW, or FAC	ies that
2	%				ling FAC-):	(A)
3	%			Total N	lumber of Dominant	
4	%				s Across All Strata:	(B)
Conline/Chruh Ctrotum (Diet size, 45')	0 %	= Total Cove	Γ	Percen	nt of Dominant Spec	ies that
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1	%				BL, FACW, or FAC:	(A/B)
2.	%					
3.	%			Preval	ence Index Worksh	neet:
4	%	<u> </u>		T	otal % Cover of:	Multiply by:
5	%	<u> </u>			pecies	% x 1 = <u>0</u>
	0 %	= Total Cove	r		/ species	% x 2 = <u>0</u>
Herb Stratum (Plot size: <u>5'</u>)					pecies species	$-\%$ \times 3 = 0 \times 4 = 0
1. Persicaria maculosa	60 %		FACW		pecies	% x 5 = 0
2. <u>Typha latifolia</u>	30 %		OBL_	Colum	n Totals:	<u>0</u> % (A) <u>0</u> (B)
3	%			Preval	lence Index = B/A =	
4 5	%					
6.	%			Hydro	phytic Vegetation I	nuicators:
7	%			□ 1 R	apid Test for Hydrop	ohytic Vegetation
8	%			☐ 2 D	ominance Test is >5	50%
9	%			□ 3 P	revalence Index is ≤	3.0^{1}
10	90 %		 r		lorphological Adapta ting data in Remarks	ations¹ (Provide or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%			☐ Pro	blematic Hydrophyti	c Vegetation¹ (explain)
2	%			1 Indica	ators of hydric soil a	nd wetland hydrology
- -	0 %		r			sturbed or problematic
Bare Ground in Herb Stratum				Hydrop	ohytic Vegetation Pro	esent? X Yes No
Remarks: Rapid test for hydrophytic vegetation is met. Phot	tograph C	-28.				

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	
0-10	10YR 5/1	80	10YR 5/6	20	C	M	Clay Loam		
10-20	10YR 6/1	80	10YR 5/6	20	C	M	Clay Loam		
		·					_		
		· —— -							
1Tuno: C. Co	noontration D Day	olotion DM	Dadwaad Matrix CC	Cover	ad ar Caataa	Cond Crains	² Location: PL=Pore	Lining M Matrix	
			Reduced Matrix, CS LRRs, unless other			Sand Grains	Indicators for Problem		
I -		able to all			-			•	
☐ Histosol (A	,		☐ Sandy Gle	-			1 cm Muck (A9) (LRI		
☐ Histic Epip☐ Black Hist			☐ Sandy Red☐ Stripped M				☐ Coast Prairie Redox☐ Dark Surface (S7) (L		
☐ Hydrogen	, ,		☐ Stripped Mu	•	•		☐ High Plains Depress	•	
	_ayers (A5) (LRR F	'	Loamy Gle	-			(LRR H outside of		
	k (A9) (LRR F, G, F		☐ Loamy Gle				☐ Reduced Vertic (F18	•	
	Below Dark Surface		☐ Redox Dar				☐ Red Parent Material		
		, (, (, 1, 1)			` '		☐ Very Shallow Dark S		
Thick Bank Garlage (11)							Other (Explain in Re	marks)	
_ ,	icky Peat or Peat (S2) (LRR G .			` ,		³ Indicators of hydrophyti	ic vegetation and	
	ky Peat or Peat (S3		(MLRA 72				wetland hydrology must		
	` ` `	, ,					disturbed or problematic		
Restrictive L	ayer (if present):						Hydric Soil Present?		
Type:		D	epth (inches):						
		<u></u>							
Remarks: Hy	dric soil indicator F	3 is met.							
HYDROLOG	Y								
Wetland Hyd	rology Indicators								
Primary Indic	ators (minimum of	one required	; check 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	` '		☐ Aquatic Invert	,	(B13)		☐ Sparsely Vegetated Concave Surface (B8)		
			☐ Hydrogen Sul				☐ Drainage Patterns (I		
☐ Water Mai	ks (B1)		☐ Dry-Season V				Oxidized Rhizosphe	res on Living Roots (C3)	
☐ Sediment	Deposits (B2)		Oxidized Rhiz	osphere	es on Living F	Roots (C3)	(where tilled)	. , ,	
☐ Drift Depo			(where not	tilled)	-		☐ Crayfish Burrows (C	8)	
☐ Algal Mat	or Crust (B4)		☐ Presence of F	Reduced	d Iron (C4)		☐ Saturation Visible or	n Aerial Imagery (C9)	
☐ Iron Depo	sits (B5)		Thin Muck Su				Geomorphic Position		
☐ Inundation	Visible on Aerial II	magery (B7)	Other (Explain	n in Ren	narks)		FAC-Neutral Test (D	,	
☐ Water-Sta	ined Leaves (B9)						☐ Frost-Heave Humm	ocks (D7) (LRR F)	
Field Observ	ations:		Depth				m gauge, monitoring well,	aerial photos, previous	
			lo (inches)	insp	ections, etc.)	, if available:			
Surface Water	r present?		1						
Water Table	oresent?	\boxtimes [0						
Saturation Pr	esent?	\boxtimes [0						
(includes cap	illary fringe)								
Wetland Hyd	rology Present?								
Remarks: We	tland hydrology inc	licators A1,	A2, A3, D2, and D5	are met					

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: 9			Sampling Point: SP-593
Investigator(s): T. Beemer, W. Hirst		Sectio	n, Township	_	 Γ111N, R67W
Landform (hillslope, terrace, etc.) toeslope	L	_ocal relief (cond	cave, conve		Slope (%): 5 %
Subregion (LRR): Northern Great Plains Spring Wheat Re	eaion	Lat: 44.42	7162	Long: -98.83	
Soil Map Unit Name: Water	- 9			_	sification: PABFh
Are climate/hydrologic conditions on the site typical for this tim	ne of ye	ar? X Yes	□ No	(If no, explain in	
Vegetation Soil Hydrolog	gy	Are "No	ormal Circun	nstances" present	? ⊠ Yes □ No
Significantly Disturbed? Naturally Problematic?		(If need	led, explain	any answers in Re	emarks.)
, – – –	comn	ling point loc	ations tra	neacte import	ant foatures, etc
SUMMARY OF FINDINGS – Attach site map showing					
Yes No Hydrophytic Vegetation Present?	Rer	narks: Upland s	ample plot a	adjacent to PEM W	V-548.
Hydric Soil Present?					
Wetland Hydrology Present?					
Is the Sampled Area within a Wetland?					
VECTATION . He estantific names of plants					
VEGETATION – Use scientific names of plants	<u> </u>	<u> </u>	1 2 4	T	
	Absolut % Cove		Indicator Status	Dominance Tes	st worksneet:
1	9			Number of Dom are OBL, FACW	inant Species that
2	9	<u> </u>		(excluding FAC	•
3	9			Total Number of	, ,
4	9			Species Across	
Continue/Charle Charters (District 45)	0 %	6 = Total Cov	er	Percent of Dom	inant Species that
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1	9	6		are OBL, FACW	
2.	9				
3.	9			Prevalence Ind	
4	9	<u> </u>		Total % C	over of: Multiply by:
5	9			OBL species	% x 1 =0
	0 %	6 = Total Cov	er	FACW species FAC species	% x 2 = <u>0</u> % x 3 = 0
Herb Stratum (Plot size: <u>5'</u>)	00.0	, v	EA (C) A /	FACU species	
Phalaris arundinacea Solidago canadensis	90 % 20 %		<u>FACW</u> FACU	UPL species	% x 5 = 0
3	<u>20 /</u>		TACO	Column Totals:	0% (A)0(B)
4	9			Prevalence Ind	lex = B/A =
5	9			Hydrophytic Ve	egetation Indicators:
6	9				
7				· ·	t for Hydrophytic Vegetation
8 9	<u>9</u>			2 Dominance	
9	9			☐ 3 Prevalence	
Woody Vine Stratum (Plot size: 30')	110 %		ver		ical Adaptations ¹ (Provide n Remarks or on a separate sheet)
1	9	<u>6</u>		☐ Problematic	Hydrophytic Vegetation ¹ (explain)
2.	0 %	<u> </u>	/er		ydric soil and wetland hydrology t, unless disturbed or problematic
Bare Ground in Herb Stratum 0 %				Hydrophytic Ve	getation Present? ⊠ Yes ☐ No
Remarks: Dominance test is met. Photograph C-29.				1	

Profile Des	cription: (Describe	to the dep	th needed to docun	nent the	e indicator o	or confirm the	absence of indicators.)		
Depth	Matrix		Re	dox Fea	atures				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 3/2	100					Silt Loam		
6-10	10YR 3/3	100					Silt Loam		
-									
-		· ——							
		· ——	·						
	-								
¹Type: C=C	oncentration, D=Dep	pletion, RM	=Reduced Matrix, CS	S=Cove	red or Coated	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 Soils ³ :	
☐ Histosol	A1)		☐ Sandy Gle	yed Ma	trix (S4)		1 cm Muck (A9) (LRR	l I, J)	
☐ Histic Ep	pedon (A2)		☐ Sandy Red	dox (S5))		□ Coast Prairie Redox (A16) (LRR F, G, H)	
☐ Black His	, ,		☐ Stripped M	•	•		☐ Dark Surface (S7) (LF	RR G)	
	Sulfide (A4)		☐ Loamy Mu	-	, ,		☐ High Plains Depression		
	Layers (A5) (LRR F		Loamy Gle	-			(LRR H outside of M	•	
	ck (A9) (LRR F, G, F		☐ Depleted N				Reduced Vertic (F18)		
•	Below Dark Surface	e (A11)	☐ Redox Dar		` '		Red Parent Material (
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF 12) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8) ☐ Other (Explain in Remarks)									
	ucky Mineral (S1) ucky Peat or Peat (\$	CO) /I DD C					` •	•	
	•	, ,	, H) ☐ High Plains (MLRA 72		, ,		³ Indicators of hydrophytic wetland hydrology must I		
5 cm wa	S 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:(Compacted	[Depth (inches): 10				☐ Yes ☒ No		
Remarks: No hydric soil indicator is present. Naturally problematic soil due to compaction at 10 inches.									
, and the second of the second									
HYDROLOG	·V								
	drology Indicators	-							
-			d; check all that apply	W			Secondary Indicators (2	or more required)	
-	•	ono regano	•	-			Secondary Indicators (2 or more required)		
Surface \	, ,		Salt Crust (B1	,	(D42)		☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8)		
☐ Saturatio	er Table (A2)		☐ Aquatic Invert ☐ Hydrogen Sul				☐ Drainage Patterns (B		
☐ Water Ma			☐ Dry-Season V				Oxidized Rhizospher		
	Deposits (B2)		Oxidized Rhiz		` '	Roots (C3)	(where tilled)	co on Elving Roots (co)	
☐ Drift Dep			(where not		oo on Eiving i	(00)	☐ Crayfish Burrows (C8	3)	
	or Crust (B4)		☐ Presence of F	Reduced	d Iron (C4)		☐ Saturation Visible on	Aerial Imagery (C9)	
☐ Iron Dep			☐ Thin Muck Su	ırface (C	C7)		☐ Geomorphic Position	(D2)	
☐ Inundation	n Visible on Aerial II	magery (B7	Other (Explain	n in Rer	narks)			,	
☐ Water-St	ained Leaves (B9)						☐ Frost-Heave Hummo	cks (D7) (LRR F)	
Field Obser	vations:	Yes	Depth No (inches)				ım gauge, monitoring well, a	aerial photos, previous	
Surface Me	er present?	_	_ ` ` `	insp	ections, etc.)	, ii avallable:			
Surface Wat	•	_	⊠ ⊠						
Water Table	•		×						
Saturation P			⊠						
(includes ca	drology Present?								
Remarks: W	etland hydrology inc	alcator D5 is	s met.						
]									

Project/Site: Sweetland Wind Project	City/County: Hand Cour	nty Sampling Date: 6/28/2018
Applicant/Owner: Sweetland Wind Farm, LLC	-	State: SD Sampling Point: SP-596
Investigator(s): T. Beemer, W. Hirst		p, Range:S14, T111N, R67W
Landform (hillslope, terrace, etc.) swale	Local relief (concave, conve	
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.425833	Long: -98.844313 Datum: NAD83
Soil Map Unit Name: Glenham loam, undulating		NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this time of y	/ear? ⊠ Yes □ No	(If no, explain in Remarks.)
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Vegetation Soil Hydrology	Are "Normal Circur	mstances" present? ☐ Yes ☐ No
Significantly Disturbed? Naturally Problematic?	(If needed, explain	any answers in Remarks.)
, – – –		
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, tra	ansects, important features, etc.
	emarks: Wetland sample plot	t located in PEM W-550.
Hydrophytic Vegetation Present? □ □ Hydric Soil Present? □ □		
Hydric Soil Present? Wetland Hydrology Present? □ □		
Is the Sampled Area within a Wetland?		
is the campled Alea Within a Welland:		
VEGETATION – Use scientific names of plants		
Absolu		Dominance Test Worksheet:
Tree Stratum (Plot size: <u>30'</u>) % Cov 1.		Number of Dominant Species that
	<u>%</u>	are OBL, FACW, or FAC
	<u>%</u>	(excluding FAC-):(A)
	%	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)
	<u>%</u>	((12)
	<u>%</u>	Prevalence Index Worksheet:
	<u>%</u>	Total % Cover of: Multiply by:
	<u>%</u>	OBL species % x 1 = 0
0		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> 100		FACU species% x 4 =0 UPL species
	<u>%</u>	Column Totals: 0 % (A) 0 (B)
9:	<u>%</u>	Prevalence Index = B/A =
	<u>%</u>	
	<u>%</u>	Hydrophytic Vegetation Indicators:
	%	□ 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: 30') 1	<u></u>	☐ Problematic Hydrophytic Vegetation¹ (explain)
	<u>%</u>	¹ Indicators of hydric soil and wetland hydrology
0		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. Photograph	C-30.	

Profile Desc	ription: (Describe	to the dept	h needed to docur	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 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				
	k Surface (A12)		☐ Depleted [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) ☐ High Plains Depressions (F16) ☐ 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless											
	ky Peat Of Peat (53) (LKK F)	(WEIGH 12		LIXIXIII		disturbed or problematic				
Restrictive I	_ayer (if present):						Hydric Soil Present?				
Type: Depth (inches):											
Demodra, Hudrig pell indicator FO in most											
Remarks: Hydric soil indicator F3 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	C	City/County: H	Hand Coun	ty	Sampling	Date: 6/28/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SF				
Investigator(s): T. Beemer, W. Hirst		Section,	Township		—— 4, T111N, R67	
Landform (hillslope, terrace, etc.) toeslope	Lo	cal relief (conca				Slope (%): 3 %
Subregion (LRR): Northern Great Plains Spring Whea		Lat: 44.4257			3.844374	Datum: NAD83
Soil Map Unit Name: Glenham loam, undulating	at Negion	44.423	700		Classification:	NA
Are climate/hydrologic conditions on the site typical for thi	s time of year	·? 🛛 Yes	□No		in in Remarks.	
7 to difficulty dividegle contained on the execution of the	o unio oi you			(II IIO, OAPIG		,
Vegetation Soil Hyd	rology	Are "Nor	mal Circun	nstances" pres	ent? 🛛 Yes	□ No
Significantly Disturbed?		(If neede	d. explain	any answers in	n Remarks.)	
				-		
SUMMARY OF FINDINGS – Attach site map show	ing sampli	ng point loca	itions, tra	nsects, imp	ortant featur	es, etc.
Yes	No Rema	arks: Upland sa	mple plot a	diacent to PEN	√ W-550.	
			1 - 1	,		
Hydric Soil Present?	\boxtimes					
Wetland Hydrology Present?						
Is the Sampled Area within a Wetland?						
VEGETATION – Use scientific names of plants						
VEGETATION - Ose scientific flames of plants				<u> </u>		
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance	Test Workshe	et:
1(Flot Size. <u>50_)</u>	0/	Species:	Status		ominant Speci	es that
2.				are OBL, FA (excluding F	,	0 (A)
3.				_		<u>U_</u> (A)
4.	%	<u> </u>			er of Dominant oss All Strata:	1_(B)
	0 %	= Total Cove	r	-		·
Sapling/Shrub Stratum (Plot size: 15')					ominant Specion	es that0%_(A/B)
1.	%					(
2	%	 -		Prevalence	Index Worksh	ieet:
3. 4.	0/			Total %	6 Cover of:	Multiply by:
45.	<u> </u>			OBL species		% x1 = 0
9.	0 %	= Total Cove	r	FACW spec		% x 2 = 0
Herb Stratum (Plot size: 5')				FAC species		_% x 3 =0
1. Poa pratensis	90 %	Y	FACU	FACU speci		_% x 4 =0
2. Solidago canadensis	5 %	N	FACU	UPL species Column Tota		
3	%					<u>5</u> 70 (N)(D)
4	%			Prevalence	Index = B/A =	
5				Hydrophytic	c Vegetation II	ndicators:
6	0.1			☐ 1 Rapid T	Test for Hydrop	hytic Vegetation
8.				☐ 2 Domina	ance Test is >5	0%
9	0.4				ence Index is ≤	
10	%	<u> </u>				
Woody Vine Stratum (Plot size: 30')	95 %	= Total Cove	r		ological Adapta ata in Remarks o	or on a separate sheet)
1	%			☐ Problema	atic Hydrophytic	c Vegetation1 (explain)
2	%					nd wetland hydrology
	0 %	= Total Cove	r	must be pres	sent, unless dis	sturbed or problematic
Bare Ground in Herb Stratum5 %				Hydrophytic	Vegetation Pre	esent? 🗌 Yes 🛚 No
Remarks: Hydrophytic vegetation is not present. Photogra	aph C-31.					

Profile Desc	ription: (Describe	to the dep	th 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		
0-6	10YR 3/1	100					Silt Loam			
6-12	10YR 3/2	100	·				Silt Loam			
		· —— ·								
-		· ——								
		-	=Reduced Matrix, CS			Sand Grains	² Location: PL=Pore			
l		cable to all	LRRs, unless other		-		Indicators for Problema	•		
☐ Histosol (,		☐ Sandy Gle		, ,		1 cm Muck (A9) (LRF			
☐ Histic Epi			☐ Sandy Red☐ Stripped M				☐ Coast Prairie Redox (☐ Dark Surface (S7) (LI	. , ,		
	n Sulfide (A4)		☐ Stripped Mu	•	•		☐ High Plains Depression			
	Layers (A5) (LRR F	:)	☐ Loamy Gle	-			(LRR H outside of I	MLRA 72 & 73)		
	ck (A9) (LRR F, G, F		☐ Depleted N	-			☐ Reduced Vertic (F18))		
	Below Dark Surface		☐ Redox Dar				Red Parent Material ((TF2)		
☐ Thick Da	rk Surface (A12)		□ Depleted D	ark Su	rface (F7)		☐ Very Shallow Dark Su	, ,		
☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8) ☐ Other (Explain in Remarks)								narks)		
	ucky Peat or Peat (³ Indicators of hydrophytic			
☐ 5 cm Mud	cky Peat or Peat (S3	B) (LRR F)	(MLRA 72	& /3 0	t LKK H)		wetland hydrology must disturbed or problematic			
Restrictive	Layer (if present):						Hydric Soil Present?			
Type:(Compacted		epth (inches): 12				☐ Yes ☒ No			
Domarka: Na	Remarks: No hydric soil indicator is present.									
ixemaiks. ixe	Remarks: No nyaric soil indicator is present.									
HYDROLOG	······································									
	drology Indicators									
1			d; check all that apply	/)			Secondary Indicators (2	or more required)		
☐ Surface V	•	one required	_				_	-		
_	er Table (A2)		☐ Salt Crust (B1☐ Aquatic Invert	,	(B13)		☐ Surface Soil Cracks (B6)☐ Sparsely Vegetated Concave Surface (B8)			
☐ Saturatio			☐ Hydrogen Sul		, ,		☐ Drainage Patterns (B			
☐ Water Ma	` '		☐ Dry-Season V				_	res on Living Roots (C3)		
	Deposits (B2)		Oxidized Rhiz		, ,	Roots (C3)	(where tilled)	3 ()		
☐ Drift Dep			(where not		ŭ	` ,	☐ Crayfish Burrows (Ca	8)		
☐ Algal Mat	or Crust (B4)		Presence of F		` '		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	Depth No (inches)		cribe Recordections, etc.)		m gauge, monitoring well,	aerial photos, previous		
Surface Wat	or procent?	_	` ,	шър	ections, etc.)	, II avallable.				
Water Table	•		⊠ ⊠							
Saturation P	•		⊠ ⊠							
(includes cap			×							
	drology Present?		\boxtimes							
	wetland hydrology									
i tomans. No	. Hodana nyarology	IGIOGIOIS C	no prodont.							
İ										

Project/Site: Sweetland Wind Project	City/County: H	and County	S	ampling Date: 6/28/2018
Applicant/Owner: Sweetland Wind Farm, LLC			ate: SD	Sampling Point: SP-600
Investigator(s): T. Beemer, W. Hirst	Section,		Range: S14, T11	1N, R67W
Landform (hillslope, terrace, etc.) swale	Local relief (concar			Slope (%): 0 %
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.4234	95	Long: -98.8588	D-1
Soil Map Unit Name: Glenham loam, undulating			NWI Classifi	
Are climate/hydrologic conditions on the site typical for this time of	year? X Yes	□ No	(If no, explain in R	
Vegetation Soil Hydrology	Are "Norn	nal Circums	tances" present?	⊠ Yes □ No
Significantly Disturbed? Naturally Problematic?	(If needed	d, explain ar	ny answers in Rema	arks.)
SUMMARY OF FINDINGS – Attach site map showing san	nnling point locat	ione tran	sacts importan	t foatures etc
			sects, importan	t reatures, etc.
Yes No R Hydrophytic Vegetation Present?	Remarks: Upland san	nple plot.		
Hydric Soil Present?				
Wetland Hydrology Present?				
Is the Sampled Area within a Wetland?				
·				
VEGETATION – Use scientific names of plants				
Abso Tree Stratum (Plot size: 30') % Co		Indicator Status	Dominance Test V	Norksheet:
1	<u>%</u>		Number of Domina	
2.	<u></u>		are OBL, FACW, o (excluding FAC-):	or FAC 0_(A)
3	<u> </u>		,	
4	<u>%</u>		Total Number of Do Species Across All	
	<u>%</u> = Total Cover		Percent of Domina	· , ,
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	0/		are OBL, FACW, o	
1	<u>%</u> <u>%</u>			
3			Prevalence Index	Worksheet:
4.	%		Total % Cove	er of: Multiply by:
5	%		OBL species	% x 1 =0
0	<u>%</u> = Total Cover		FACW species	% x 2 = 0
Herb Stratum (Plot size: <u>5'</u>)			FAC species FACU species	% x 3 = 0 % x 4 = 0
		FACU	UPL species	% x 5 = 0
2	<u>%</u>		Column Totals:	0% (A)0 (B)
4	<u>%</u>		Prevalence Index	= B/A =
5	<u>%</u>		Hydronhytic Vege	etation Indicators:
6	%			
7	<u></u>			r Hydrophytic Vegetation
8	<u>%</u>		2 Dominance To	est is >50%
9	<u>%</u> <u>%</u>		☐ 3 Prevalence In	idex is ≤3.0¹
	0 % = Total Cover			I Adaptations ¹ (Provide Lemarks or on a separate sheet)
1	%		☐ Problematic Hye	drophytic Vegetation ¹ (explain)
2	%			ic soil and wetland hydrology
0	<u>%</u> = Total Cover		must be present, u	nless disturbed or problematic
Bare Ground in Herb Stratum0 %			Hydrophytic Vegeta	ation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photograph C-32	<u></u>			

Inches Color (moist)	Depth	Matrix	to the def		Redox F		, commin me	absence of indicators.)			
O-12 10YR 3/2 100 Silt Loam			%				Loc ²	Texture	Remarks		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	0-12										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)											
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)											
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)											
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)											
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)											
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)											
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)											
Histosol (A1)	¹ Type: C=Co	ncentration, D=Dep	pletion, RM	=Reduced Matrix,	CS=Cov	ered or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Histic Epipedon (A2)	Hydric Soil Ir	ndicators: (Applic	cable to all	LRRs, unless otl	nerwise	noted.)		Indicators for Problem	atic Hydric Soils ³ :		
Black Histic (A3)	☐ Histosol (A	.1)		☐ Sandy 0	Sleyed M	latrix (S4)		1 cm Muck (A9) (LRI	R I, J)		
Hydrogen Sulfide (A4)	☐ Histic Epip	edon (A2)		☐ Sandy F	Redox (S	5)		☐ Coast Prairie Redox	(A16) (LRR F, G, H)		
Startified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2) CluRR Houtside of MLRA 72 & 73)								☐ Dark Surface (S7) (L	RR G)		
Startified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2) CluRR Houtside of MLRA 72 & 73)	☐ Hydrogen	Sulfide (A4)		☐ Loamy I	Mucky M	ineral (F1)		☐ High Plains Depress	ions (F16)		
or Muck (A9) (LRR F, G, H)	☐ Stratified L	ayers (A5) (LRR F	-)					(LRR H outside of	MLRA 72 & 73)		
Depleted Below Dark Surface (A11)					-			☐ Reduced Vertic (F18)		
Sardy Mucky Mineral (S1)						` '			` '		
Sandy Mucky Mineral (S1)			, ,			, ,		☐ Very Shallow Dark S	urface (TF 12)		
□ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)		, ,		•		. ,		Other (Explain in Re	marks)		
S cm Mucky Peat or Peat (S3) (LRR F)	-		S2) (LRR G			, ,		³ Indicators of hydrophyti	ic vegetation and		
Remarks: No hydric soil indicator is present. HYDROLOGY 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) Saturation (A3) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Into Deposits (B3) Into Deposits (B3) Versence of Reduced Iron (C4) Into Deposits (B5) Into Deposits (B5) Into Deposits (B5) Surface Leaves (B9) Field Observations: Yes No Depth (inches) Surface Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Water Table present? Water Table present? Water Table present? Surface Water pr	5 cm Muck	y Peat or Peat (S3	3) (LRR F)	(MLRA	72 & 73	of LRR H)		wetland hydrology must	be present, unless		
Type: _Compacted									;		
Remarks: No hydric soil indicator is present. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Surface Soil Cracks (B6) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Dry-Season Water Table (C2) Drift Deposits (B3) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Mater Table or Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Water Stained Leaves (B9) Field Observations: Depth (inches) Water Table present? Water Table present? Wetland Hydrology Present? Wetland Hydrology Present? Wetland Hydrology Present?	Restrictive L	ayer (if present):						•			
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Sulface Water (A1) Surface Water (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Iron Deposits (B3) Mater - Crust (B4) Into Deposits (B5) Water-Stained Leaves (B9) Field Observations: Ves No Depth (inches) Surface Water (A1) Sediment Deposits (B2) Other (Explain in Remarks) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Water Table present? Wetland Hydrology Present? Wetland Hydrology Present? Wetland Hydrology Present?	Type: Co	ompacted	[Depth (inches):	12			∐ Yes ⊠ No			
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Concave Surface (B8) 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 not tilled) I prift Deposits (B3) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) I Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) I mudation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Water-Stained Leaves (B9) Pepth (inches) Depth (inches) Water Table present? Depth (inches) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Surface Water present? Depth (inches) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Water Table present? Describe Recorded Data (stream gauge, m	HADBOI OCA	,									
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) High Water Table (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Orift Deposits (B3) Algal Mat or Crust (B4) Innudation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present? Saturation Present? Wetland Hydrology Present? Wetland Hydrology Present? Saturation Present? Wetland Hydrology Present? Saturation Present? Wetland Hydrology Present? Saturation Visible on Aerial Imagery (C3) Saturation Visible on Aerial Imagery (C4) Saturation Visible on Aerial Imagery (C5) Saturation Visible on Aerial Imagery (B7) Saturation Visible on Aerial Imagery (B7) Saturation Visible on Aerial Imagery (B7) Sa			_								
Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6)	•			d: check all that ar	nnly)			Secondary Indicators (2	or more required)		
High Water Table (A2)		-	one require	-				-	<u> </u>		
Saturation (A3)	_	` '			` '	(D40)			` '		
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) □ Drift Deposits (B3) □ Presence of Reduced Iron (C4) □ Saturation Visible on Aerial Imagery (C9) □ Saturation Visible on Aerial Imagery (C9) □ Iron Deposits (B5) □ Thin Muck Surface (C7) □ Geomorphic Position (D2) □ Water-Stained Leaves (B9) □ Other (Explain in Remarks) □ FAC-Neutral Test (D5) Field Observations: Ves No Depth (inches) Surface Water present? □ □ □ □ □ □ □ Water Table present? □ □ □ □ □ □ □ Saturation Present? □ □ □ □ □ □ □ (includes capillary fringe) □ □ □ □ □ □ Wetland Hydrology Present? □ □ □ □ □ □ □		` ,		_ '		,		, , ,			
Sediment Deposits (B2)		. ,									
Drift Deposits (B3) (where not tilled) Crayfish Burrows (C8) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Iron Deposits (B5) Thin Muck Surface (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) (LRR F) Field Observations: Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Saturation Present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F) Water Table present? Depth (inches) Prost-Heave Hummocks (D7) (LRR F)				•		, ,	Danta (C2)		res on Living Roots (C3		
Algal Mat or Crust (B4)							Roois (C3)		.8)		
Iron Deposits (B5)		, ,		_ `		•					
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5) ☐ Frost-Heave Hummocks (D7) (LRR F) Field Observations: 7	•	, ,									
Water-Stained Leaves (B9) Field Observations: Yes No Depth (inches) Surface Water present? Water Table present? Saturation Present? (includes capillary fringe) Wetland Hydrology Present?	-		maganı (B7			. ,					
Field Observations: Yes No Depth (inches) Surface Water present? Water Table present? Saturation Present? (includes capillary fringe) Wetland Hydrology Present? Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Unique Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Wetland Hydrology Present? Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available:			magery (b <i>i</i>)		orrianto,		•	•		
Yes No (inches) inspections, etc.), if available: Surface Water present?		` ,									
Water Table present?	Field Observ	ations:	Yes					m gauge, monitoring well,	aerial photos, previous		
Water Table present?	Surface Wate	r present?		\boxtimes		,					
Saturation Present?		•	П		_						
(includes capillary fringe) Wetland Hydrology Present?					_						
Wetland Hydrology Present?					-						
· · · · · · · · · · · · · · · · · · ·			П	\boxtimes							
Remarks: Wetland hydrology Indicator D2 is met.					l						
	Remarks: We	tiand hydrology inc	alcator D2 is	s met.							

Project/Site: Sweetland Wind Project City/County: Hand County Sampling Date: 6,28/2018 Applicant/Owner: Sweetland Wind Farm, LLC State: SD Sampling Point: Sp-603 Sp-603 Sampling Point: Sp-603 Sp-6	
Investigator(s): T. Be-mer, W. Hirst Landform (hillslope, terrace, etc.) Loeslope Local relief (concave, convex, none): none none Slope (%): 5 %	
Local relief (concave, convex, none): none none Slope (%): 5 % Subregion (LRR): Northern Great Plains: Spring Wheat Region Lat: 44.437162 Long: 98.858469 Datum: NAD83 NAD8	
Subregion (LRR): Northern Great Plains Spring Wheat Region Lat: 44.437162 Long: -98.858469 Datum: NADB3 Soil Map Unit Name: Glenham-Prosper loams, 0 to 2 percent slopes NWI Classification: PABFh Are climate/hydrologic conditions on the site typical for this time of year? Syes No (If no, explain in Remarks.)	
Soil Map Unit Name: Glenham-Prosper Ioams, 0 to 2 percent slopes NWI Classification: PABFh	
Are climate/hydrologic conditions on the site typical for this time of year?	
Significantly Disturbed?	
Significantly Disturbed?	
Naturally Problematic?	
Yes No Hydrophytic Vegetation Present?	
Hydrophytic Vegetation Present? □ ☑ Hydric Soil Present? □ ☑ Wetland Hydrology Present? □ ☑ Is the Sampled Area within a Wetland? □ ☑ Tree Stratum (Plot size: 30') Absolute % Cover Species? Dominant Species that are OBL, FACW, or FAC (excluding FAC-): Number of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): □ 2. 0 % □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ <t< td=""><td></td></t<>	
Hydrophytic Vegetation Present? □ ☑ Hydric Soil Present? □ ☑ Wetland Hydrology Present? □ ☑ Is the Sampled Area within a Wetland? □ ☑ Tree Stratum (Plot size: 30') Absolute % Cover Species? Dominant Species that are OBL, FACW, or FAC (excluding FAC-): Number of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): □ 2. 0 % □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ <t< td=""><td></td></t<>	
Wetland Hydrology Present?	
Note Sampled Area within a Wetland?	
Absolute	
Absolute Dominant Indicator Species Status	
Tree Stratum (Plot size: 30') % Cover % Species? Status Number of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 0 (A 3. %	
1. % Number of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 0 (excluding FAC-): 0 (A 3. % Total Number of Dominant Species Across All Strata: 1 (Excluding FAC-): 1 (Excluding FAC-): 0 (A Sapling/Shrub Stratum (Plot size: 15') Percent of Dominant Species that are OBL, FACW, or FAC: 0 (A 2. % Prevalence Index Worksheet: 3. % Total % Cover of: Multiply by: 5. % OBL species % x1 = 0 FACW species % x2 = 0 FACW species % x3 = 0 FAC species % x3 = 0 FACU species % x4 = 0 UPL species % x5 = 0 Column Totals: 0 % (A) 0 % (A)	
2.	
3.	,
1)
Sapling/Shrub Stratum (Plot size: 15')	:1
A	,
Prevalence Index Worksheet:	/B)
3.	
4. % Total % Cover of: Multiply by: 5. % OBL species % x 1 = 0 OBL species % x 2 = 0 FACW species % x 3 = 0 FAC species % x 3 = 0 FACU species % x 4 = 0 1. Poa pratensis Y FACU species % x 5 = 0 2. Column Totals: 0 % (A) 0	
5. % OBL species % x1 = 0 Herb Stratum (Plot size: 5') 100 % Y FACU FACU species % x2 = 0 1. Poa pratensis 100 % Y FACU UPL species % x4 = 0 2. Column Totals: 0 % (A) 0	
Herb Stratum (Plot size: 5') 1. Poa pratensis 2.	
1. <u>Poa pratensis</u> 2	
2	
2 Column Totals: 0 % (A) 0 (
	B)
Prevalence Index - R/A -	
4	
6	
7 1 Rapid Test for Hydrophytic Vegetation	
8 2 Dominance Test is >50%	
9	
)
Woody Vine Stratum (Plot size: 30') 1	1)
2 ¹ Indicators of hydric soil and wetland hydrology	
= Total Cover must be present, unless disturbed or problemati	
Bare Ground in Herb Stratum0 % Hydrophytic Vegetation Present? ☐ Yes ☒ N	С
Remarks: Hydrophytic vegetation is not present. Photograph C-33.	С
	С
	С

Depth	Matrix	. to the dep		edox Fe		, commin me	absence of indicators.)			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-12	10YR 3/2	100	Color (molet)	70	1,700		Silt Loam	romano		
							0			
			=Reduced Matrix, C			d Sand Grains	² Location: PL=Pore	<u> </u>		
•		cable to all	LRRs, unless othe		•		Indicators for Problem	•		
Histosol (A	,		☐ Sandy Gle	•	` '		1 cm Muck (A9) (LRI			
☐ Histic Epip			☐ Sandy Re				Coast Prairie Redox			
☐ Black Histi	. ,		☐ Stripped N				☐ Dark Surface (S7) (L	•		
Hydrogen	, ,	•	Loamy Mu				☐ High Plains Depressi (LRR H outside of			
	ayers (A5) (LRR F		☐ Loamy Gl	-			Reduced Vertic (F18	· · · · · · · · · · · · · · · · · · ·		
	(A9) (LRR F, G, F		☐ Depleted I	,	,		☐ Red Parent Material	,		
	Below Dark Surface	e (A11)	☐ Redox Da		` '		☐ Very Shallow Dark S	` '		
	Surface (A12)		☐ Depleted I		, ,		Other (Explain in Re	, ,		
-	cky Mineral (S1) cky Peat or Peat (S	S2) (I DD ^	☐ Redox De , H) ☐ High Plain				, .	•		
	xy Peat or Peat (S	, ,	, n)		, ,		³ Indicators of hydrophyti wetland hydrology must			
5 cm wach	ly real or real (oc) (L IXIX I)	(_ ,		disturbed or problematic			
Restrictive L	ayer (if present):						Hydric Soil Present?			
	ompacted	г	Nonth (inches): 12				☐ Yes ⊠ No			
Type: <u>Co</u>	лпрастец	_ '	Depth (inches): 12							
HYDROLOG	,									
		_								
•	rology Indicators		d. alaad. all that awal	L A			Casaadam, Indiantara (6)		
		one require	d; check all that appl				Secondary Indicators (2	<u> </u>		
☐ Surface W	` '		☐ Salt Crust (B	,	(= \		☐ Surface Soil Cracks	` '		
☐ High Wate	` '		☐ Aquatic Inver		` ,		☐ Sparsely Vegetated Concave Surface (B8)			
☐ Saturation	. ,		☐ Hydrogen Su				☐ Drainage Patterns (I			
☐ Water Mar			☐ Dry-Season \		, ,	D (- (OO)	Oxidized Rhizosphe (where tilled)	res on Living Roots (C3		
☐ Sediment			Oxidized Rhiz		es on Living i	Roots (C3)	☐ Crayfish Burrows (C	8)		
☐ Drift Depos	, ,		☐ Presence of		d Iron (C4)		☐ Saturation Visible or			
☐ Iron Depos	, ,		☐ Thin Muck St				☐ Geomorphic Position			
	Visible on Aerial I	magery (R7		,	•		☐ FAC-Neutral Test (□			
	ned Leaves (B9)	magery (D7	,		,		☐ Frost-Heave Hummo	,		
	· ,		Depth		" 5 '	15				
Field Observ	ations:	Yes	No (inches)		ections, etc.)		m gauge, monitoring well,	aeriai pnotos, previous		
Surface Wate	r present?				,					
Water Table p	•									
Saturation Pre										
(includes capi			<u> </u>							
	rology Present?		\boxtimes							
remarks. NO	wetland hydrology	mulcators a	ne present.							

Project/Site: Sweetland Wind Project		City/County: H	Hand Coun	ty	Sampling	Date: 10/16/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP				
Investigator(s): T. Beemer, W. Hirst		Section	, Township	, Range:	S33, T111N, R66	:W
Landform (hillslope, terrace, etc.) drainage	Lo	cal relief (conca				Slope (%): 2 %
Subregion (LRR): Northern Great Plains Spring Wheat F	Region	Lat: 44.3826	675	Long:	-98.780460	Datum: NAD83
Soil Map Unit Name: Betts-Java loams, steep	togion	44.0020	010	_	NWI Classification:	NA
Are climate/hydrologic conditions on the site typical for this ti	ime of vea	ır? 🛛 Yes	□No	(If no.	explain in Remarks.	
	, , , ,			(- /		,
Vegetation Soil Hydrolo	ogy	Are "Nor	mal Circun	nstances'	" present? 🛛 Yes	s □ No
Significantly Disturbed?		(If neede	ed, explain	any answ	ers in Remarks.)	
Naturally Problematic?				•		
SUMMARY OF FINDINGS – Attach site map showing	g sampli	ing point loca	tions, tra	insects,	important featur	es, etc.
Yes No	Rem	arks: Wetland s	ample plot	located in	n 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	Domin	ance Test Workshe	eet:
Tree Stratum (Plot size: <u>30'</u>)	% Cover		Status	-		
1	%				er of Dominant Speci L, FACW, or FAC	es that
2	%				ling FAC-):	(A)
3.	%			Total N	lumber of Dominant	
4	<u>%</u> 0 %	= Total Cove		Species	s Across All Strata:	(B)
Sapling/Shrub Stratum (Plot size: 15')	<u> </u>	= Total Cove	i.		t of Dominant Speci	es that
1.	%			are OB	L, FACW, or FAC:	(A/B)
2.	%	·		Drevel	anaa Inday Warkah	
3	%				ence Index Worksh	
4	%				otal % Cover of:	Multiply by:
5	%				pecies	_% x1 = <u>0</u>
	0 %	= Total Cove	er	FAC s	species	$-\%$ \times 2 = 0 \times 3 = 0
Herb Stratum (Plot size: <u>5'</u>)	00.0/	V	EA C\A/		species	% x 4 = 0
Spartina pectinata Xanthium strumarium	<u>90 %</u> 5 %	<u>Y</u> N	FACW FAC	UPL s	pecies	% x 5 = 0
3	<u> </u>		<u> TAC</u>	Colum	n Totals:	<u>0</u> % (A) <u> 0 (B)</u>
4	<u>%</u>			Preval	ence Index = B/A =	
5	%			Hydror	ohytic Vegetation I	ndicators:
6	%				, ,	
7	%				apid Test for Hydrop	
8	%			☐ 2 Do	ominance Test is >5	0%
9 10	<u>%</u>			☐ 3 Pr	revalence Index is ≤	3.0 ¹
	95 %	= Total Cove	r		orphological Adapta ing data in Remarks o	itions ¹ (Provide or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%			☐ Prol	blematic Hydrophytic	c Vegetation1 (explain)
2	%			¹ Indica	ators of hydric soil ar	nd wetland hydrology
	0 %	= Total Cove	r			sturbed or problematic
Bare Ground in Herb Stratum5 %				Hydrop	hytic Vegetation Pre	esent? X Yes No
Remarks: Rapid test for hydrophytic vegetation is met. Photo	tograph C-	34.				

Profile Desc	ription: (Describe	to the dept	h needed to docu	ment th	e indicator o	or confirm the	absence of indicators.)		
Depth	Matrix		R	edox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-2	10YR 2/1	100			<u> </u>		silty clay loam		
2-8	10YR 2/2	90	10YR 5/4	10	<u>C</u>	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=Cove	red or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil	Indicators: (Applic	cable to all I	RRs, unless othe	rwise n	oted.)		Indicators for Problema	atic Hydric Soils ³ :	
☐ Histosol (A1)		☐ Sandy Gle	eyed Ma	trix (S4)		1 cm Muck (A9) (LRR	l I, J)	
☐ Histic Epi	pedon (A2)		☐ Sandy Re				☐ Coast Prairie Redox (A16) (LRR F, G, H)	
☐ Black His	, ,		☐ Stripped N				☐ Dark Surface (S7) (LF	RR G)	
	Sulfide (A4)		☐ Loamy Mu	-			☐ High Plains Depression		
	Layers (A5) (LRR F		Loamy GI	-			(LRR H outside of N	•	
	k (A9) (LRR F, G, F	•	□ Depleted				Reduced Vertic (F18)		
	Below Dark Surface	e (A11)	☐ Redox Da		, ,		☐ Red Parent Material (☐ Very Shallow Dark Su		
	k Surface (A12)		☐ Depleted				Other (Explain in Rem	, ,	
_	ucky Mineral (S1)	S2) (I 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) ☐ (MLRA 72 & 73 of LRR H) ☐ wetland hydrology must be present, unless									
3 cm wac	ky real of real (30	5) (LKK F)	(MERCA 7				disturbed or problematic	De present, uniess	
Restrictive I	_ayer (if present):						Hydric Soil Present?		
Type: Depth (inches): No									
HYDROLOG	iΥ								
Wetland Hy	drology Indicators	:							
Primary Indic	cators (minimum of	one required	; check all that app	ly)			Secondary Indicators (2	or more required)	
☐ Surface V	Vater (A1)		☐ Salt Crust (B	11)			☐ Surface Soil Cracks (B6)		
	er Table (A2)		Aquatic Inve	,	s (B13)		☐ Sparsely Vegetated Concave Surface (B8)		
			☐ Hydrogen Su				□ Drainage Patterns (B)		
☐ Water Ma	ırks (B1)		☐ Dry-Season \	Water Ta	able (C2)		Oxidized Rhizospher	es on Living Roots (C3)	
☐ Sediment	Deposits (B2)		Oxidized Rhi		es on Living I	Roots (C3)	(where tilled)	.,	
☐ Drift Depo	, ,		(where no		(0.1)		☐ Crayfish Burrows (C8		
_	or Crust (B4)		☐ Presence of				☐ Saturation Visible on	3 , , ,	
☐ Iron Depo	, ,	(0.7)	☐ Thin Muck S ☐ Other (Explain				☑ Geomorphic Position☑ FAC-Neutral Test (D		
	n Visible on Aerial II	magery (B7)	☐ Other (Expla	III III Kei	ilaiks)		☐ Frost-Heave Hummo	,	
☐ water-Sta	ained Leaves (B9)			1				CKS (D1) (LIKK 1)	
Field Obser	vations:	Yes N	Depth lo (inches)		scribe Record sections, etc.)		am gauge, monitoring well, a	aerial photos, previous	
Surface Wat	er present?		⊴						
Water Table	present?		0						
Saturation P	resent?		0						
(includes car	oillary fringe)	_							
Wetland Hy	drology Present?								
Remarks: W	etland hydrology inc			5 are me	et.				
		,							
1									

Project/Site: Sweetland Wind Project		City/Co	unty: H	and Coun	ty	Sampling	Date: 10/16/2018
Applicant/Owner: Sweetland Wind Farm, LLC					tate: SD	Samp	ling Point: SP-607
Investigator(s): T. Beemer, W. Hirst			Section,	Township		S33, T111N, R66	
Landform (hillslope, terrace, etc.) toeslope		Local reli			_	none	Slope (%): 7 %
Subregion (LRR): Northern Great Plains Spring Whea	at Regio		44.3829		Long:	-98.780482	Datum: NAD83
Soil Map Unit Name: Betts-Java loams, steep	at Neglo		44.3029	09		VI Classification:	NA NA
Are climate/hydrologic conditions on the site typical for thi	s time o	f vear?	⊠ Yes	□No		xplain in Remarks.	
7 to difficulty dividegle contained on the cite typical for the	0 11110 0	. your.	<u> </u>		(11 110, 0	Apiani in Nomano.	,
Vegetation Soil Hyd	rology		Are "Norn	nal Circum	nstances" p	oresent? 🛛 Yes	☐ No
Significantly Disturbed?		(If needed	d. explain a	anv answe	rs in Remarks.)	
					-		
SUMMARY OF FINDINGS – Attach site map show	ing sa	mpling po	int locat	ions, tra	nsects, i	mportant featur	es, etc.
Yes	No	Remarks: U	oland san	nple plot a	diacent to	PEM W-554.	
					,		
Hydric Soil Present?	\boxtimes						
Wetland Hydrology Present?							
Is the Sampled Area within a Wetland?							
VEGETATION – Use scientific names of plants	•						
VEGETATION - 030 Solentine names of plants	A I	alata Ban		La al' a a ta a	D	T(\\	-1
Tree Stratum (Plot size: 30')			ninant cies?	Indicator Status	Domina	nce Test Workshe	eet:
1		<u>%</u>				of Dominant Speci	es that
2		%				, FACW, or FAC ng FAC-):	0 (A)
3		<u>%</u>				mber of Dominant	(/
4	-	<u>%</u>				Across All Strata:	2_(B)
	(<u>) %</u> = To	tal Cover		Percent	of Dominant Speci	·
Sapling/Shrub Stratum (Plot size: 15')		0/				, FACW, or FAC:	0%_(A/B)
1 2.		<u>%</u>	 .				
2. 3.		<u>%</u>			Prevale	nce Index Worksh	eet:
4.		%			Tot	tal % Cover of:	Multiply by:
5.		%			OBL sp		% x 1 = <u>0</u>
	(<u>) %</u> = To	tal Cover		FACW		_% x 2 =0
Herb Stratum (Plot size: <u>5'</u>)					FAC spo		_% x 3 = <u>0</u> % x 4 = 0
1. Bromus inermis			<u>Y</u>	<u>UPL</u>	UPL spe		$-\frac{70}{8} \times 5 = 0$
2. <u>Poa pratensis</u>	5		<u>Y</u> .	FACU	Column		0 (A) 0 (B)
3.		<u>%</u> %			Prevale	nce Index = B/A =	
4 5		<u>%</u>					
6		%			Hyaropi	nytic Vegetation Ir	idicators:
7.		%			☐ 1 Rap	oid Test for Hydrop	hytic Vegetation
8		<u>%</u>			2 Dor	minance Test is >5	0%
9		<u>%</u>			☐ 3 Pre	valence Index is ≤	3.0 ¹
10	1(<u>%</u> 00 % = To	tal Cover		4 Mor	rphological Adapta g data in Remarks o	tions ¹ (Provide or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>) 1		<u>%</u>			☐ Probl	ematic Hydrophytic	Vegetation ¹ (explain)
2.		<u>%</u>	 .				d wetland hydrology
	(<u>) %</u> = To	tal Cover		must be	present, unless dis	turbed or problematic
Bare Ground in Herb Stratum0 %					Hydroph	ytic Vegetation Pre	sent? Yes No
Remarks: Hydrophytic vegetation is not present. Photogra	aph C-3	5.					

		to the dept				or confirm the	absence of indicators.)			
Depth	Matrix		Re	dox Fea						
(inches)	Color (moist)	%	Color (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	ncentration, D=De	pletion, RM=	Reduced Matrix, CS	=Cover	ed or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil II	ndicators: (Appli	cable to all	RRs, unless other	wise no	oted.)		Indicators for Problem	atic Hydric Soils ³ :		
☐ Histosol (A	A1)		☐ Sandy Gle	yed Mat	rix (S4)		1 cm Muck (A9) (LRF	₹ I, J)		
☐ Histic Epip	edon (A2)		☐ Sandy Red	lox (S5)			☐ Coast Prairie Redox	(A16) (LRR F, G, H)		
☐ Black Hist	ic (A3)		☐ Stripped M	atrix (S	6)		☐ Dark Surface (S7) (L	RR G)		
☐ Hydrogen	Sulfide (A4)		☐ Loamy Mu	cky Min	eral (F1)		☐ High Plains Depressi			
☐ Stratified L	ayers (A5) (LRR F	=)	☐ Loamy Gle	yed Ma	trix (F2)		(LRR H outside of	•		
☐ 1 cm Mucl	(A9) (LRR F, G, H	- I)	□ Depleted N	/latrix (F	3)		Reduced Vertic (F18)			
☐ Depleted B	Below Dark Surface	e (A11)	☐ Redox Dar	k Surfac	ce (F6)		Red Parent Material			
	Surface (A12)		□ Depleted D		, ,		☐ Very Shallow Dark S			
_	cky Mineral (S1)		☐ Redox Dep				Other (Explain in Rer	narks)		
	cky Peat or Peat (3Indicators of hydrophyti			
5 cm Mucl	ky Peat or Peat (S3	B) (LRR F)	(MLRA 72	& 73 o	f LRR H)		wetland hydrology must disturbed or problematic			
Restrictive L	ayer (if present):						Hydric Soil Present?			
Type:		_ D	epth (inches):				☐ Yes ☒ No			
HYDROLOG										
· ·	rology Indicators			,			0 1 1 1 7 70			
	•	one required	; check all that apply				Secondary Indicators (2			
Surface W	` '		Salt Crust (B1	,			☐ Surface Soil Cracks (B6)			
☐ High Wate			Aquatic Invert				☐ Sparsely Vegetated			
Saturation			☐ Hydrogen Sul				☐ Drainage Patterns (E			
☐ Water Mai	` '		☐ Dry-Season W		` '	D (00)	(where tilled)	res on Living Roots (C3)		
	Deposits (B2)		Oxidized Rhiz (where not		es on Living	Roots (C3)	☐ Crayfish Burrows (C	8)		
☐ Drift Depo☐ Algal Mat			☐ Presence of R		Hron (C4)		☐ Saturation Visible or			
☐ Iron Depos			☐ Thin Muck Su				☐ Geomorphic Position	0 , , ,		
	Nisible on Aerial I	magery (R7)	Other (Explain				☐ FAC-Neutral Test (D			
_	ined Leaves (B9)	inagery (Dr)	_ , , , ,				☐ Frost-Heave Hummo	,		
_	. ,		Donth	T_						
Field Observ	ations:	Yes N	Depth lo (inches)			ed Data (strea , if available:	m gauge, monitoring well,	aerial photos, previous		
Surface Wate	r present?		☑							
Water Table	present?		≾							
Saturation Pro	esent?		⊴							
(includes cap	illary fringe)									
Wetland Hyd	rology Present?									
Remarks: No	wetland hydrology	indicators a	re present.	•						
	, ,		•							

Project/Site: Sweetland Wind Project	City/County: Ha	d County Sampling Da	te: 10/16/2018
Applicant/Owner: Sweetland Wind Farm, LLC		<u></u>	g Point: SP-612
Investigator(s): T. Beemer, W. Hirst	Section, T	ownship, Range: S32, T111N, R66W	
Landform (hillslope, terrace, etc.) swale	Local relief (concave		Slope (%): 5 %
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.38415		atum: NAD83
Soil Map Unit Name: Glenham loam, undulating			EM1Ad
Are climate/hydrologic conditions on the site typical for this time of	year? X Yes	☐ No (If no, explain in Remarks.)	
		<u>_</u>	_
Vegetation Soil Hydrology	Are "Norma	I Circumstances" present? ☐ Yes	□ No
Significantly Disturbed? Naturally Problematic?	(If needed,	explain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing san	nnling point location	ns transects important features	etc
			, 5.5.
Yes No F Hydrophytic Vegetation Present?	Remarks: Upland samp	е рют.	
Hydric Soil Present?			
Wetland Hydrology Present?			
Is the Sampled Area within a Wetland?			
<u>`</u>			
VEGETATION – Use scientific names of plants			
Abso Tree Stratum (Plot size: 30') % Co		dicator tatus 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)
	<u>%</u> = Total Cover	Percent of Dominant Species	 , ,
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	0/	are OBL, FACW, or FAC:	0%_(A/B)
1	<u>%</u>		
3.	<u></u>	Prevalence Index Workshee	t:
4	<u>%</u>	Total % Cover of:	Multiply by:
5.	%		x 1 =0
0	% = Total Cover		x 2 = 0
Herb Stratum (Plot size: <u>5'</u>)		FACIL species 9/	$\begin{array}{ccc} x & 3 = \underline{0} \\ x & 4 = \underline{0} \end{array}$
		JFL	$x = \frac{0}{0}$
2	<u>%</u>		(A) 0 (B)
3	<u>%</u>	Prevalence Index = B/A =	
5	%	Hydrophytic Vegetation Indi	ootoro
6	<u>%</u>		
7	<u> </u>	1 Rapid Test for Hydrophyt	ic Vegetation
8	<u>%</u>	2 Dominance Test is >50%	
9	<u>%</u>	3 Prevalence Index is ≤3.0	I
	0 % = Total Cover	4 Morphological Adaptation supporting data in Remarks or c	ıs ¹ (Provide n a separate sheet)
Woody Vine Stratum (Plot size: 30') 1	%	☐ Problematic Hydrophytic V	egetation1 (explain)
2	%	1 Indicators of hydric soil and	
0	<u>%</u> = Total Cover	must be present, unless distur	
Bare Ground in Herb Stratum0 %		Hydrophytic Vegetation Prese	nt? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photograph C-36	 S.		

Profile Description: (Describe	to the dep	ile absence of indicators.				
Depth Matrix		Re	dox Features			
(inches) Color (moist)	%	Color (moist)	% Ty	pe ¹ Loc ²	Texture	Remarks
0-8 10YR 3/3	100				Clay Loam	
8-20 10YR 3/4	100				Clay Loam	
						
¹ Type: C=Concentration, D=De	pletion, RM=	Reduced Matrix, CS	S=Covered or	Coated Sand Grai	ns ² Location: PL=Pore	Lining, M=Matrix
Hydric Soil Indicators: (Appli	cable to all	LRRs, unless other	rwise noted.)		Indicators for Problem	atic Hydric Soils ³ :
☐ Histosol (A1)		☐ Sandy Gle	eyed Matrix (S4	4)	1 cm Muck (A9) (LRF	₹ I, J)
☐ Histic Epipedon (A2)		☐ Sandy Red	dox (S5)		☐ Coast Prairie Redox	(A16) (LRR F, G, H)
☐ Black Histic (A3)		☐ Stripped M			☐ Dark Surface (S7) (L	
☐ Hydrogen Sulfide (A4)			icky Mineral (F		☐ High Plains Depressi	ions (F16)
☐ Stratified Layers (A5) (LRR I			eyed Matrix (F	2)	(LRR H outside of I	•
☐ 1 cm Muck (A9) (LRR F, G,		☐ Depleted N			☐ Reduced Vertic (F18) ☐ Red Parent Material (,
Depleted Below Dark Surfac	e (A11)		rk Surface (F6	•	☐ Very Shallow Dark Si	` '
☐ Thick Dark Surface (A12)		•	Dark Surface (pressions (F8)	,	Other (Explain in Rer	, ,
☐ Sandy Mucky Mineral (S1)☐ 2.5 cm Mucky Peat or Peat (S2) (I DD G		s Depressions			
5 cm Mucky Peat or Peat (S			2 & 73 of LRR		³ Indicators of hydrophytic wetland hydrology must	
o om wacky i cat of i cat (of	3) (L IIII)	(,	disturbed or problematic	
Restrictive Layer (if present):					Hydric Soil Present?	
Type:	D	epth (inches):			☐ Yes ☒ No	
Dans and as Marks and the disease						
Remarks: No hydric soil indicate	or is present.					
HADBOLOGA						
HYDROLOGY						
Wetland Hydrology Indicators					Constitution (n	
Wetland Hydrology Indicators Primary Indicators (minimum of		_			Secondary Indicators (2	
Wetland Hydrology Indicators Primary Indicators (minimum of ☐ Surface Water (A1)		☐ Salt Crust (B	11)		☐ Surface Soil Cracks	(B6)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2)		☐ Salt Crust (B ²	— 11) tebrates (B13)		☐ Surface Soil Cracks ☐ Sparsely Vegetated	(B6) Concave Surface (B8)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)		☐ Salt Crust (B ² ☐ Aquatic Inver☐ Hydrogen Su	 11) tebrates (B13) lfide Odor (C1)	☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (B	(B6) Concave Surface (B8) 310)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Salt Crust (B' Aquatic Inver Hydrogen Su Dry-Season V	— 11) tebrates (B13) lfide Odor (C1 Vater Table (C) 52)	☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (E ☐ Oxidized Rhizospher	(B6) Concave Surface (B8)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		☐ Salt Crust (B'☐ Aquatic Inver☐ Hydrogen Su☐ Dry-Season V☐ Oxidized Rhiz	 11) tebrates (B13) Ifide Odor (C1 Vater Table (C zospheres on l)	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 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		☐ Salt Crust (B' ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season V ☐ Oxidized Rhiz (where not) C2) Living Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ci	(B6) Concave Surface (B8) B10) res on Living Roots (C3)
Wetland Hydrology Indicators 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)		☐ Salt Crust (B' ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season V ☐ Oxidized Rhiz (where not) ☐ Presence of F	tebrates (B13) Ifide Odor (C1 Vater Table (Cospheres on Intilled) Reduced Iron (I) C2) Living Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Compared to the compared to t	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9)
Wetland Hydrology Indicators 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)	one required	☐ Salt Crust (B' ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season V ☐ Oxidized Rhiz (where not) ☐ Presence of F ☐ Thin Muck Su	tebrates (B13) Ifide Odor (C1 Vater Table (Cospheres on letilled) Reduced Iron (urface (C7)) C2) Living Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ci	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) A Aerial Imagery (C9) n (D2)
Wetland Hydrology Indicators 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)	one required	☐ Salt Crust (B' ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season V ☐ Oxidized Rhiz (where not) ☐ Presence of F ☐ Thin Muck Su	tebrates (B13) Ifide Odor (C1 Vater Table (Cospheres on letilled) Reduced Iron (urface (C7)) C2) Living Roots (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)
Wetland Hydrology Indicators 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 I	one required magery (B7)	Salt Crust (B' Aquatic Inver Hydrogen Su Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explai	tebrates (B13) Ifide Odor (C1 Vater Table (Cospheres on letilled) Reduced Iron (urface (C7) n in Remarks)) C2) Living Roots (C3) (C4)	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) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
Wetland Hydrology Indicators 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 I Water-Stained Leaves (B9)	one required magery (B7)	☐ Salt Crust (B' ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season V ☐ Oxidized Rhiz (where not) ☐ Presence of F ☐ Thin Muck Su ☐ Other (Explain	tebrates (B13) Ifide Odor (C1 Vater Table (Cospheres on letilled) Reduced Iron (urface (C7) In in Remarks) Describe F) C2) Living Roots (C3) (C4)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ci Saturation Visible on Geomorphic Position FAC-Neutral Test (D Frost-Heave Hummore	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
Wetland Hydrology Indicators 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 I Water-Stained Leaves (B9)	magery (B7)	Salt Crust (B' Aquatic Inver Hydrogen Su Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explai	tebrates (B13) Ifide Odor (C1 Vater Table (Cospheres on letilled) Reduced Iron (urface (C7) In in Remarks) Describe F) C2) Living Roots (C3) (C4) Recorded Data (sti	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ci Saturation Visible on Geomorphic Position FAC-Neutral Test (D Frost-Heave Hummore	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
Wetland Hydrology Indicators 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 I Water-Stained Leaves (B9) Field Observations:	magery (B7)	□ Salt Crust (B' □ Aquatic Inver □ Hydrogen Su □ Dry-Season V □ Oxidized Rhiz (where not □ Presence of F □ Thin Muck Su □ Other (Explai	tebrates (B13) Ifide Odor (C1 Vater Table (Cospheres on letilled) Reduced Iron (urface (C7) In in Remarks) Describe F) C2) Living Roots (C3) (C4) Recorded Data (sti	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ci Saturation Visible on Geomorphic Position FAC-Neutral Test (D Frost-Heave Hummore	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
Wetland Hydrology Indicators 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 I Water-Stained Leaves (B9) Field Observations: Surface Water present?	magery (B7) Yes I	□ Salt Crust (B' □ Aquatic Inver □ Hydrogen Su □ Dry-Season V □ Oxidized Rhiz (where not □ Presence of F □ Thin Muck Su □ Other (Explai) Depth No (inches)	tebrates (B13) Ifide Odor (C1 Vater Table (Cospheres on letilled) Reduced Iron (urface (C7) In in Remarks) Describe F) C2) Living Roots (C3) (C4) Recorded Data (sti	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ci Saturation Visible on Geomorphic Position FAC-Neutral Test (D Frost-Heave Hummore	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
Wetland Hydrology Indicators 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 I Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present?	magery (B7) Yes I	□ Salt Crust (B' □ Aquatic Inver □ Hydrogen Su □ Dry-Season V □ Oxidized Rhiz (where not □ Presence of F □ Thin Muck Su □ Other (Explai) Depth (inches)	tebrates (B13) Ifide Odor (C1 Vater Table (Cospheres on letilled) Reduced Iron (urface (C7) In in Remarks) Describe F) C2) Living Roots (C3) (C4) Recorded Data (sti	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ci Saturation Visible on Geomorphic Position FAC-Neutral Test (D Frost-Heave Hummore	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
Wetland Hydrology Indicators 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 Indicator Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present?	magery (B7) Yes I	Salt Crust (B' Aquatic Inver Hydrogen Su Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explai)	tebrates (B13) Ifide Odor (C1 Vater Table (Cospheres on letilled) Reduced Iron (urface (C7) In in Remarks) Describe F) C2) Living Roots (C3) (C4) Recorded Data (sti	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ci Saturation Visible on Geomorphic Position FAC-Neutral Test (D Frost-Heave Hummore	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
Wetland Hydrology Indicators 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 I Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present? (includes capillary fringe)	magery (B7) Yes □ □ □ □ □ □ □ □	□ Salt Crust (B' □ Aquatic Inver □ Hydrogen Su □ Dry-Season V □ Oxidized Rhiz (where not □ Presence of F □ Thin Muck Su □ Other (Explai) Depth (inches)	tebrates (B13) Ifide Odor (C1 Vater Table (Cospheres on letilled) Reduced Iron (urface (C7) In in Remarks) Describe F) C2) Living Roots (C3) (C4) Recorded Data (sti	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ci Saturation Visible on Geomorphic Position FAC-Neutral Test (D Frost-Heave Hummore	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)
Wetland Hydrology Indicators 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 I Water-Stained Leaves (B9) Field Observations: Surface Water present? Water Table present? Saturation Present? (includes capillary fringe) Wetland Hydrology Present?	magery (B7) Yes □ □ □ □ □ □ □ □	□ Salt Crust (B' □ Aquatic Inver □ Hydrogen Su □ Dry-Season V □ Oxidized Rhiz (where not □ Presence of F □ Thin Muck Su □ Other (Explai) Depth (inches)	tebrates (B13) Ifide Odor (C1 Vater Table (Cospheres on letilled) Reduced Iron (urface (C7) In in Remarks) Describe F) C2) Living Roots (C3) (C4) Recorded Data (sti	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (E Oxidized Rhizospher (where tilled) Crayfish Burrows (Ci Saturation Visible on Geomorphic Position FAC-Neutral Test (D Frost-Heave Hummore	(B6) Concave Surface (B8) B10) res on Living Roots (C3) 8) Aerial Imagery (C9) n (D2) Docks (D7) (LRR F)

Application Covered Present P	Project/Site: Sweetland Wind Project	City/County: Han	nd County	Sampling Date: 10/16/2018
	A			•
Landform (fillslope, terrace, etc.) Oesitope Local relief (concave, convex., none); none None Stope (%): 2 % Subregion (LRR): Northern Great Plaines Spring Wheat Region Latt. 44,390799 Long: 98,795293 Datum: NADO3 Datum:		Section, To		
Subriging (LRR)	Landform (hillslope, terrace, etc.) toeslope	Local relief (concave	,	
Name	Subregion (LRR): Northern Great Plains Spring Wheat Region	n Lat: 44.390799	Long: -98.79	<u> </u>
According to the stratum Characteristic Characteris	-			
Significantly Disturbed?	-		☐ No (If no, explain ir	
Significantly Disturbed?				
SUMMARY OF FINDINGS - Attack site map showing sampling point locations, transects, important features, etc.	5_	Are "Norma	Il Circumstances" present	? ⊠ Yes □ No
SumMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.		(If needed, e	explain any answers in Re	emarks.)
Remarks: Upland sample plot. Hydrophytic Vegetation Present?	, – – –	mnling point locatio	ons transects import	ant features, etc.
Hydroc Soil Present?				uni reatures, etc.
Hydric Soil Present?		Remarks: Upland sampl	le plot.	
Section Sec				
Absolute Scription Absolute Scription Absolute Scription Script	•			
Absolute Dominant Indicator Species? Status	Is the Sampled Area within a Wetland?			
Absolute Dominant Indicator Species? Status	VECETATION. Her exicutific names of plants			
Tree Stratum (Plot size: 30') % Cover Species? Status are OBL, FACW, or FAC (excluding FAC-): Number of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 0 (A) 3.	•			
1.				st Worksheet:
2.		•	Number of Dom	
3.	2	<u> </u>		•
Sapling/Shrub Stratum (Plot size: 15') Sapling/Shrub Shrub Shr	3		Total Number of	·
Sapling/Shrub Stratum (Plot size: 15) — Percent of Dominant Species that are OBL, FACW, or FAC:				
A) % = Lotal Cover	Percent of Domi	inant Species that
2.	· · · · · · · · · · · · · · · · · · ·	%		
3.	<u> </u>		Daniel and de la d	lace Mar electroner
S	_			
Herb Stratum (Plot size: 5')	4	<u> </u>		over of: Multiply by:
Herb Stratum (Plot size: 5')				
1. <u>Poa pratensis</u> 2) % = Total Cover		
1	(<u>=</u>)	0.0/ V F	FACIL species	
3			UPL species	
4. % Prevalence Index = B/A =			Column Totals:	0% (A)0(B)
6	4		Prevalence Ind	ex = B/A =
6	5	<u> </u>	Hydrophytic Ve	egetation Indicators:
8				
9				
10.				
Woody Vine Stratum (Plot size: 30') 1			I —	
1	9		□ 4 Morphologi supporting data ii	ical Adaptations ¹ (Provide n Remarks or on a separate sheet)
2	, <u> </u>	<u> </u>	☐ Problematic	Hydrophytic Vegetation ¹ (explain)
Bare Ground in Herb Stratum 10 % Hydrophytic Vegetation Present? ☐ Yes ☒ No	2			
				·
	<u> </u>	7.	l	
		· •		

Profile Desc	ription: (Describe	to the de	oth needed to docu	ment th	e indicator o	r confirm the	absence of indicators.)		
Depth	Matrix		Re	edox Fe	atures				
(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		
	ny roat or roat (or	, (=:::: /	` .		,		disturbed or problematic		
Restrictive L	ayer (if present):						Hydric Soil Present?		
Type:			Depth (inches):				☐ Yes ☐ No		
Remarks: No	hydric soil indicato	r is presen	i.						
	· · · · · · · · · · · · · · · · · · ·								
HYDROLOG									
_	drology Indicators			,					
Primary Indicators (minimum of one required; check all that apply)							Secondary Indicators (2	• • •	
☐ Surface Water (A1) ☐ Salt Crust (B11) ☐ High Water Table (A2) ☐ Aquatic Invertebra				,			Surface Soil Cracks	` '	
	High Water Table (A2) ☐ Aquatic Invertebrates (B13)					☐ 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 St		` ,		☐ 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	etland hydrology inc	licators 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: SP-616
Investigator(s): T. Beemer, W. Hirst		Section	n, Township	, Range: S20, T111N, R66W
Landform (hillslope, terrace, etc.) swale	Lo	 cal relief (conc		· · · · · · · · · · · · · · · · · · ·
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.)
The diffractify arologic containers on the site 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?]	(If need	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	ırks: Wetland s	sample plot	located in 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	•			
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>			
2. 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			

Profile Desc	ription: (Describe	to the dept	h needed to docui	ment th	e indicator o	r confirm the	absence of indicators.)	
Depth	Matrix		Re	edox Fe	atures			
(inches)	Color (moist)	%	Color (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	
-		· —— -						
-								
-		·						
-	•	· —— -	-		- ——			-
		· —— -	· -				·	
¹Type: C=C	oncentration, D=Dep	oletion, RM=	Reduced Matrix, C	S=Cove	red or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil	Indicators: (Applic	cable to all	_RRs, unless othe	rwise n	oted.)		Indicators for Problema	ntic Hydric Soils ³ :
☐ Histosol (A1)		☐ Sandy Gle	eyed Ma	atrix (S4)		1 cm Muck (A9) (LRR	I, J)
☐ Histic Epi	pedon (A2)		☐ Sandy Re	dox (S5)		☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Black His	tic (A3)		☐ Stripped N	∕latrix (S	66)		☐ Dark Surface (S7) (LF	RR G)
	Sulfide (A4)		☐ Loamy Mu	-			☐ High Plains Depression	
	Layers (A5) (LRR F		☐ Loamy Glo	-			(LRR H outside of N	/ILRA 72 & 73)
	k (A9) (LRR F, G, F		Depleted I				Reduced Vertic (F18)	TEO)
	Below Dark Surface	e (A11)	□ Redox Da		, ,		☐ Red Parent Material (☐ Very Shallow Dark Su	•
	k Surface (A12)		☐ Depleted I		, ,		☐ Other (Explain in Rem	, ,
	ucky Mineral (S1)	CO) / DD C	Redox De				• •	,
	ucky Peat or Peat (\$ ky Peat or Peat (\$3				of LRR H)		3Indicators of hydrophytic	
5 CITI MUC	ky Peat of Peat (53	o) (LKK F)	(MEIXA 7	2 0 73 0	JI LIKIK II)		wetland hydrology must li disturbed or problematic	be present, unless
Restrictive	_ayer (if present):						Hydric Soil Present?	
Type:		_ D	epth (inches):				⊠ Yes □ No	
HYDROLOG	Υ							
Wetland Hy	drology Indicators	:						
Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2	or more required)	
☐ Surface Water (A1) ☐ Salt Crust (B11)							☐ Surface Soil Cracks (B6)
	☐ High Water Table (A2) ☐ Aquatic Invertebrates (B13)						☐ Sparsely Vegetated (,
	☐ Aquatic invertebrates (B13) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1)					☐ Drainage Patterns (B		
	Water Marks (B1)						☐ Oxidized Rhizospher	
☐ Sediment	Deposits (B2)		Oxidized Rhiz		es on Living I	Roots (C3)	(where tilled)	
☐ Drift Depo	osits (B3)		(where not				☐ Crayfish Burrows (C8	•
☐ Algal Mat	or Crust (B4)		☐ Presence of I				☐ Saturation Visible on	0 , (,
☐ Iron Depo			☐ Thin Muck St				☐ Geomorphic Position	
_	n Visible on Aerial Ir	magery (B7)	Other (Explai	in in Rei	marks)		☐ FAC-Neutral Test (D:	,
☐ Water-Sta	ained Leaves (B9)			1			☐ Frost-Heave Hummo	CKS (D7) (LRR F)
Field Obser	vations:	Yes N	Depth lo (inches)		scribe Record pections, etc.)		ım gauge, monitoring well, a	aerial photos, previous
Surface Wat	er present?		⊠					
Water Table	present?		⊠					
Saturation P			<u> </u>					
(includes cap								
	drology Present?							
	etland hydrology inc		D2 and D5 are me	t.				
	,,							

Project/Site: Sweetland Wind Project	City/County: Hand Cou	unty Sampling Date: 10/16/2018	
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-617	
Investigator(s): T. Beemer, W. Hirst	Section, Townsh	·	
Landform (hillslope, terrace, etc.) toeslope	Local relief (concave, conv		
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44,404534	Long: -98.801618 Datum: NAD83	
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		
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	unling point locations t	ransacts important foatures ato	
Yes No R Hydrophytic Vegetation Present? □ ⊠	emarks: Upland sample plo	t adjacent to PEM W-558.	
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			
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: 1 (B)	ı
	<u>%</u> = Total Cover	Percent of Dominant Species that	
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1	<u>%</u>	are OBL, FACW, or FAC: 0% (A/E	B)
2.	%	Dustralamas landari Wantrala act.	
3	<u></u>	Prevalence Index Worksheet:	
4	<u>%</u>	Total % Cover of: Multiply by:	
5	<u>%</u>	OBL species	
· · · · · · · · · · · · · · · · · · ·	<u>%</u> = Total Cover	FACW species% x 2 =0 FAC species% x 3 =0	
Herb Stratum (Plot size: <u>5'</u>) 1. Bromus inermis 65	% Y UPL	FACU species	
1. <u>Bromus inermis</u> 65 2. Poa pratensis 15		UPL species	
3. Spartina pectinata 10		Column Totals:0% (A)0 (B	3)
9:	% 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%	
10.	<u>%</u>	- ☐ 3 Prevalence Index is ≤3.0¹	
Woody Vine Stratum (Plot size: 30')		4 Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
1	<u>%</u>	☐ 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 Stratum5 %		Hydrophytic Vegetation Present? ☐ Yes ☒ No)
Remarks: Hydrophytic vegetation is not present. Photograph C-39.			

Depth (inches) Color (moist)
0-8 10/YR 3/2 100 Clay Loam 8-20 10/YR 3/3 100 Clay Loam "Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Clay Loam "Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Clay Loam "Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Clay Loam "Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Clay Loam Matrix Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)
8-20 10YR 3/3 100 Clay Loam "Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils3: Histosol (A1)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains 1
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Sandy Gleyed Matrix (S4) 1 cm Muck (A9) (LRR I, J) 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) (LRR H outside of MLRA 72 & 73) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Redox Dark Surface (F7) Very Shallow Dark Surface (TF 12) Sandy Mucky Mineral (S1) Redox Depressions (F16) MLRA 72 & 73 of LRR H) High Plains Depresent; unless disturbed or problematic Hydric Soil Present? Yes ⊠ No
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)
☐ 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) ☐ High Plains Depressions (F16) ☐ 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) ☐ 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 wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): Type: Depth (inches): ☐ Yes ☑ No
☐ 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) ☐ High Plains Depressions (F16) ☐ 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) ☐ 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) ☐ Other (Explain in Remarks) ☐ 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): Type: Depth (inches): ☐ Yes ☑ No
☐ 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) ☐ High Plains Depressions (F16) ☐ 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) ☐ 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) ☐ Other (Explain in Remarks) ☐ 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): Type: Depth (inches): ☐ Yes ☑ No
□ 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) □ Loamy Gleyed Matrix (F2) □ 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) □ 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 wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): Type: Depth (inches): □ Yes ☑ No
☐ 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) ☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF 12) ☐ 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) ☐ Very Shallow Dark Surface (TF 12) ☐ Other (Explain in Remarks) ☐ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): Type: Depth (inches): ☐ Yes ☑ No
□ 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) □ Thick Dark Surface (A12) □ Depleted Dark Surface (F7) □ Very Shallow Dark Surface (TF 12) □ 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 wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): Type: Depth (inches): □ Yes ☑ No
□ 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) □ 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 wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): Type: Depth (inches): □ Yes ☑ No
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF 12) ☐ 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 wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): ☐ Hydric Soil Present? Type: ☐ Depth (inches): ☐ Yes ☑ No
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 wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): □ Yes ☑ No Type: □ Depth (inches): □ Yes ☑ No
□ 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 disturbed or problematic □ Restrictive Layer (if present): □ Hydric Soil Present? □ Yes □ No
□ 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): Type: □ Depth (inches): □ Yes □ No
Contact
Type: Depth (inches): Yes ☑ No
Bopan (Moneo).
INVENE LOCK
HYDROLOGY
Wetland Hydrology Indicators:
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) ———————————————————————————————————
Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6)
High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Concave Surface (B8)
☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Drainage Patterns (B10)
☐ Water Marks (B1) ☐ Dry-Season Water Table (C2) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Government Deposite (B2)
□ Drift Deposits (B3) (where not tilled) □ Crayfish Burrows (C8) □ Algal Mat or Crust (B4) □ Presence of Reduced Iron (C4) □ Saturation Visible on Aerial Imagery (C9)
- · · · · · · · · · · · · · · · · · ·
☐ Iron Deposits (R5) ☐ Thin Muck Surface (C7) ☐ Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ Geomorphic Position (D2) ☐ Injundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5) ☐ Water-Stained Leaves (B9) ☐ Frost-Heave Hummocks (D7) (LRR F)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5) ☐ Water-Stained Leaves (B9) ☐ Frost-Heave Hummocks (D7) (LRR F)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5) ☐ Water-Stained Leaves (B9) ☐ Frost-Heave Hummocks (D7) (LRR F) Field Observations: ☐ Depth ☐ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5) ☐ Water-Stained Leaves (B9) ☐ Frost-Heave Hummocks (D7) (LRR F) Field Observations: ☐ Depth (inches) ☐ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available:
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5) ☐ Water-Stained Leaves (B9) ☐ Frost-Heave Hummocks (D7) (LRR F) Field Observations: ☐ Depth (inches) ☐ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Surface Water present? ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
□ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ FAC-Neutral Test (D5) □ Water-Stained Leaves (B9) □ Prost-Heave Hummocks (D7) (LRR F) Field Observations: □ Depth (inches) □ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Surface Water present? □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5) ☐ Water-Stained Leaves (B9) ☐ Frost-Heave Hummocks (D7) (LRR F) Field Observations: ☐ Depth (inches) ☐ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Surface Water present? ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
□ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ FAC-Neutral Test (D5) □ Water-Stained Leaves (B9) □ Prost-Heave Hummocks (D7) (LRR F) Field Observations: □ Depth (inches) □ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Surface Water present? □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
□ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ FAC-Neutral Test (D5) □ Frost-Heave Hummocks (D7) (LRR F) Field Observations: □ Depth (inches) □ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Surface Water present? □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

Project/Site: Sweetland Wind Project	City/County: Ha	and County	Sampling Date: 10/16/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD	Sampling Point: SP-619
Investigator(s): T. Beemer, W. Hirst	Section, T		 S20, T111N, R66W
Landform (hillslope, terrace, etc.) toeslope	Local relief (concav	, -	none Slope (%): 7 %
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.40241	0 Long: _	98.801110 Datum: NAD83
Soil Map Unit Name: Glenham-Java loams, rolling			Classification: NA
Are climate/hydrologic conditions on the site typical for this time of	year? X Yes	☐ No (If no, exp	olain in Remarks.)
Vegetation Soil Hydrology	Are "Norm	al Circumstances" pre	esent? 🛛 Yes 🗌 No
Significantly Disturbed? Naturally Problematic?	(If needed,	, explain any answers	in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing san	mpling point locati	one transacte im	unartant faaturas, ata
			iportant reatures, etc.
Yes No F Hydrophytic Vegetation Present?	Remarks: Upland sam	ple plot.	
Hydric Soil Present?			
Wetland Hydrology Present?			
Is the Sampled Area within a Wetland?			
<u>`</u>			
VEGETATION – Use scientific names of plants	hata Dana'a ant la	- #: B	- T(W-sheb)
Abso Tree Stratum (Plot size: 30') % Co		Status	ce Test Worksheet:
1	<u>%</u>	Number of	Dominant Species that FACW, or FAC
2	%	——— (excluding	
3	<u></u>	Total Num	ber of Dominant
4	<u>%</u>		cross All Strata: 1 (B)
	<u>%</u> = Total Cover	Percent of	Dominant Species that
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1	<u>%</u>		FACW, or FAC:0%_(A/B)
2.	<u>%</u>		
3.	<u>%</u>		e Index Worksheet:
4	<u> </u>	Total	% Cover of: Multiply by:
5	<u>%</u>	OBL spec	
	<u>%</u> = Total Cover	FACW sp FAC spec	
Herb Stratum (Plot size: <u>5'</u>)	0.0/	FACILEDE	
1. <u>Bromus inermis</u> 10 2.	<u>0 % Y </u>	UPL spec	ies
3	<u></u>	Column T	otals: 0 % (A) 0 (B)
4	%	Prevalence	ce Index = B/A =
5	%	Hydrophy	tic Vegetation Indicators:
6	<u>%</u>		_
7	<u>%</u>		d Test for Hydrophytic Vegetation
8	<u>%</u>		nance Test is >50%
9	%		alence Index is ≤3.01
	0 % = Total Cover	☐ 4 Morpl supporting	hological Adaptations ¹ (Provide data in Remarks or on a separate sheet)
1	%	☐ Probler	matic Hydrophytic Vegetation ¹ (explain)
2	%		s of hydric soil and wetland hydrology
0	<u>%</u> = Total Cover	must be pr	resent, unless disturbed or problematic
Bare Ground in Herb Stratum0 %		Hydrophyti	ic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation is not present. Photograph C-40).		

Depth (inches) Color (moist)
0-8 10/YR 3/2 100 Clay Loam 8-20 10/YR 3/3 100 Clay Loam "Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Clay Loam "Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Clay Loam "Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Clay Loam "Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Clay Loam Matrix Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)
8-20 10YR 3/3 100 Clay Loam "Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils3: Histosol (A1)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains 1
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Sandy Gleyed Matrix (S4) 1 cm Muck (A9) (LRR I, J) 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) (LRR H outside of MLRA 72 & 73) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Redox Dark Surface (F7) Very Shallow Dark Surface (TF 12) Sandy Mucky Mineral (S1) Redox Depressions (F16) MLRA 72 & 73 of LRR H) High Plains Depresent; unless disturbed or problematic Hydric Soil Present? Yes ⊠ No
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)
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☐ 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) ☐ High Plains Depressions (F16) ☐ 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) ☐ 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 wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): Type: Depth (inches): ☐ Yes ☑ No
☐ 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) ☐ High Plains Depressions (F16) ☐ 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) ☐ 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) ☐ Other (Explain in Remarks) ☐ 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): Type: Depth (inches): ☐ Yes ☑ No
☐ 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) ☐ High Plains Depressions (F16) ☐ 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) ☐ 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) ☐ Other (Explain in Remarks) ☐ 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): Type: Depth (inches): ☐ Yes ☑ No
□ 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) □ Loamy Gleyed Matrix (F2) □ 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) □ 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 wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): Type: Depth (inches): □ Yes ☑ No
☐ 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) ☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF 12) ☐ 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) ☐ Very Shallow Dark Surface (TF 12) ☐ Other (Explain in Remarks) ☐ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): Type: Depth (inches): ☐ Yes ☑ No
□ 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) □ Thick Dark Surface (A12) □ Depleted Dark Surface (F7) □ Very Shallow Dark Surface (TF 12) □ 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 wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): Type: Depth (inches): □ Yes ☑ No
□ 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) □ 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 wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): Type: Depth (inches): □ Yes ☑ No
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF 12) ☐ 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 wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): ☐ Hydric Soil Present? Type: ☐ Depth (inches): ☐ Yes ☑ No
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 wetland hydrology must be present, unless disturbed or problematic Restrictive Layer (if present): □ Yes ☑ No Type: □ Depth (inches): □ Yes ☑ No
□ 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 disturbed or problematic □ Restrictive Layer (if present): □ Hydric Soil Present? □ Yes □ No
□ 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): Type: □ Depth (inches): □ Yes □ No
Contact
Type: Depth (inches): Yes ☑ No
Bopan (Moneo).
INVENE LOCK
HYDROLOGY
Wetland Hydrology Indicators:
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) ———————————————————————————————————
Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6)
High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Concave Surface (B8)
☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Drainage Patterns (B10)
☐ Water Marks (B1) ☐ Dry-Season Water Table (C2) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Government Deposite (B2)
□ Drift Deposits (B3) (where not tilled) □ Crayfish Burrows (C8) □ Algal Mat or Crust (B4) □ Presence of Reduced Iron (C4) □ Saturation Visible on Aerial Imagery (C9)
- · · · · · · · · · · · · · · · · · ·
☐ Iron Deposits (R5) ☐ Thin Muck Surface (C7) ☐ Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ Geomorphic Position (D2) ☐ Injundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5) ☐ Water-Stained Leaves (B9) ☐ Frost-Heave Hummocks (D7) (LRR F)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5) ☐ Water-Stained Leaves (B9) ☐ Frost-Heave Hummocks (D7) (LRR F)
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☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5) ☐ Water-Stained Leaves (B9) ☐ Frost-Heave Hummocks (D7) (LRR F) Field Observations: ☐ Depth (inches) ☐ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available:
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5) ☐ Water-Stained Leaves (B9) ☐ Frost-Heave Hummocks (D7) (LRR F) Field Observations: ☐ Depth (inches) ☐ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Surface Water present? ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
□ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ FAC-Neutral Test (D5) □ Water-Stained Leaves (B9) □ Prost-Heave Hummocks (D7) (LRR F) Field Observations: □ Depth (inches) □ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Surface Water present? □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5) ☐ Water-Stained Leaves (B9) ☐ Frost-Heave Hummocks (D7) (LRR F) Field Observations: ☐ Depth (inches) ☐ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Surface Water present? ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
□ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ FAC-Neutral Test (D5) □ Water-Stained Leaves (B9) □ Prost-Heave Hummocks (D7) (LRR F) Field Observations: □ Depth (inches) □ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Surface Water present? □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
□ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ FAC-Neutral Test (D5) □ Frost-Heave Hummocks (D7) (LRR F) Field Observations: □ Depth (inches) □ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Surface Water present? □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

Project/Site: Sweetland Wind Project	City/County: Hand	County Sampling D	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.		

Profile Description: (Describ	-	· · · · · · · · · · · · · · · · · · ·				
Depth Matrix	·	Re	edox Features			
(inches) Color (moist)		Color (moist)	% Type	Loc ²	Texture	Remarks
0-8 10YR 3/2	100				Clay Loam	
8-20 10YR 3/3	100	·-			Clay Loam	-
						
		-	<u> </u>			
			·			
				:		
¹ Type: C=Concentration, D=De	epletion, RM=	Reduced Matrix, C	S=Covered or Co	ated Sand Grains	s ² Location: PL=Pore	e Lining, M=Matrix
Hydric Soil Indicators: (Appli	icable to all I	LRRs, unless othe	rwise noted.)		Indicators for Problem	natic Hydric Soils³:
☐ Histosol (A1)		☐ Sandy Gle	eyed Matrix (S4)		☐ 1 cm Muck (A9) (LR)	R I, J)
☐ Histic Epipedon (A2)		☐ Sandy Re	dox (S5)		☐ Coast Prairie Redox	(A16) (LRR F, G, H)
☐ Black Histic (A3)		☐ Stripped N	, ,		☐ Dark Surface (S7) (L	•
☐ Hydrogen Sulfide (A4)			ıcky Mineral (F1)		☐ High Plains Depress	
Stratified Layers (A5) (LRR			eyed Matrix (F2)		(LRR H outside of	•
☐ 1 cm Muck (A9) (LRR F, G ,		Depleted I			☐ Reduced Vertic (F18	•
Depleted Below Dark Surface	e (A11)		rk Surface (F6)		Red Parent Material	
☐ Thick Dark Surface (A12)		•	Dark Surface (F7)		☐ Very Shallow Dark S☐ Other (Explain in Re	
☐ Sandy Mucky Mineral (S1)	(CO) (LDD C		pressions (F8)	4.0\		
□ 2.5 cm Mucky Peat or Peat□ 5 cm Mucky Peat or Peat (S			s Depressions (F 2 & 73 of LRR H)		³ Indicators of hydrophyt wetland hydrology must	
☐ 5 cm Mucky Feat of Feat (5	3) (LKK F)	(MEICA I	a roor Entry		disturbed or problemation	
Restrictive Layer (if present):					Hydric Soil Present?	
Type:	D	epth (inches):			☐ Yes ☐ No	
HYDROLOGY Wetland Hydrology Indicators						
		; check all that appl	Υ)		Secondary Indicators (2	2 or more required)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1)		☐ Salt Crust (B	11)		☐ Surface Soil Cracks	(B6)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2)		☐ Salt Crust (B	11) tebrates (B13)		☐ Surface Soil Cracks ☐ Sparsely Vegetated	(B6) Concave Surface (B8)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)		Salt Crust (B Aquatic Inver	 11) tebrates (B13) Ifide Odor (C1)		☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (I	(B6) Concave Surface (B8) B10)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		☐ Salt Crust (B☐ Aquatic Inver☐ Hydrogen Su☐ Dry-Season \	 11) tebrates (B13) Ifide Odor (C1) Vater Table (C2)		☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (I ☐ Oxidized Rhizosphe	(B6) Concave Surface (B8) B10)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		☐ Salt Crust (B☐ Aquatic Inver☐ Hydrogen Su☐ Dry-Season \☐ Oxidized Rhi:	 11) tebrates (B13) Ifide Odor (C1) Vater Table (C2) zospheres on Livi	ng Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled)	(B6) Concave Surface (B8) B10) eres on Living Roots (C3)
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Project/Site: Sweetland Wind Project		City/County:	Hand Coun	ty	Sampling I	Date: 10/16/2018
Applicant/Owner: Sweetland Wind Farm, LLC				State: SD	Samp	ling Point: SP-623
Investigator(s): T. Beemer, W. Hirst		Section	, Township	, Range: S29,	 T111N, R66\	<i></i>
Landform (hillslope, terrace, etc.) toeslope		Local relief (conc	ave, conve	x, none): none)	Slope (%): 2 %
Subregion (LRR): Northern Great Plains Spring Whea	at Region	Lat: 44.395	976	Long: -98.7	799820	Datum: NAD83
Soil Map Unit Name: Glenham-Propser loams, 1 to 6		_		_		NA
Are climate/hydrologic conditions on the site typical for thi			☐ No	(If no, explain	_	
Vanatation Cail Und		A "N.I		"	-40 MV	□ Na
Vegetation Soil Hyd Significantly Disturbed? ☐ ☐	rology □			nstances" preser	_	☐ No
		(If neede	ed, explain	any answers in F	Remarks.)	
SUMMARY OF FINDINGS – Attach site map show	ing samp	oling point loca	ations, tra	ınsects, impoi	rtant featur	es, etc.
Yes 1	No Re	marks: Upland sa	ample plot a	diacent to PEM	W-561.	
Hydrophytic Vegetation Present?	\boxtimes	·		•		
	\boxtimes					
,						
Is the Sampled Area within a Wetland?						
VEGETATION – Use scientific names of plants						
- C	Absolu		Indicator	Dominance To	est Workshe	et:
Tree Stratum (Plot size: <u>30'</u>) 1.	% Cove	er Species? <u>%</u>	Status	Number of Dor	minant Specie	es that
1. 2.		<u></u>		are OBL, FAC	,	0 (1)
3.		<u></u>		(excluding FAC		0_(A)
4.		<u></u>		Total Number Species Acros		1 (B)
	0 9	<u>%</u> = Total Cove	er			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Percent of Dor are OBL, FAC		es that0%_(A/B)
1.		<u></u>				(; 1-)
2		<u>%</u> <u></u>		Prevalence In	dex Worksh	eet:
3 4		<u></u>		Total % (Cover of:	Multiply by:
5.		<u></u>		OBL species		% x 1 = 0
	0 9		er	FACW specie	s	% x 2 = 0
Herb Stratum (Plot size: <u>5'</u>)				FAC species FACU species		_% x 3 = <u>0</u> % x 4 = 0
1. <u>Bromus inermis</u>	100 9		<u>UPL</u>	UPL species	·	$\frac{1}{2}$ $\frac{1}$
2		<u></u>		Column Totals	s: (0 (B)
3		<u>%</u> <u></u>		Prevalence In	idex = B/A =	
4 5		<u></u>		Lively ambustic \	/ogototion ly	diagtara
6		<u></u>		Hydrophytic \	regetation in	dicators:
7		<u></u>		☐ 1 Rapid Te	st for Hydropl	hytic Vegetation
8		<u></u>		2 Dominano	ce Test is >50)%
9		<u>%</u>		☐ 3 Prevalend	ce Index is ≤3	3.0 ¹
10(Plateire 200)	100 9		er	☐ 4 Morpholo supporting data	gical Adaptat ı in Remarks o	ions ¹ (Provide or on a separate sheet)
Woody Vine Stratum (Plot size: 30') 1		<u></u>		☐ Problemation	c Hydrophytic	: Vegetation¹ (explain)
2.		<u></u>		1 Indicators of	hydric soil an	d wetland hydrology
	0 °	<u>%</u> = Total Cove	er			turbed or problematic
Bare Ground in Herb Stratum 0 %				Hydrophytic Ve	egetation Pre	sent? 🗌 Yes 🛛 No
Remarks: Hydrophytic vegetation is not present. Photogra	aph C-42.					

Color (moist) W Type¹ Loc² Texture	Remarks
Clay Loam Clay	ing, M=Matrix
Section Stratified Layers (A5) (LRR F) Depleted Matrix (F3) Depleted Below Dark Surface (A12) Depleted Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F6) Storn Mucky Peat or Peat (S3) (LRR F) High Plains Depressions (F16) Struth Dark Surface (S3) (LRR F) Cast Prairie Redox (LRR F) Cast Prairie Redox (LRR F) Depleted Dark Surface (F7) Cast Prairie Redox (A16) Cast Prairie Red	ing, M=Matrix
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Coation: PL=Pore Lining Coation: PL=Pore Lining PL=Pore Lining	ing, M=Matrix
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Applicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic I Histosol (A1)	ing, M=Matrix
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	ing, M=Matrix
Indicators for Problematic I Indicators for Problematic Indicators Ind	ing, M=Matrix
Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stripped Matrix (S6) Stratified Layers (A5) (LRR F) Coast Prairie Redox (A16) Stratified Layers (A5) (LRR F, G, H) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Redox Depressions (F8) Stratified Layers (A5) (LRR F) Depleted Dark Surface (F7) Redox Depressions (F8) Sandy Mucky Mineral (S1) Stratified Layers (A5) (LRR F) Depleted Matrix (F2) Redox Dark Surface (F6) Redox Dark Surface (F7) Redox Depressions (F8) Stratified Layers (A12) Redox Dark Surface (F6) Redox Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) Stratified Layers (A5) (LRR F) Reduced Vertic (F18) Redox Dark Surface (F7) Stratified Layers (A12) Redox Dark Surface (F6) Redox Depressions (F8) Stratified Layers (A5) (LRR F) Reduced Vertic (F18) Reduced Vertic (F18) Redox Dark Surface (F7) Stratified Layers (A5) (LRR F) Reduced Vertic (F18) Redox Dark Surface (F7) Wery Shallow Dark Surface (F7) Stratified Layers (A5) Reduced Vertic (F18) Redox Dark Surface (F7) Wery Shallow Dark Surface (F7) Stratified Layers (A5) Reduced Vertic (F18) Redox Dark Surface (F7) Wery Shallow Dark Surface (F7) Stratified Layers (A5) Reduced Vertic (F18) Redox Dark Surface (F7) Wery Shallow Dark Surface (F7)	
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Stratified Layers (A5) (LRR F) Current Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Pepleted Dark Surface (F6) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S2) (LRR G, H) Stratified Layers (A5) (LRR F) Depleted Matrix (F2) Redox Dark Surface (F6) Redox Dark Surface (F7) Redox Depressions (F8) Coast Prairie Redox (A16) High Plains Depressions (ERR G) Reduced (S7) (LRR G) High Plains Depressions (F8) Indicators of hydrophytic vegore wetland hydrology must be pidisturbed or problematic	Hydric Soils ³ :
□ Black Histic (A3) □ Stripped Matrix (S6) □ Dark Surface (S7) (LRR R) □ Hydrogen Sulfide (A4) □ Loamy Mucky Mineral (F1) □ High Plains Depressions (LRR R) □ Stratified Layers (A5) (LRR F) □ Loamy Gleyed Matrix (F2) □ Loamy Gleyed Matrix (F2) □ 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 □ 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 veg wetland hydrology must be pression of the problematic	J)
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) ☐ High Plains Depressions (LRR F) ☐ Stratified Layers (A5) (LRR F) ☐ Loamy Gleyed Matrix (F2) ☐ Reduced Vertic (F18) ☐ 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 ☐ 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) ☐ Note (Explain in Remarks) ☐ Stratified Layers (A12) ☐ High Plains Depressions (F16) ☐ Reduced Vertic (F18) ☐ Reduced Vertic (F18) ☐ Reduced Vertic (F18) ☐ Ned Parent Material (TF2) ☐ Very Shallow Dark Surface ☐ Other (Explain in Remarks) ☐ Other (Explain in Remarks) ☐ Struck (F1) ☐ Midicators of hydrophytic vegoent (F16) ☐ Neduced Vertic (F18) ☐ Struck (F1) ☐ Neduced Vertic (F18) ☐ Neduced Vertic (F18) ☐ Reduced Vertic (F18) ☐ Neduced Vertic (F18) ☐ Neduced Vertic (F18) ☐ Reduced Vertic (F18) ☐ Neduced Vertic (F18) ☐ Neduced Vertic (F18)	
□ Stratified Layers (A5) (LRR F) □ Loamy Gleyed Matrix (F2) (LRR H outside of MLR. □ 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 □ 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 veg wetland hydrology must be pression of the problematic	•
1 cm Muck (A9) (LRR F, G, H)	(F16)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) Medox Dark Surface (F6) Red Parent Material (TF2) Depleted Dark Surface (F7) Redox Depressions (F8) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H) Material (TF2) Very Shallow Dark Surface Other (Explain in Remarks) Indicators of hydrophytic veg wetland hydrology must be pressions (F16) disturbed or problematic	₹A 72 & 73)
Thick Dark Surface (A12) □ Depleted Dark Surface (F7) □ Very Shallow Dark Surface (F7) □ Sandy Mucky Mineral (S1) □ Redox Depressions (F8) □ Other (Explain in Remarks 1.5 cm Mucky Peat or Peat (S2) (LRR G, H) □ High Plains Depressions (F16) □ 3Indicators of hydrophytic veg wetland hydrology must be prodisturbed or problematic	
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 pid disturbed or problematic	•
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) Indicators of hydrophytic vego wetland hydrology must be pidisturbed or problematic	
5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be pidisturbed or problematic	(S)
5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be pidisturbed or problematic	egetation and
ype: Depth (inches): ☐ Yes ☐ No	
YDROLOGY	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or m	more required)
)
☐ Surface Water (A1) ☐ Salt Crust (B11) ☐ Surface Soil Cracks (B6)	,
_	
☐ High Water Table (A2) ☐ Aquatic Invertebrates (B13) ☐ Sparsely Vegetated Cond	
☐ High Water Table (A2) ☐ Aquatic Invertebrates (B13) ☐ Sparsely Vegetated Conc ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Drainage Patterns (B10)	sir Living recoto
High Water Table (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Dry-Season Water Table (C2) Sparsely Vegetated Conc Drainage Patterns (B10) Oxidized Rhizospheres o	
High Water Table (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Dry-Season Water Table (C2) Sediment Deposits (B2) Aquatic Invertebrates (B13) Dry-Season Water (C1) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)	rial Imagery (C9
High Water Table (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Dry-Season Water Table (C2) Sediment Deposits (B2) Drift Deposits (B3) Aquatic Invertebrates (B13) Dry-Season Water (C1) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)	
High Water Table (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Water Marks (B1) Dry-Season Water Table (C2) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aeri	,
High Water Table (A2) Aquatic Invertebrates (B13) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Algal Mat or Crust (B4) Thin Muck Surface (C7) Geomorphic Position (D2)	(D7) (LRR F)
High Water Table (A2) Aquatic Invertebrates (B13) Saturation (A3) Water Marks (B1) Dry-Season Water Table (C2) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Aquatic Invertebrates (B13) Drifted Odor (C1) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Cond (where till 0) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (B7)	al photos, previ
High Water Table (A2) Aquatic Invertebrates (B13) Baturation (A3) Water Marks (B1) Dry-Season Water Table (C2) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Depth Describe Recorded Data (stream gauge, monitoring well, aerial magery (B1)) Describe Recorded Data (stream gauge, monitoring well, aerial magery (B1))	
High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Cond Aquatic Invertebrates (B13) Baturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Drift Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Water Narks (B1) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Invertebrates (B13) Drift Deodroft (C1) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (B7) Deform (Explain in Remarks) Depth (inches) Describe Recorded Data (stream gauge, monitoring well, aerial inspections, etc.), if available:	
High Water Table (A2)	

Project/Site: Sweetland Wind Project		City/County: _	Hand Coun	ty	Sampling	Date: 10/16/2018
Applicant/Owner: Sweetland Wind Farm, LLC			oling Point: SP-634			
Investigator(s): T. Beemer, W. Hirst		Section		State: <u>SD</u> , Range:	S33, T111N, R66	
Landform (hillslope, terrace, etc.) pothole		Local relief (conca		_	concave	Slope (%): 1 %
Subregion (LRR): Northern Great Plains Spring Whe	at Pegion			Long:	-98.779054	Datum: NAD83
Soil Map Unit Name: Glenham-Java loams, rolling	at Negion	44.373	004		VI Classification:	NA NA
Are climate/hydrologic conditions on the site typical for the	is time of	year? X Yes	□No		kplain in Remarks.	
7 to similate riyare logic containents on the cite typical for the		your		(11 110, 0)	tpiam in realization,	'
Vegetation Soil Hyd	drology	Are "Nor	mal Circun	nstances" p	oresent? 🛛 Yes	☐ No
Significantly Disturbed?		(If neede	ed, explain	any answei	rs in Remarks.)	
Naturally Problematic?				-		
SUMMARY OF FINDINGS – Attach site map show	ving san	npling point loca	ations, tra	ansects, i	mportant featur	es, etc.
Yes	No R	temarks: Wetland s	ample plot	located in I	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 - Ose scientific flames of plants						
Tree Stratum (Plot size: 30')	Absol % Co		Indicator Status	Dominar	nce Test Workshe	et:
1		<u>%</u>	Otatus		of Dominant Speci	es that
2.		%		are OBL, (excludin	FACW, or FAC	(A)
3		<u></u>				(/ //
4		<u></u>			mber of Dominant Across All Strata:	(B)
	0	<u>%</u> = Total Cove	r	-		, ,
Sapling/Shrub Stratum (Plot size: <u>15'</u>)					of Dominant Specie FACW, or FAC:	es mai (A/B)
1.		<u>%</u>			•	
2		<u>%</u> %		Prevaler	nce Index Worksh	eet:
3. 4.		<u>%</u>		Tot	al % Cover of:	Multiply by:
5.		<u>%</u>		OBL spe		% x 1 = 0
	0	% = Total Cove	r	FACW s		% x 2 = 0
Herb Stratum (Plot size: <u>5'</u>)				FAC spe		_% x 3 = <u>0</u>
1. Eleocharis obtusa	35	<u>Y</u>	OBL	FACU sp		-% x = 0 $% x = 0$
2. Spartina pectinata		<u>Y</u>	FACW	Column		$\frac{1}{2}$ %
3. <u>Alisma gramineum</u>	5	<u>%</u> N_	OBL			<u> </u>
4		<u>%</u>		Prevaler	nce Index = B/A =	
5		<u>%</u>		Hydroph	ytic Vegetation Ir	ndicators:
6		<u>%</u> <u>%</u>		⊠ 1 Rap	oid Test for Hydrop	hytic Vegetation
8		<u>%</u>		☐ 2 Don	ninance Test is >5	0%
9.		%			valence Index is ≤	
10		<u></u>			phological Adapta	
Woody Vine Stratum (Plot size: 30')	65	5 % = Total Cove	er	supporting	g data in Remarks o	or on a separate sheet)
1		<u> </u>		☐ Proble	ematic Hydrophytic	C Vegetation ¹ (explain)
2		<u>%</u>				nd wetland hydrology sturbed or problematic
Bare Ground in Herb Stratum 35 %				Hydrophy	ytic Vegetation Pre	esent? 🛛 Yes 🗌 No
Remarks: Rapid test for hydrophytic vegetation is met. P	hotograph	n C-43.		1		
, , , , , , , , , , , , , , , , , , , ,	- 3 13.					

Profile Desc	ription: (Describe	to the dep	th needed to docur	ment the	e indicator o	r confirm the	absence of indicators.)	
Depth	Matrix		Re	dox Fe	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	70	10YR 2/1	20	<u>C</u>	M	clay	
			10YR 6/4	10	C	M		
-	-		·					•
-								
¹Type: C=Co	ncentration, D=Dep	oletion, RM	=Reduced Matrix, CS	S=Cove	red or Coated	d Sand Grains	² Location: PL=Por	e Lining, M=Matrix
Hydric Soil I	ndicators: (Applic	cable to all	LRRs, unless othe	rwise n	oted.)		Indicators for Probler	natic Hydric Soils³:
☐ Histosol (A	A1)		☐ Sandy Gle	yed Ma	trix (S4)		☐ 1 cm Muck (A9) (LF)	RR I, J)
☐ Histic Epip	pedon (A2)		☐ Sandy Re	dox (S5))		☐ Coast Prairie Redox	(A16) (LRR F, G, H)
☐ Black Hist	, ,		☐ Stripped N	•	•		☐ Dark Surface (S7) (,
☐ Hydrogen			Loamy Mu	-			☐ High Plains Depress	sions (F16)
	ayers (A5) (LRR F		Loamy Gle				(LRR H outside of	•
	(A9) (LRR F, G, F		□ Depleted I	•	•		☐ Reduced Vertic (F1)☐ Red Parent Materia	
	Below Dark Surface	e (A11)	⊠ Redox Da		, ,		☐ Very Shallow Dark \$	
	Surface (A12)		☐ Depleted I ☐ Redox De		, ,		Other (Explain in Re	
	cky Mineral (S1) icky Peat or Peat (\$	S2) (I PP G	_		` '			
	ky Peat or Peat (S3	, ,	(MLRA 7				³ Indicators of hydrophy wetland hydrology mus	
	ty real or real (oc) (LICIT)	(disturbed or problemati	
Restrictive L	ayer (if present):						Hydric Soil Present?	
Type:			Depth (inches):					
Remarks: Hy	dric soil indicators f	-3 and F6 a	re met.					
HYDROLOG	Y							
Wetland Hyd	rology Indicators	:						
Primary Indic	ators (minimum of	one required	d; check all that appl	<u>y)</u>			Secondary Indicators (2 or more required)
Surface W	ater (A1)		☐ Salt Crust (B	11)			☐ Surface Soil Cracks	s (B6)
☑ High Wate	er Table (A2)		☐ Aquatic Inver	tebrates	s (B13)		☐ Sparsely Vegetated	d Concave Surface (B8)
	(A3)		☐ Hydrogen Su	lfide Od	or (C1)		□ Drainage Patterns	
☐ Water Mai	ks (B1)		□ Dry-Season \	Vater Ta	able (C2)			eres on Living Roots (C3)
☐ Sediment	Deposits (B2)		Oxidized Rhiz		es on Living I	Roots (C3)	(where tilled)	
☐ Drift Depo			(where not		(0.1)		☐ Crayfish Burrows (0	•
Algal Mat	, ,		☐ Presence of I		` ,		☐ Saturation Visible o	• • • •
☐ Iron Depo	` '	·	Thin Muck Su				⊠ Geomorphic Position ⊠ FAC-Neutral Test (
	Visible on Aerial I	magery (B7	Other (Explai	n in Kei	narks)		☐ Frost-Heave Humn	,
☐ Water-Sta	ined Leaves (B9)						☐ F105t-Heave Hullill	IOCKS (D7) (LKK F)
Field Observ	ations:	Yes	Depth No (inches)		cribe Record ections, etc.)		am gauge, monitoring well	, aerial photos, previous
Surface Water	r present?	\boxtimes	□ 1					
Water Table	present?	\boxtimes	0					
Saturation Pr	esent?	_	0					
(includes cap	illary fringe)	_						
Wetland Hyd	rology Present?	\boxtimes						
			A2, A3, D2, and D5	are met				
Trainer We			,,,,	0 11100				

Project/Site: Sweetland Wind Project	City/County: Hand Co	unty Samplin	g Date: 10/16/2018
Applicant/Owner: Sweetland Wind Farm, LLC		npling Point: SP-635	
Investigator(s): T. Beemer, W. Hirst	Section, Towns	State: <u>SD</u> San hip, Range: S33, T111N, R6	66W
Landform (hillslope, terrace, etc.) toeslope	Local relief (concave, con		Slope (%): 2 %
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.372942	Long: -98.778920	Datum: NAD83
Soil Map Unit Name: Glenham-Java loams, rolling		NWI Classification:	
Are climate/hydrologic conditions on the site typical for this time of y	/ear? ⊠ Yes □ N	o (If no, explain in Remarks	-
Vegetation Soil Hydrology	Are "Normal Circ	cumstances" present? 🛛 Ye	es 🗌 No
Significantly Disturbed?	(If needed, expla	in any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing sam	nling point locations	transects important feati	ires etc
Yes No Re Hydrophytic Vegetation Present? □ ⊠	emarks: Upland sample plo	ot adjacent to PEIVI VV-566.	
Hydric Soil Present?			
Wetland Hydrology Present? □ ⊠			
Is the Sampled Area within a Wetland?			
VEGETATION – Use scientific names of plants			
Absolu	ute Dominant Indicate	or Dominance Test Worksl	neet:
Tree Stratum (Plot size: 30') % Cov		S	
1	%	 Number of Dominant Spe are OBL, FACW, or FAC 	cies that
2	<u>%</u>	(excluding FAC-):	0_(A)
3.	<u>%</u>	Total Number of Dominar	ıt
4	% % = Total Cover	 Species Across All Strata 	
Sapling/Shrub Stratum (Plot size: 15')	<u>%</u> = rotal Cover	Percent of Dominant Spe	cies that
1.	<u> </u>	are OBL, FACW, or FAC:	0%_(A/B)
2.	%	- Dravalance Index Weeks	shoot.
3	%	Prevalence Index Works	sneet:
4	<u></u>	Total % Cover of:	Multiply by:
5	<u>%</u>	OBL species FACW species	$-\frac{\%}{\%}$ x 1 = $\frac{0}{\%}$ x 2 = $\frac{0}{\%}$
	<u>%</u> = Total Cover	FAC species	% x3 = 0
Herb Stratum (Plot size: <u>5'</u>) 1. Poa pratensis 90	% Y FACU	FACIL species	% x 4 = 0
2	<u>%</u>	UPL species	% x 5 = <u>0</u>
3.	%	Column Totals:	<u>0</u> % (A) <u>0</u> (B)
4.	%	Prevalence Index = B/A =	=
5	<u>%</u>	Hydrophytic Vegetation	Indicators:
6	<u>%</u>	_	onhytic Vegetation
7 8.	<u>%</u>	_	. , ,
8	<u>%</u>	- -	
10.	%	→ 3 Prevalence Index is	
Woody Vine Stratum (Plot size: 30')	<u>%</u> = Total Cover	☐ 4 Morphological Adapt supporting data in Remarks	ations' (Provide s or on a separate sheet)
1	<u>%</u>	Problematic Hydrophy	tic Vegetation ¹ (explain)
2	% = Total Cover	_ 1 Indicators of hydric soil a must be present, unless of	
	<u>/o</u> = Fotal Cover	Hydrophytic Vegetation P	
Bare Ground in Herb Stratum 10 %		r iyuropriyiic vegetation P	ieseiiti 🖂 162 🕅 IAO
Remarks: Hydrophytic vegetation is not present. Photograph C-44.			

Profile Description: (Describe	to the dep	in needed to docui	monte and man	cator or commi	i the absence of indicators.)						
Depth Matrix		Re	edox Features								
(inches) Color (moist)	%	Color (moist)	% Ty	vpe ¹ Loc ²	Texture	Remarks					
0-8 10YR 3/2	100				Clay Loam						
8-20 10YR 3/3	100				Clay Loam						
		-			-						
¹ Type: C=Concentration, D=De	pletion, RM=	Reduced Matrix, CS	S=Covered or	Coated Sand G	rains ² Location: PL=Pore	E Lining, M=Matrix					
Hydric Soil Indicators: (Appli	cable to all	LRRs, unless other	rwise noted.)		Indicators for Problem	natic Hydric Soils ³ :					
☐ Histosol (A1)		☐ Sandy Gle	yed Matrix (S	4)	☐ 1 cm Muck (A9) (LR)	R I, J)					
☐ Histic Epipedon (A2)		☐ Sandy Red	dox (S5)		☐ Coast Prairie Redox	(A16) (LRR F, G, H)					
☐ Black Histic (A3)		☐ Stripped M	, ,		☐ Dark Surface (S7) (L						
☐ Hydrogen Sulfide (A4)		Loamy Mu			☐ High Plains Depress	ions (F16)					
☐ Stratified Layers (A5) (LRR I		Loamy Gle		2)	(LRR H outside of	•					
1 cm Muck (A9) (LRR F, G,		☐ Depleted N		.,	☐ Reduced Vertic (F18 ☐ Red Parent Material	•					
Depleted Below Dark Surfac	e (A11)	☐ Redox Dai	•	•	☐ Very Shallow Dark S	` '					
☐ Thick Dark Surface (A12)		☐ Depleted [☐ Redox De		. ,	Other (Explain in Re	, ,					
☐ Sandy Mucky Mineral (S1) ☐ 2.5 cm Mucky Peat or Peat (S2) (I DD C		, ,	,							
5 cm Mucky Peat or Peat (S			s Depressions 2 & 73 of LRF		³ Indicators of hydrophyt wetland hydrology must						
Som Mucky Feat of Feat (5	3) (LIXIX I)	(- a 70 01 21th	,	disturbed or problemation						
Restrictive Layer (if present):					Hydric Soil Present?						
Type:	0	epth (inches):			☐ Yes ⊠ No						
5 . N. I. II. II. II. I											
Remarks: No nydric soil indicato	or is present.	Remarks: No hydric soil indicator is present.									
LIVEROL GOV											
HYDROLOGY											
Wetland Hydrology Indicators		Is check all that appl			Connection Indicators (2 or more required					
Wetland Hydrology Indicators Primary Indicators (minimum of		_			Secondary Indicators (2						
Wetland Hydrology Indicators Primary Indicators (minimum of ☐ Surface Water (A1)		☐ Salt Crust (B1	 11)		☐ Surface Soil Cracks	(B6)					
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2)		☐ Salt Crust (B ²	11) tebrates (B13		☐ Surface Soil Cracks☐ Sparsely Vegetated	(B6) Concave Surface (B8)					
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)		☐ Salt Crust (B ² ☐ Aquatic Inver☐ Hydrogen Su	— 11) tebrates (B13 lfide Odor (C1)	☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (I	(B6) Concave Surface (B8) B10)					
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Salt Crust (B' Aquatic Inver Hydrogen Su Dry-Season V	– 11) tebrates (B13) lfide Odor (C1 Vater Table (0) D2)	☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (I ☐ Oxidized Rhizosphe	(B6) Concave Surface (B8)					
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		☐ Salt Crust (B' ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season V ☐ Oxidized Rhiz	 11) tebrates (B13 lfide Odor (C1 Vater Table (0 zospheres on) D2)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled)	(B6) Concave Surface (B8) B10) eres on Living Roots (C3)					
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Salt Crust (B' Aquatic Inver Hydrogen Su Dry-Season V	tebrates (B13) Ifide Odor (C1) Water Table (Cospheres on tilled)) C2) Living Roots (C3	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C	(B6) Concave Surface (B8) B10) eres on Living Roots (C3)					
Wetland Hydrology Indicators 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)		☐ Salt Crust (B' ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season V ☐ Oxidized Rhiz (where not) ☐ Presence of F	tebrates (B13 lfide Odor (C1 Vater Table (Cospheres on tilled) Reduced Iron) C2) Living Roots (C3	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9)					
Wetland Hydrology Indicators 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)	one required	☐ Salt Crust (B' ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season V ☐ Oxidized Rhiz (where not) ☐ Presence of F ☐ Thin Muck Su	tebrates (B13) Ifide Odor (C1) Vater Table (C2) Zospheres on tilled) Reduced Iron urface (C7)) C2) Living Roots (C3 (C4)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2)					
Wetland Hydrology Indicators 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)	one required	☐ Salt Crust (B' ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season V ☐ Oxidized Rhiz (where not) ☐ Presence of F ☐ Thin Muck Su	tebrates (B13) Ifide Odor (C1) Vater Table (C2) Zospheres on tilled) Reduced Iron urface (C7)) C2) Living Roots (C3 (C4)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Position	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5)					
Wetland Hydrology Indicators 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	one required magery (B7)	☐ Salt Crust (B' ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season V ☐ Oxidized Rhiz (where not ☐ Presence of F ☐ Thin Muck Su ☐ Other (Explai	tebrates (B13 lfide Odor (C1 Vater Table (Cospheres on tilled) Reduced Iron urface (C7) n in Remarks)) C2) Living Roots (C3 (C4)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Position FAC-Neutral Test (E	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)					
Wetland Hydrology Indicators 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)	one required magery (B7)	☐ Salt Crust (B' ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season V ☐ Oxidized Rhiz	tebrates (B13) Ifide Odor (C1) Vater Table (C2) Zospheres on tilled) Reduced Iron Urface (C7) In in Remarks)) C2) Living Roots (C3 (C4)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humms	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)					
Wetland Hydrology Indicators 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)	magery (B7)	☐ Salt Crust (B' ☐ Aquatic Inver ☐ Hydrogen Su ☐ Dry-Season V ☐ Oxidized Rhiz (where not ☐ Presence of F ☐ Thin Muck Su ☐ Other (Explai	tebrates (B13) Ifide Odor (C1) Vater Table (C2) Zospheres on tilled) Reduced Iron Urface (C7) In in Remarks)) C2) Living Roots (C3 (C4) Recorded Data (Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humms	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)					
Wetland Hydrology Indicators 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:	magery (B7)	□ Salt Crust (B' □ Aquatic Inver □ Hydrogen Su □ Dry-Season V □ Oxidized Rhiz (where not □ Presence of F □ Thin Muck Su □ Other (Explai	tebrates (B13) Ifide Odor (C1) Vater Table (C2) Zospheres on tilled) Reduced Iron Urface (C7) In in Remarks)) C2) Living Roots (C3 (C4) Recorded Data (Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humms	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)					
Wetland Hydrology Indicators 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?	magery (B7)	□ Salt Crust (B' □ Aquatic Inver □ Hydrogen Su □ Dry-Season V □ Oxidized Rhiz (where not □ Presence of F □ Thin Muck Su □ Other (Explai) Depth No (inches)	tebrates (B13) Ifide Odor (C1) Vater Table (C2) Zospheres on tilled) Reduced Iron Urface (C7) In in Remarks)) C2) Living Roots (C3 (C4) Recorded Data (Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humms	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)					
Wetland Hydrology Indicators 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?	magery (B7)	□ Salt Crust (B' □ Aquatic Inver □ Hydrogen Su □ Dry-Season V □ Oxidized Rhiz (where not □ Presence of F □ Thin Muck Su □ Other (Explai) Depth (inches)	tebrates (B13) Ifide Odor (C1) Vater Table (C2) Zospheres on tilled) Reduced Iron Urface (C7) In in Remarks)) C2) Living Roots (C3 (C4) Recorded Data (Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humms	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)					
Wetland Hydrology Indicators 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?	magery (B7)	Salt Crust (B' Aquatic Inver Hydrogen Su Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explai	tebrates (B13) Ifide Odor (C1) Vater Table (C2) Zospheres on tilled) Reduced Iron Urface (C7) In in Remarks)) C2) Living Roots (C3 (C4) Recorded Data (Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humms	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)					
Wetland Hydrology Indicators 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)	magery (B7) Yes I	□ Salt Crust (B' □ Aquatic Inver □ Hydrogen Su □ Dry-Season V □ Oxidized Rhiz (where not □ Presence of F □ Thin Muck Su □ Other (Explai) Depth (inches)	tebrates (B13) Ifide Odor (C1) Vater Table (C2) Zospheres on tilled) Reduced Iron Urface (C7) In in Remarks)) C2) Living Roots (C3 (C4) Recorded Data (Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humms	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)					
Wetland Hydrology Indicators 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) Wetland Hydrology Present?	magery (B7) Yes I	□ Salt Crust (B' □ Aquatic Inver □ Hydrogen Su □ Dry-Season V □ Oxidized Rhiz (where not □ Presence of F □ Thin Muck Su □ Other (Explai) Depth (inches)	tebrates (B13) Ifide Odor (C1) Vater Table (C2) Zospheres on tilled) Reduced Iron Urface (C7) In in Remarks)) C2) Living Roots (C3 (C4) Recorded Data (Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Positio FAC-Neutral Test (I Frost-Heave Humms	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)					

Project/Site: Sweetland Wind Project	City	/County: Har	nd County	Sampling Date:10/16/2018
Applicant/Owner: Sweetland Wind Farm, LLC			Stat	e: SD Sampling Point: SP-651
Investigator(s): T. Beemer, W. Hirst				ange: S9, T110N, R66W
Landform (hillslope, terrace, etc.) depression	Local r	elief (concave,	convex, n	one): concave Slope (%): 3 %
Subregion (LRR): Northern Great Plains Spring Wheat				
Soil Map Unit Name: Betts-Java loams, steep				NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this year?				(If no, explain in Remarks)
Vegetation Soil Hydrol	logy	Are "Norm	al Circums	stances" present? 🛛 Yes 🔲 No
Significantly Disturbed?			(If need	ed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing	ng samplir	ng point loca	tions, tra	nsects, important features, etc.
Yes No	Remark	s: Wetland san	nple plot lo	ocated in PEM W-005.
VEGETATION - Ose scientific fiames of plants				
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1	<u>%</u>	<u> </u>		Number of Dominant Species that are OBL. FACW. or FAC
2	<u>%</u>			(excluding FAC-): 2 (A)
3				Total Number of Dominant
4	%			Species Across All Strata: 2 (B)
	0 %	= Total Cover		Percent of Dominant Species that
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	0/			are OBL, FACW, or FAC: 100% (A/B)
1 2	<u> %</u> %			
3.				Prevalence Index Worksheet:
4.	0.4			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% x 4 =0
Schoenoplectus fluviatilis	<u>50 %</u>	<u>Y</u>	OBL	UPL species % x 5 = 0
2. Xanthium strumarium	<u>25 %</u>	<u>Y</u>	FAC	Column Totals: <u>0</u> % (A) <u>0</u> (B)
Hordeum jubatum Rumex crispus	<u>5 %</u> 2 %	<u>N</u> N	FACW FAC	Prevalence Index = B/A =
4. Rumex crispus 5.	<u>2 %</u>		170	Hydrophytic Vegetation Indicators:
6.	%			
7	<u>%</u>			☐ 1 Rapid Test for Hydrophytic Vegetation
8	<u></u>			
9	<u> %</u> %			☐ 3 Prevalence Index is ≤3.0¹
10.	82 %	= Total Cover		☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>)	0.4			☐ 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 Stratum0 %		2276.		Hydrophytic Vegetation Present? ☑ Yes ☐ No
Remarks: Dominance test is met. Photograph C-45.				

Profile Desc	ription: (Describe	to the dep	th needed to docun	nent the	indicator o	r confirm the	absence of indicators.)		
Depth	Matrix		Re	dox Fea	itures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-20	10YR 2/1	95	10YR 4/4	5	С	М	silty clay loam	gravel	
								· 	
-									
-								-	
		· ·							
¹Type: C=Co	ncentration, D=Dep	oletion, RM=	Reduced Matrix, CS	=Cover	ed or Coated	Sand Grains	² Location: PL=Por	re Lining, M=Matrix	
Hydric Soil	ndicators: (Applic	cable to all	LRRs, unless other	wise no	oted.)		Indicators for Probler	natic Hydric Soils ³ :	
☐ Histosol (A1)		☐ Sandy Gle	yed Mat	rix (S4)		☐ 1 cm Muck (A9) (LF)	RR 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) (,	
Hydrogen			Loamy Mu	-			☐ High Plains Depres		
	Layers (A5) (LRR F		☐ Loamy Gle	-			(LRR H outside of Reduced Vertic (F1	•	
	k (A9) (LRR F, G, F	-	☐ Depleted N				☐ Red Parent Materia	,	
	Below Dark Surface	e (A11)	⊠ Redox Dar		, ,		☐ Very Shallow Dark	` '	
	k Surface (A12) icky Mineral (S1)		☐ Depleted ☐ Redox Dep				Other (Explain in Re	, ,	
-	ucky Peat or Peat (\$	S2) (I RR G			. ,		, ,	•	
	ky Peat or Peat (S3	, ,	(MLRA 72				³ Indicators of hydrophy wetland hydrology mus		
	,	,, (=::::)	•		,		disturbed or problemat		
Restrictive Layer (if present): Hydric Soil Present?									
Type:	, , ,		epth (inches):				⊠ Yes □ No		
		_	,						
Remarks: Hy	dric soil indicator F	6 is present							
HYDROLOG	Y								
Wetland Hy	drology Indicators								
_			l; check all that apply	<i>(</i>)			Secondary Indicators	(2 or more required)	
		one require						<u>.</u>	
Surface V	` '		☐ Salt Crust (B1	,	(D12)		Surface Soil Crack	` '	
☐ Saturation	er Table (A2)		☐ Hydrogen Sul				☐ Sparsely Vegetated ☐ Drainage Patterns	d Concave Surface (B8)	
☐ Water Ma	` '		☐ Dry-Season V				_	eres on Living Roots (C3)	
_	Deposits (B2)		Oxidized Rhiz		` '	Roots (C3)	(where tilled)	cics on Living Roots (00)	
☐ Drift Depo	. , ,		(where not		oo on Eiring i	(00)	☐ Crayfish Burrows (C8)	
-	or Crust (B4)		☐ Presence of F	Reduced	Iron (C4)		☐ Saturation Visible of	on Aerial Imagery (C9)	
☐ Iron Depo	` '		☐ Thin Muck Su	rface (C	7)		☐ Geomorphic Position	on (D2)	
	n Visible on Aerial Iı	magery (B7	☐ Other (Explain	n in Ren	narks)			D5)	
☐ Water-Sta	ined Leaves (B9)						☐ Frost-Heave Humn	nocks (D7) (LRR F)	
Field Obser	/ations:		Depth	Desc	cribe Record	ed Data (strea	m gauge, monitoring well	, aerial photos, previous	
		Yes I	No (inches)		ections, etc.)		0 0 7	, , , , , ,	
Surface Water	er present?		⊠						
Water Table	present?		⊠						
Saturation P	esent?		<u></u>						
(includes cap	illary fringe)		_						
Wetland Hy	drology Present?		\boxtimes						
Remarks: We	etland hydrology ind	licators B10	, D2, and D5 are pre	sent.					

Project/Site: Sweetland Wind Project	City/County: Hand Coun	ty Sampling Date: 10/16/2018
Applicant/Owner: Sweetland Wind Farm, LLC	s	tate: SD Sampling Point: SP-652
Investigator(s): T. Beemer, W. Hirst	Section, Township,	Range: S9, T110N, R66W
Landform (hillslope, terrace, etc.) terrace	Local relief (concave, convex	none): none Slope (%): 0 %
Subregion (LRR): Northern Great Plains Spring Wheat		
- · · · · · · · · · · · · · · · · · · ·		
Are climate/hydrologic conditions on the site typical for this year?		(If no, explain in Remarks)
Vegetation Soil Hydro	logy Are "Normal Circu	mstances" present? 🛛 Yes 🔲 No
Significantly Disturbed?		eded, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point locations,	transects, important features, etc.
Yes No Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Is the Sampled Area within a Wetland? □ ■ VEGETATION – Use scientific names of plants	Remarks: Upland confirmation	plot adjacent to PEM W-005.
VEGETATION – Ose scientific flames of plants		T
Tree Stratum (Plot size: <u>30'</u>) 1.	Absolute Dominant Indicate % Cover Species? Status	
2		(excluding FAC-):0_(A)
3. 4.	<u></u>	Total Number of Dominant
	0 % = Total Cover	- Species Across All Strata:3_(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		- Prevalence Index Worksheet:
3.		Total % Cover of: Multiply by:
4		OBL species
5	<u>%</u> 0 % = Total Cover	FACW species
Harle Christian (Diet sine) 51)		FAC species % x 3 = 0
Herb Stratum (Plot size: <u>5'</u>) 1. Bromus arvensis	50 % Y FACU	FACU species % x 4 = 0
Schedonorus arundinaceus	30 % Y FACU	- 01 L species
Bromus inermis	20 % Y UPL	
4. Cirsium arvense	<u></u>	Prevalence Index = B/A =
5	<u></u>	Hydrophytic Vegetation Indicators:
6	<u></u>	
7.	<u>%</u>	1 Rapid Test for Hydrophytic Vegetation
8 9.	<u> </u>	2 Dominance Test is >50%
9	<u></u>	- ☐ 3 Prevalence Index is ≤3.0¹
	100 % = Total Cover	4 Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>)	%	☐ 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 is not present. Photograp	oh C-46.	

	•	to the de	pth n				or confirm the	absence of indicators.	.)
Depth (inches) 0-20	Color (moist) 10YR 2/1	100	Co	olor (moist)	dox Fea	Type ¹	Loc ²	Texture silty clay loam	Remarks
						·		only only rounn	gravel
¹Type: C=Co	oncentration, D=De	oletion, RN	M=Rec	luced Matrix, CS	=Cove	red or Coate	d Sand Grains	² Location: PL=Po	ore Lining, M=Matrix
Hydric Soil I	ndicators: (Appli	cable to a	II LRR	ts, unless other	wise n	oted.)		Indicators for Proble	matic Hydric Soils ³ :
☐ Histosol (A	A1)			☐ Sandy Gle	yed Ma	trix (S4)		☐ 1 cm Muck (A9) (L	RR I, J)
☐ Histic Epip	oedon (A2)			☐ Sandy Red	lox (S5)		☐ Coast Prairie Redo	ox (A16) (LRR F, G, H)
☐ Black Hist	ic (A3)			☐ Stripped M	atrix (S	6)		☐ Dark Surface (S7)	(LRR G)
☐ Hydrogen	, ,			☐ Loamy Mu	cky Min	eral (F1)		☐ High Plains Depres	
	Layers (A5) (LRR F			Loamy Gle	-	, ,		(LRR H outside o	•
	k (A9) (LRR F, G, F	•		☐ Depleted M				☐ Reduced Vertic (F²☐ Red Parent Materia	,
•	Below Dark Surface	e (A11)		☐ Redox Dar		` '		☐ Very Shallow Dark	` '
_	k Surface (A12)			☐ Depleted □				☐ Other (Explain in R	` '
-	icky Mineral (S1) ucky Peat or Peat (S2) (I DD (С П/	☐ Redox Dep☐ High Plains		, ,			
	ky Peat or Peat (S	, ,	, ,	(MLRA 72		, ,		³ Indicators of hydrophy wetland hydrology mu disturbed or problema	st be present, unless
Restrictive L	ayer (if present):							Hydric Soil Present?	
Type:	, , ,		Depth	n (inches):				☐ Yes ☒ No	
HYDROLOG	Y								
	rology Indicators								
-	ators (minimum of		ed: ch	eck all that annly	/)			Secondary Indicators	(2 or more required)
	•	one requir						<u> </u>	<u> </u>
☐ Surface W	, ,			☐ Salt Crust (B1 ☐ Aquatic Invert		(D12)		Surface Soil Crack	ed Concave Surface (B8)
☐ Saturation				☐ Hydrogen Sul		, ,		☐ Drainage Patterns	
☐ Water Ma	` '			⊒ Frydrogen odi ⊒ Dry-Season V		` '		=	neres on Living Roots (C3
	Deposits (B2)			☐ Oxidized Rhiz		, ,	Roots (C3)	(where tilled)	iorde on Living Modes (Oc
☐ Drift Depo			_	(where not			(55)	☐ Crayfish Burrows	(C8)
☐ Algal Mat	, ,			☐ Presence of R	Reduced	d Iron (C4)		☐ Saturation Visible	on Aerial Imagery (C9)
☐ Iron Depo	sits (B5)			Thin Muck Su				Geomorphic Positi	
☐ Inundation	n Visible on Aerial I	magery (B	(7) E	☐ Other (Explair	in Rer	narks)		☐ FAC-Neutral Test	` '
☐ Water-Sta	ined Leaves (B9)							☐ Frost-Heave Humi	mocks (D7) (LRR F)
Field Observ	vations:	Yes	No	Depth (inches)			ed Data (strea , if available:	m gauge, monitoring we	ll, aerial photos, previous
Surface Water	er present?		\boxtimes						
Water Table	present?		\boxtimes						
Saturation Pr			\boxtimes						
(includes cap	illary fringe)								
Wetland Hyd	drology Present?		\boxtimes						
Remarks: No	hydrology indicato	r is presen	nt.						

Project/Site: Sweetland Wind Project	City/County:	Hand Count	y Sampling Date: 10/17/2018		
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point:			
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> </u>	<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.				

Profile Desc	ription: (Describe	to the depth	needed to docum	ent the	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 2/1	100					mucky clay	
-								
-	-							_
¹Type: C=C	oncentration, D=Dep	oletion, RM=R	educed Matrix, CS	=Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil	Indicators: (Applic	able to all LF	RRs, unless other	vise no	oted.)		Indicators for Problema	atic Hydric Soils ³ :
☐ Histosol (A1)		☐ Sandy Gley	ed Mat	rix (S4)		1 cm Muck (A9) (LRR	₹ I, J)
☐ Histic Epi			☐ Sandy Red				☐ Coast Prairie Redox (
☐ Black His	, ,		☐ Stripped Ma	•	•		☐ Dark Surface (S7) (LF	•
	Sulfide (A4)		□ Loamy Much	-			☐ High Plains Depression	
	Layers (A5) (LRR F		Loamy Gley				(LRR H outside of M	•
	k (A9) (LRR F, G, F		Depleted M				Reduced Vertic (F18)	
	Below Dark Surface	e (A11)	Redox Dark		` '		Red Parent Material (
	k Surface (A12)		☐ Depleted D		` '		☐ Very Shallow Dark St☐ Other (Explain in Rem	
	ucky Mineral (S1)	20) (LDD 0 L	Redox Dep				, .	•
	ucky Peat or Peat (S	, ,					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	_ayer (if present):						Hydric Soil Present?	
Type:		Dep	oth (inches):				⊠ Yes □ No	
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 (B1	1)			☐ Surface Soil Cracks ((B6)
	er Table (A2)		☐ Aquatic Inverte	brates	(B13)		☐ Sparsely Vegetated (Concave Surface (B8)
			☐ Hydrogen Sulf	ide Odo	or (C1)		□ Drainage Patterns (B	
☐ Water Ma	ırks (B1)		□ Dry-Season W	ater Ta	ble (C2)		Oxidized Rhizospher	es on Living Roots (C3)
	Deposits (B2)		Oxidized Rhize		s on Living	Roots (C3)	(where tilled)	
☐ Drift Depo	, ,		(where not	•	. (0.1)		☐ Crayfish Burrows (C8	
	or Crust (B4)		☐ Presence of R				☐ Saturation Visible on	3 , , ,
☐ Iron Depo		(= -)	☐ Thin Muck Sur				☐ Geomorphic Position	
	n Visible on Aerial Ir	magery (B7)	☐ Other (Explain	in Ken	iaiks)			•
☐ Water-Sta	ained Leaves (B9)			1				CKS (D1) (EKK F)
Field Obser	vations:	Yes No	Depth (inches)			ed Data (strea , if available:	m gauge, monitoring well, a	aerial photos, previous
Surface Wat	er present?		1					
Water Table	present?		0					
Saturation P	resent?		0					
(includes cap	oillary fringe)							
	drology Present?							
Remarks: W	etland hydrology ind		2, A3, D2, and D5 a	re met.				
	. 0.	•						

Project/Site: Sweetland Wind Project	C	ity/County:	land Coun	ty	Sampling	Date: 10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC				state: SD	 Samp	ling Point: SP-659
Investigator(s): T. Beemer, W. Hirst		Section,			 S10, T110N, R66	
Landform (hillslope, terrace, etc.) hillslope	Loc	al relief (conca			convex	Slope (%): 10 %
Subregion (LRR): Northern Great Plains Spring Whea		Lat: 44.3539			98.745979	Datum: NAD83
Soil Map Unit Name: Betts-Java loams, steep	70-7		Classification:	PEM1A		
Are climate/hydrologic conditions on the site typical for this	s time of vear	? 🛛 Yes	□No		lain in Remarks.)	
, , ,				(,		
Vegetation Soil Hydr	rology	Are "Nor	mal Circun	nstances" pre	esent? 🛛 Yes	☐ No
Significantly Disturbed?		(If neede	d, explain a	any answers	in Remarks.)	
				-		
SUMMARY OF FINDINGS – Attach site map show	ing samplin	g point loca	tions, tra	ınsects, im	portant featur	es, etc.
Yes N	No Rema	rks: Upland sa	mple plot a	djacent to P	EM W-579.	
	\boxtimes					
	\boxtimes					
Is the Sampled Area within a Wetland?						
VEGETATION – Use scientific names of plants						
	Absolute	Dominant	Indicator	Dominand	e Test Workshe	et:
Tree Stratum (Plot size: <u>30'</u>)	% Cover	Species?	Status	Number of	Dominant Specie	es that
1				are OBL, F	FACW, or FAC	55 triat
2. 3.				(excluding	FAC-):	0_(A)
3. 4.	<u></u>				ber of Dominant	
	0 %	= Total Cove		Species A	cross All Strata:	1_(B)
Sapling/Shrub Stratum (Plot size: 15')					Dominant Specie	
1.	%			are OBL, F	FACW, or FAC:	0%_(A/B)
2	%			Prevalenc	e Index Worksh	eet:
3						
4					% Cover of:	Multiply by:
5	. <u>%</u> 0 %	= Total Cove		OBL spec FACW sp		_% x 1 = <u>0</u> % x 2 = 0
Herb Stratum (Plot size: 5')		= Total Cove	Í	FAC spec		$\frac{1}{2}$ % x 3 = 0
1. Poa pratensis	100 %	Υ	FACU	FACU spe	ecies	% x 4 = 0
2	<u>%</u>			UPL spec		-% x 5 = -0
3.	%			Column T	otals: (<u>0</u> % (A) <u>0</u> (B)
4	%			Prevalenc	ce Index = B/A =	
5	%			Hydrophy	tic Vegetation Ir	dicators:
6				☐ 1 Ranio	d Test for Hydrop	hytic Vegetation
7 8.		-			nance Test is >50	, ,
8 9	0.4			_		
10.	%			-	alence Index is ≤3	
Woody Vine Stratum (Plot size: 30')	<u>100 %</u>	= Total Cove	r		hological Adaptat data in Remarks o	ions' (Provide or on a separate sheet)
1	<u></u> %			☐ Probler	natic Hydrophytic	: Vegetation1 (explain)
2	0 %	= Total Cove	r			d wetland hydrology turbed or problematic
Bare Ground in Herb Stratum0 %				Hydrophyti	ic Vegetation Pre	sent? ☐ Yes 🛛 No
Remarks: Hydrophytic vegetation is not present. Photogra	aph C-48.					

(inches) Color (moist) % Color (moist) % Type¹ Lo 0-8 10YR 2/2 100 8-20 10YR 3/3 100 *Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand	Clay Loam Clay Loam
0-8 10YR 2/2 100 8-20 10YR 3/3 100	Clay Loam
8-20 10YR 3/3 100	
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand	
	d Grains ² Location: PL=Pore Lining, M=Matrix
ydric 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)	☐ 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)
☐ 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)	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
estrictive Layer (if present):	Hydric Soil Present?
ype: Depth (inches):	☐ Yes ☒ No
VDDOLOOV	
Vetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) ☐ Surface Water (A1) ☐ Salt Crust (B11)	☐ Surface Soil Cracks (B6)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Salt Crust (B11) Aquatic Invertebrates (B13)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Wetland Hydrology Indicators: Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	☐ Surface Soil Cracks (B6)☐ Sparsely Vegetated Concave Surface (B☐ Drainage Patterns (B10)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Primary Indicators (minimum of one required; check all that apply) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2)	 ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B ☐ Drainage Patterns (B10) ☐ Oxidized Rhizospheres on Living Roots
☐ 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	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Wetland Hydrology Indicators: Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (where not tilled)	□ Surface Soil Cracks (B6) □ Sparsely Vegetated Concave Surface (B □ Drainage Patterns (B10) □ Oxidized Rhizospheres on Living Roots (where tilled) □ Crayfish Burrows (C8)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	□ Surface Soil Cracks (B6) □ Sparsely Vegetated Concave Surface (E □ Drainage Patterns (B10) □ Oxidized Rhizospheres on Living Roots (where tilled) □ Crayfish Burrows (C8) □ Saturation Visible on Aerial Imagery (C9
Vetland 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) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Thin Muck Surface (C7)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (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) Presence of Reduced Iron (C4) Other (Explain in Remarks)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (E Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5)
// rimary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2)
// rimary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (E Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (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: Irimary 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 Orift 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) Ield Observations: Yes No (inches) Describe Recorded Datinspections, etc.), if available of the content of	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (E Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (E Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (E Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Hydrogen Sulfide Odor (C1) Vater Marks (B1) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (where not tilled) Rlgal Mat or Crust (B4) Rron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Ves No Control Deposits Recorded Dainspections, etc.), if available of the control of th	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (E Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (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: Trimary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (E Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Project/Site: Sweetland Wind Project	City/County: Hand Cour	sampling Date: 10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC	 -	State: SD Sampling Point: SP-660
Investigator(s): T. Beemer, W. Hirst		o, Range: S5, T110N, R66W
Landform (hillslope, terrace, etc.) drainage	Local relief (concave, conve	
Subregion (LRR): Northern Great Plains Spring Wheat Region	Lat: 44.364107	Long: _98.793791 Datum: NAD83
Soil Map Unit Name: Glenham-Java loams, rolling		NWI Classification: PEM1Cd
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 Circur	nstances" present? 🛛 Yes 🔲 No
Significantly Disturbed? Naturally Problematic?	(If needed, explain	any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	unling point locations tr	ansacts important features atc
Yes No R Hydrophytic Vegetation Present? □	emarks: Wetland sample plot	located in PEM W-580.
Hydric Soil Present?		
Wetland Hydrology Present? □ □		
Is the Sampled Area within a Wetland? □		
VEGETATION – Use scientific names of plants		
•	uta Daminant Indicator	Deminance Test Westsheet
Absol 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-): (A)
3	<u>%</u>	Total Number of Dominant
4	<u>%</u> % = Total Cover	Species Across All Strata:(B)
Sapling/Shrub Stratum (Plot size: 15')	<u>%</u> = rotal Cover	Percent of Dominant Species that
1.	<u>%</u>	are OBL, FACW, or FAC:(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
	<u>%</u> = Total Cover	FAC species
Herb Stratum (Plot size: <u>5'</u>) 1. Spartina pectinata 100)% Y FACW	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>	
7	<u>%</u>	2 Dominance Test is >50%
8	<u>%</u>	
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>	Hydrophytic Vegetation Present? ☑ Yes ☐ No
Bare Ground in Herb Stratum 0 % Remarks: Rapid test for hydrophytic vegetation is met. Photograph	n C-49	
romano. Napid test for hydrophytic vegetation is met. Filotograpi	i ∪ 1 3.	

Profile Desc	ription: (Describe	to the depth	needed to docum	ent the	indicator o	r confirm the	absence of indicators.)				
Depth	Matrix		Red	dox Fea	tures						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks				
0-20	10YR 2/1	100					mucky clay				
-											
-											
-											
-	-		-								
¹Type: C=Ce	oncentration, D=Dep	oletion, RM=R	Reduced Matrix, CS	=Cover	ed or Coated	d 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 Problema	ntic Hydric Soils ³ :			
☐ Histosol (A1)		☐ Sandy Gley	ed Mat	rix (S4)		1 cm Muck (A9) (LRR	I, J)			
☐ Histic Epi	pedon (A2)		☐ Sandy Redeleter	ox (S5)			☐ Coast Prairie Redox (A16) (LRR F, G, H)			
☐ Black Histic (A3) ☐ Stripped Matrix (S6) ☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1)							☐ Dark Surface (S7) (LRR G)				
	Sulfide (A4)	☐ High Plains Depressions (F16)									
	Layers (A5) (LRR F		(LRR H outside of M	ILRA 72 & 73)							
	k (A9) (LRR F, G, F		☐ Depleted M				Reduced Vertic (F18)	TC2)			
	Below Dark Surface	e (A11)	Redox Dark		` '		☐ Red Parent Material (☐ Very Shallow Dark St				
	k Surface (A12)		☐ Depleted D		` '		Other (Explain in Ren				
	ucky Mineral (S1) ucky Peat or Peat (S	CO) (LDD C L	☐ Redox Dep H) ☐ High Plains				, .	,			
	cky Peat or Peat (S3	, ,	(MLRA 72				³ Indicators of hydrophytic				
	oky i eat of i eat (50) (LIXIX I)	(u . o o			wetland hydrology must be present, unless disturbed or problematic				
Restrictive I	_ayer (if present):						Hydric Soil Present?				
Type:		_ De	pth (inches):				⊠ Yes □ No				
HYDROLOG	iΥ										
Wetland Hv	drology Indicators										
_	cators (minimum of		check all that apply)			Secondary Indicators (2	or more required)			
☐ Surface V	•		☐ Salt Crust (B1	_			☐ Surface Soil Cracks (
	er Table (A2)		☐ Aquatic Inverte	,	(B13)		☐ Sparsely Vegetated (,			
☐ Saturation			☐ Hydrogen Sulf				☐ Drainage Patterns (B				
☐ Water Ma			☐ Dry-Season W				☐ Oxidized Rhizospher				
☐ Sediment	Deposits (B2)		Oxidized Rhize	osphere	s on Living I	Roots (C3)	(where tilled)	. ,			
☐ Drift Depo	osits (B3)		(where not	•			Crayfish Burrows (C8	•			
☐ Algal Mat	or Crust (B4)		☐ Presence of R				☐ Saturation Visible on	0 , (,			
☐ Iron Depo	, ,		☐ Thin Muck Sur				☐ Geomorphic Position				
_	n Visible on Aerial Ir	magery (B7)	Other (Explain	ın Rem	narks)		☐ FAC-Neutral Test (D	,			
☐ Water-Sta	ained Leaves (B9)						☐ Frost-Heave Hummo	CKS (D7) (LKK F)			
Field Obser	vations:	Yes No	Depth (inches)			ed Data (strea , if available:	m gauge, monitoring well, a	aerial photos, previous			
Surface Wat	•		<u> </u>								
Water Table			<u> </u>								
Saturation P	resent?		<u> </u>								
(includes cap		_									
Wetland Hy	drology Present?										
Remarks: W	etland hydrology inc	licators B10, I	D2, and D5 are met								

Project/Site: Sweetland Wind Project	Ci	ty/County: H	Hand Coun	ty Sampling Date: 10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC		_		tate: SD Sampling Point: SP-661
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: 44.364	096	Long: -98.793736 Datum: NAD83
Soil Map Unit Name: Glenham-Java loams, rolling	ogion	44.004	000	NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this tin	ne of vear?	? ⊠ Yes	П No	(If no, explain in Remarks.)
, , , , , , , , , , , , , , , , , , ,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			(,,,
Vegetation Soil Hydrolog	gy	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	samplin	g point loca	ations, tra	nsects, important features, etc.
Yes No	Remar	ks: Upland sa	mple plot a	djacent to PEM W-580.
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.				(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
1	<u></u> %			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: <u>5'</u>)	0 70	- 10tal 00v0	,,	FAC species% x 3 =0
1. Bromus inermis	100 %	Υ	UPL	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: <u>30'</u>)	<u>100 %</u>	= 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	<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-50.			

Profile Desc	ription: (Describe	absence of indicators.)								
Depth	Matrix		Re	dox Fea	atures					
(inches)	Color (moist)	%	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=Dep	oletion, RM=	Reduced Matrix, CS	S=Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil	Indicators: (Applic	cable to all L	RRs, unless other	wise n	oted.)		Indicators for Problema	tic Hydric Soils ³ :		
☐ Histosol (A1)		☐ Sandy Gle	yed Mat	trix (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 Histic (A3) ☐ Stripped Matrix (S6) ☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1)							☐ Dark Surface (S7) (LRR G)			
	Sulfide (A4)		☐ High Plains Depressions (F16)							
	Layers (A5) (LRR F			(LRR H outside of MLRA 72 & 73)						
	k (A9) (LRR F, G, F		Depleted N				Reduced Vertic (F18)	TEO)		
	Below Dark Surface	e (A11)	Redox Dar		` '		Red Parent Material (
	k Surface (A12)		☐ Depleted □		, ,		☐ Very Shallow Dark Su☐ Other (Explain in Rem			
	ucky Mineral (S1)	CO) // DD C	Redox Dep					,		
	ucky Peat or Peat (\$2		H) High Plains (MLRA 72				³ Indicators of hydrophytic			
	ky Peat or Peat (S3	o) (LRK F)	(MENA 12	. & 750	LIXIX II)		wetland hydrology must be present, unless disturbed or problematic			
Restrictive	_ayer (if present):						Hydric Soil Present?			
Type:		De	epth (inches):				☐ Yes ☒ No			
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)		
☐ Saturation			☐ Hydrogen Sul				☐ Drainage Patterns (B			
☐ Water Ma	ırks (B1)		□ Dry-Season V	Vater Ta	able (C2)		Oxidized Rhizospher	es on Living Roots (C3)		
☐ Sediment	Deposits (B2)		Oxidized Rhiz		es on Living	Roots (C3)	(where tilled)			
☐ Drift Depo	, ,		(where not		(0.1)		☐ Crayfish Burrows (C8	•		
	or Crust (B4)		☐ Presence of F				Saturation Visible on	0, 1,		
☐ Iron Depo		(D7)	☐ Thin Muck Su☐ Other (Explain				☐ Geomorphic Position☐ FAC-Neutral Test (D	• •		
_	n Visible on Aerial II	magery (B7)	☐ Other (Explain	i iii Keii	ilaiks)		Frost-Heave Hummo	,		
☐ water-Sta	ained Leaves (B9)						1 103t-1 leave 1 lullillillo	CRS (D1) (LIKIT I)		
Field Obser	vations:	Yes N	Depth o (inches)			ed Data (strea , if available:	m gauge, monitoring well, a	aerial photos, previous		
Surface Wat	er present?		₫							
Water Table	present?		₫							
Saturation P	resent?									
(includes cap	oillary fringe)	_								
Wetland Hy	drology Present?		₃							
Remarks: W	etland hydrology inc	dicators are n	ot met.							

Project/Site: Sweetland Wind Project	(City/County: Hand	d County	,	Sampling	Date: 10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-60				
Investigator(s): T. Beemer, W. Hirst		Section, To	wnship,	Range: S4,		
Landform (hillslope, terrace, etc.) toeslope	Lo	 cal relief (concave,				Slope (%): 4 %
Subregion (LRR): Northern Great Plains Spring Whea		Lat: 44.362340			781045	Datum: NAD83
		44.302340	<u>'</u>		assification:	NA NA
Are climate/hydrologic conditions on the site typical for this		r? ⊠ Yes [□No		n in Remarks.	
7 to diffication of the discountries and	o umo or you	🙇 100 [(II 110, Oxpiaii	Till Rolliano.	,
Vegetation Soil Hydr	rology	Are "Normal	I Circums	stances" prese	nt? 🛛 Yes	☐ No
Significantly Disturbed?		(If needed, e	explain a	ny answers in	Remarks.)	
SUMMARY OF FINDINGS – Attach site map show	ing sampli	ng point location	ns, trar	sects, impo	rtant featur	es, etc.
Yes N	No Rema	arks: Upland sample	le plot.			
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			1			
Tree Stratum (Plot size: 30')	Absolute % Cover		dicator status	Dominance T	est Workshe	et:
1	0/	орескоз: О	natus	Number of Do		es that
2.				are OBL, FAC (excluding FA	,	0 (A)
3	%			-		(/ //
4	%			Total Number Species Acros		1_(B)
	0 %	= Total Cover		Percent of Do		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)	0.4			are OBL, FAC		0%_(A/B)
1 2.	<u>%</u>					
2. 3.	0.4			Prevalence II	ndex Worksh	eet:
4.	0.4			Total %	Cover of:	Multiply by:
5.	%			OBL species		% x 1 = <u>0</u>
	0 %	= Total Cover		FACW specie		_% x 2 = <u>0</u>
Herb Stratum (Plot size: <u>5'</u>)				FAC species FACU species		_% x 3 = <u>0</u> % x 4 = 0
1. <u>Bromus inermis</u>	100 %	<u>Y</u> <u>L</u>	UPL_	UPL species		$-\frac{76}{8} \times 4 = \frac{0}{0}$
2	%			Column Tota		0 % (A) 0 (B)
3	%			Prevalence In	ndex = B/A =	
4 5	<u>%</u>					
6.	0.4			Hydrophytic	vegetation li	idicators:
7.	0/			☐ 1 Rapid Te	est for Hydrop	hytic Vegetation
8	%			2 Dominar	nce Test is >5	0%
9				☐ 3 Prevalen	nce Index is ≤	3.0 ¹
10	<u>%</u> 	= Total Cover				tions ¹ (Provide or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>)	0/			•		c Vegetation ¹ (explain)
1 2	<u>%</u>				, , ,	nd wetland hydrology
<u></u>	0 %	= Total Cover				sturbed or problematic
Bare Ground in Herb Stratum 0 %				Hydrophytic V	egetation Pre	esent? Yes No
Remarks: Hydrophytic vegetation is not present. Photogra	aph C-51.					
, , ,						

(inches) Color (moist) % Color (moist) % Type¹ Lo 0-8 10YR 2/2 100 8-20 10YR 3/3 100 *Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand	Clay Loam Clay Loam
0-8 10YR 2/2 100 8-20 10YR 3/3 100	Clay Loam
8-20 10YR 3/3 100	
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand	
	d Grains ² Location: PL=Pore Lining, M=Matrix
ydric 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)	☐ 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)
☐ 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)	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
estrictive Layer (if present):	Hydric Soil Present?
ype: Depth (inches):	☐ Yes ☒ No
VDDOLOOV	
Vetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) ☐ Surface Water (A1) ☐ Salt Crust (B11)	☐ Surface Soil Cracks (B6)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Salt Crust (B11) Aquatic Invertebrates (B13)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Wetland Hydrology Indicators: Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	☐ Surface Soil Cracks (B6)☐ Sparsely Vegetated Concave Surface (B☐ Drainage Patterns (B10)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Primary Indicators (minimum of one required; check all that apply) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2)	 ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B ☐ Drainage Patterns (B10) ☐ Oxidized Rhizospheres on Living Roots
☐ 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	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Wetland Hydrology Indicators: Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (where not tilled)	□ Surface Soil Cracks (B6) □ Sparsely Vegetated Concave Surface (B □ Drainage Patterns (B10) □ Oxidized Rhizospheres on Living Roots (where tilled) □ Crayfish Burrows (C8)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	□ Surface Soil Cracks (B6) □ Sparsely Vegetated Concave Surface (E □ Drainage Patterns (B10) □ Oxidized Rhizospheres on Living Roots (where tilled) □ Crayfish Burrows (C8) □ Saturation Visible on Aerial Imagery (C9
Vetland 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) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Thin Muck Surface (C7)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (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) Presence of Reduced Iron (C4) Other (Explain in Remarks)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (E Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5)
// rimary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2)
// rimary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (E Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (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: Irimary 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 Orift 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) Ield Observations: Yes No (inches) Describe Recorded Datinspections, etc.), if available of the content of	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (E Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (E Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (E Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Hydrogen Sulfide Odor (C1) Vater Marks (B1) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (where not tilled) Rlgal Mat or Crust (B4) Rron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Ves No Control Deposits Recorded Dainspections, etc.), if available of the control of th	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (E Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (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: Trimary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (E Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Project/Site: Sweetland Wind Project	Ci	ty/County:	Hand Coun	ty Sampling Date: 10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC				tate: SD Sampling Point: SP-664
Investigator(s): T. Beemer, W. Hirst		Section		, Range:, R66W
Landform (hillslope, terrace, etc.) swale	Loc	al relief (conc		•
Subregion (LRR): Northern Great Plains Spring Wheat R		Lat: 44.363		Long: -98.778882 Datum: NAD83
Soil Map Unit Name: Oahe-Delmont loams, 2 to 6 percer		44.505	204	NWI Classification: NA
Are climate/hydrologic conditions on the site typical for this tir		? X Yes	□ No	(If no, explain in Remarks.)
The difficulty drottegle definations on the die typical for this th	ino or your			(II no, explain III residence)
Vegetation Soil Hydrolo	ogy	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	g samplin	g point loca	ations, tra	nsects, important features, etc.
Yes No	Remai	rks: 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>	<u> </u>		Number of Dominant Species that are OBL, FACW, or FAC
2	<u>%</u>			(excluding FAC-): 1 (A)
3	<u>%</u>			Total Number of Dominant
4	<u>%</u>			Species Across All Strata: 1 (B)
0 1 (0 1 0 4 (0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 %	= Total Cove	er	Percent of Dominant Species that
Sapling/Shrub Stratum (Plot size: <u>15')</u> 1	%			are OBL, FACW, or FAC: 100% (A/B)
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 FACU species % x 4 =0
Echinochloa crus-galli	<u>100 %</u>	<u> </u>	<u>FAC</u>	UPL species
2.	<u>%</u>			Column Totals: 0 % (A) 0 (B)
3	<u>%</u> %			Prevalence Index = B/A =
4 5				
6				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 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	<u>%</u> %			¹ Indicators of hydric soil and wetland hydrology
<u> </u>	0 %	= Total Cove	er	must be present, unless disturbed or problematic
				Hydrophytic Vegetation Present? ⊠ Yes ☐ No
Bare Ground in Herb Stratum0 %				,
Remarks: Dominance test is met. Photograph C-52.				

Profile Descr	iption: (Describe	to the dep	oth neede	ed to docum	ent the	indicator o	r confirm the	absence of indicators.)				
Depth	Matrix			Red	ox Feat	ures						
(inches)	Color (moist)	%	Color ((moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-12	10YR 2/2	100						Clay				
12-20	10YR 3/2	100						Clay				
									·			
									· -			
		- ——							· 			
									· ·			
¹Type: C=Co	ncentration, D=De	nletion RM	-Reduced	d Matrix CS-	-Covere	d or Coated	Sand Grains	² I ocation: PI –Por	e Lining, M=Matrix			
	ndicators: (Applie						Odrid Grains	Indicators for Probler	<u> </u>			
☐ Histosol (A				Sandy Gley		-		☐ 1 cm Muck (A9) (LF	•			
☐ Histosof (A	,			Sandy Gley Sandy Redo		IX (34)		☐ Coast Prairie Redox				
☐ Black Histi				Stripped Ma		١						
☐ Hydrogen	, ,			Loamy Muc	•	•		☐ Dark Surface (S7) (LRR G) ☐ High Plains Depressions (F16)				
	ayers (A5) (LRR F	=)		Loamy Gley	-			(LRR H outside of MLRA 72 & 73)				
	(A9) (LRR F, G, I			Depleted M				☐ Reduced Vertic (F1	8)			
	Below Dark Surface			Redox Dark				☐ Red Parent Materia	I (TF2)			
	Surface (A12)	,		Depleted Da		, ,		☐ Very Shallow Dark	Surface (TF 12)			
☐ Sandy Mu	cky Mineral (S1)			Redox Depr	essions	s (F8)		Other (Explain in Re	emarks)			
☐ 2.5 cm Mu	cky Peat or Peat (S2) (LRR G	6, H) 🔲	High Plains	Depres	sions (F16)		3Indicators of hydrophy	tic vegetation and			
5 cm Muck	xy Peat or Peat (S3	B) (LRR F)		(MLRA 72	& 73 of	LRR H)		wetland hydrology mus disturbed or problemat				
Restrictive L	ayer (if present):							Hydric Soil Present?	·			
Type:			Depth (inc	ches):				☐ Yes ⊠ No				
- J1		_	-1. (_						
Remarks: No	hydric soil indicate	r is presen	t.									
HYDROLOG	Y											
Wetland Hyd	rology Indicators	:										
Primary Indica	ators (minimum of	one require	d; check a	all that apply)	<u> </u>			Secondary Indicators	(2 or more required)			
☐ Surface W	ater (A1)		□Sa	alt Crust (B11)			☐ Surface Soil Crack	s (B6)			
☐ High Wate	` '			quatic Inverte	,	(B13)		-	d Concave Surface (B8)			
☐ Saturation	, ,			/drogen Sulfi				☐ Drainage Patterns				
☐ Water Mar	ks (B1)		☐ Dr	y-Season W	ater Tal	ole (C2)		Oxidized Rhizosph	eres on Living Roots (C3)			
☐ Sediment	Deposits (B2)			xidized Rhizo		s on Living F	Roots (C3)	(where tilled)				
☐ Drift Depos				(where not t				Crayfish Burrows (
☐ Algal Mat of	or Crust (B4)			esence of Re		` ,		☐ Saturation Visible of	• • • •			
☐ Iron Depos				nin Muck Sur				☐ Geomorphic Position				
	Visible on Aerial I	magery (B7	r) □ Ot	ther (Explain	ın Rem	arks)		☐ FAC-Neutral Test (,			
☐ Water-Stai	ined Leaves (B9)							☐ Frost-Heave Humn	nocks (D7) (LRR F)			
Field Observ	ations:	Yes		Depth inches)			ed Data (strear if available:	n gauge, monitoring well	, aerial photos, previous			
Surface Wate	r nresent?		\boxtimes	,	Шоро	0110110, 0101),	ii availabio.					
Water Table p	•											
Saturation Pre		=										
(includes capi			⊠									
	rology Present?		\boxtimes									
					<u> </u>							
Remarks: We	tland hydrology ind	alcator D2 is	s met.									

Project/Site: Sweetland Wind Project	City/County:	Hand Count	V	Sampling Date: 10/17/2018		
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-6				
Investigator(s): T. Beemer, W. Hirst	Section	n, Township,		 10N, R66W		
Landform (hillslope, terrace, etc.) toeslope	Local relief (cond	cave, convex	x, none): none	Slope (%): 5 %		
Subregion (LRR): Northern Great Plains Spring Wheat Regio	n Lat: 44.36	7701	Long: -98.80			
Soil Map Unit Name: Tetonka silt loam, 0 to 1 percent slopes			NWI Class			
Are climate/hydrologic conditions on the site typical for this time of		□ No	(If no, explain in			
Vegetation Soil Hydrology	Are "No	ormal Circum	stances" present?	? ⊠ Yes □ No		
Significantly Disturbed? Naturally Problematic?	(If need	led, explain a	any answers in Re	emarks.)		
SUMMARY OF FINDINGS – Attach site map showing sa	mpling point los	ations tra	neacte impart	ant faatures, etc		
			iisecis, iiiporta	ant reatures, etc.		
Yes No Hydrophytic Vegetation Present?	Remarks: Upland s	ample plot.				
Hydric Soil Present?						
Wetland Hydrology Present?						
Is the Sampled Area within a Wetland?						
<u> </u>						
VEGETATION – Use scientific names of plants	aluta Bandanat	La d'a a tan	D T	-(Wlb(
	olute Dominant Sover 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			
4	<u>%</u>		Species Across			
	0 % = Total Cov	er	Percent of Domi	inant Species that		
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1	%		are OBL, FACW			
2.	%					
3.	%		Prevalence Inde			
4	<u></u>		Total % Co	over of: Multiply by:		
5	<u> </u>		OBL species	% x 1 =0		
	0 % = Total Cov	er	FACW species FAC species	${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${}$ ${$		
Herb Stratum (Plot size: <u>5'</u>)	00.0/	LIDI	FACU species	% x 4 = 0		
1. <u>Bromus inermis</u> 10	00 % Y %	<u>UPL</u>	UPL species	% x 5 = 0		
3	<u></u>		Column Totals:	0% (A)0(B)		
4	%		Prevalence Inde	ex = B/A =		
5	%		Hydrophytic Ve	egetation Indicators:		
6	<u> </u>					
7	<u>%</u>			for Hydrophytic Vegetation		
8	<u>%</u>		2 Dominance			
9	<u>%</u>		3 Prevalence			
	00 % = Total Cov	/er	☐ 4 Morphologi supporting data in	ical Adaptations ¹ (Provide n Remarks or on a separate sheet)		
1	%		☐ Problematic I	Hydrophytic Vegetation ¹ (explain)		
2	%			ydric soil and wetland hydrology		
	0 % = Total Cov	er er	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-5	3.					

Profile Descr	iption: (Describe	to the dep	th needed to doo	ument t	he indicator o	r confirm the	absence of indicators.)				
Depth	Matrix			Redox F	eatures						
(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				
				-				·			
				-							
1Tyroc: C-Cor	poontration D_Da	nlotion DM			orod or Costos	L Sand Crains	² Location: PL=Pore	Lining M-Motrix			
			=Reduced Matrix, LRRs, unless otl			1 Sand Grains	Indicators for Problem				
		cable to all			-			•			
☐ Histosol (A	,		☐ Sandy (1 cm Muck (A9) (LR				
☐ Histic Epip			☐ Sandy F				Coast Prairie Redox				
☐ Hydrogen \$, ,		☐ Loamy I	,	,		☐ Dark Surface (S7) (LRR G) ☐ High Plains Depressions (F16)				
	ayers (A5) (LRR F	-)	Loamy	-			(LRR H outside of				
	(A9) (LRR F, G, I		☐ Deplete	-			☐ Reduced Vertic (F18	•			
	elow Dark Surface		☐ Redox [Red Parent Material	•			
	Surface (A12)	3 (7111)	☐ Deplete		, ,		☐ Very Shallow Dark S	, ,			
	ky Mineral (S1)		☐ Redox [, ,		Other (Explain in Re	marks)			
	cky Peat or Peat (S2) (LRR G		•	ressions (F16)		³ Indicators of hydrophyt	ic vegetation and			
	y Peat or Peat (S3				of LRR H)		wetland hydrology must				
	,	, ,					disturbed or problemation				
Restrictive La	yer (if present):						Hydric Soil Present?				
Type:		[Depth (inches):				☐ Yes ☒ No				
					-						
Remarks: No	nydric soil indicato	r is present									
HYDROLOGY	,										
Wetland Hydi	ology Indicators	:									
Primary Indica	tors (minimum of	one require	d; check all that ap	ply)			Secondary Indicators (2 or more required)			
☐ Surface Wa	ater (A1)		☐ Salt Crust	(B11)			☐ Surface Soil Cracks	s (B6)			
☐ High Water	` '		☐ Aquatic Inv	` '	es (B13)		_	Concave Surface (B8)			
☐ Saturation	` '		☐ Hydrogen \$				☐ Drainage Patterns (
☐ Water Marl	` '		☐ Dry-Seaso				Oxidized Rhizosphe	eres on Living Roots (C3)			
☐ Sediment [Deposits (B2)		☐ Oxidized R	hizosphe	eres on Living F	Roots (C3)	(where tilled)				
☐ Drift Depos	sits (B3)		(where n	ot tilled))		☐ Crayfish Burrows (C	C8)			
☐ Algal Mat o	or Crust (B4)		☐ Presence of		` '		☐ Saturation Visible o	• • • •			
☐ Iron Depos	its (B5)		Thin Muck				Geomorphic Positio				
☐ Inundation	Visible on Aerial I	magery (B7) Dther (Exp	lain in Re	emarks)		FAC-Neutral Test (I	,			
☐ Water-Stai	ned Leaves (B9)						☐ Frost-Heave Humm	ocks (D7) (LRR F)			
Field Observa	ations:		Depth	De	scribe Record	ed Data (strea	m gauge, monitoring well,	aerial photos, previous			
		Yes	No (inches)	ins	pections, etc.)	, if available:					
Surface Water	present?			_							
Water Table p	resent?		⊠	_							
Saturation Pre	sent?			_							
(includes capil	lary fringe)										
Wetland Hydi	ology Present?		\boxtimes								
Remarks: Wet	land hydrology inc	dicators are	not met.								

Project/Site: Sweetland Wind Project	City	/County: _ ¡	Hand Count	ty	Sampling Date	3: 10/17/20	018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD Sampling Point: SP-6					
Investigator(s): T. Beemer, W. Hirst		Section	, Township		T110N, R66W		
Landform (hillslope, terrace, etc.) pothole	Local	relief (conc	ave, convex	,		Slope (%):	0 %
Subregion (LRR): Northern Great Plains Spring Wheat Region	– on La	at: 44.365	499	Long: _98.		tum: NAD	
Soil Map Unit Name: Glenham loam, undulating					assification: NA		
Are climate/hydrologic conditions on the site typical for this time of	of year?		□ No	(If no, explair	n in Remarks.)		
Vegetation Soil Hydrology		Are "No	rmal Circum	nstances" prese	ent? 🛛 Yes	☐ No	
Significantly Disturbed? Naturally Problematic?		(If neede	ed, explain a	any answers in	Remarks.)		
, – – –	amplina	noint loss	ations tra	neacte impe	ertant foaturos	oto	
SUMMARY OF FINDINGS – Attach site map showing sa							
Yes No Hydrophytic Vegetation Present?	Remarks	s: Wetland s	ample plot	located in PEM	W-584.		
Hydric Soil Present?							
Wetland Hydrology Present?							
Is the Sampled Area within a Wetland?							
VECETATION Lies esignific names of plants							
VEGETATION – Use scientific names of plants		.	1 11 /				
		Dominant Species?	Indicator Status		Test Worksheet:		
1	%			Number of Do are OBL, FAC	ominant Species th	ıat	
2	%			(excluding FA			(A)
3	%			Total Number	r of Dominant		_ ` '
4	<u>%</u>			Species Acros			(B)
	0 % =	= Total Cove	er	Percent of Do	ominant Species th	at	
Sapling/Shrub Stratum (Plot size: <u>15'</u>) 1	<u>%</u>			are OBL, FAC			(A/B)
2.	%						
3.	%				ndex Worksheet:		
4	%			Total %	Cover of:	Multiply by	<u>/:</u>
5	<u>%</u>			OBL species		-	0
	0 % =	= Total Cove	er	FACW species		-	<u>0</u> 0
Herb Stratum (Plot size: <u>5'</u>)	100.0/	V	E4 0)4/	FACU species			0
1. Phalaris arundinacea 1 2.	100 <u>%</u> <u>%</u>	<u>Y</u>	<u>FACW</u>	UPL species	%		0
3				Column Tota	ıls: <u>0</u> %	(A)	0 (B)
4	<u>%</u>			Prevalence I	ndex = B/A =		
5	%			Hydrophytic	Vegetation Indica	ators:	
6	<u>%</u>				_		
7	<u>%</u>				est for Hydrophytic	vegetation	
8	<u>%</u> %				nce Test is >50%		
9	%				nce Index is ≤3.0¹		
		= Total Cove	er		ogical Adaptations a in Remarks or on		heet)
1	%			☐ Problemat	ic Hydrophytic Ve	getation1 (ex	plain)
2	%				f hydric soil and we		
	0 % =	= Total Cove	er	must be prese	ent, unless disturb	ed or proble	matic
Bare Ground in Herb Stratum0 %				Hydrophytic V	egetation Present	:? ⊠ Yes	□ No
Remarks: Rapid test for hydrophytic vegetation is met. Photogra	aph C-54.					·	

Profile Desc	ription: (Describe	to the dep	th needed to docu	ment th	e indicator o	or confirm the	absence of indicators.)	
Depth	Matrix		R	edox Fe	atures			
(inches)	Color (moist)	<u>%</u>	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=Ce	oncentration, D=De	pletion, RM=	Reduced Matrix, C	S=Cove	red or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix
			LRRs, unless othe				Indicators for Problem	atic Hydric Soils ³ :
☐ Histosol (☐ Sandy Gle		-		1 cm Muck (A9) (LRF	•
☐ Histic Epi	,		☐ Sandy Re	•	` ,		☐ Coast Prairie Redox	
☐ Black His			☐ Stripped N				☐ Dark Surface (S7) (L	
	Sulfide (A4)		☐ Loamy Mı	•	•		☐ High Plains Depressi	,
	Layers (A5) (LRR F	=)	☐ Loamy GI	-			(LRR H outside of I	MLRA 72 & 73)
1 cm Muc	k (A9) (LRR F, G, I	H)	□ Depleted	Matrix (F	- 3)		☐ Reduced Vertic (F18)	
□ Depleted	Below Dark Surface	e (A11)	Redox Da	ırk Surfa	ce (F6)		Red Parent Material	
☐ Thick Dar	k Surface (A12)		□ Depleted				☐ Very Shallow Dark S	
☐ Sandy Mu	ucky Mineral (S1)		☐ Redox De				Other (Explain in Rer	narks)
	ucky Peat or Peat (, ,		3Indicators of hydrophytic	
5 cm Muc	ky Peat or Peat (S	3) (LRR F)	(MLRA 7	2 & 73 c	of LRR H)		wetland hydrology must disturbed or problematic	
Restrictive I	_ayer (if present):						Hydric Soil Present?	
Type:			epth (inches):					
HYDROLOG	iΥ							
Wetland Hy	drology Indicators	:						
Primary India	cators (minimum of	one required	d; check all that app	ly)			Secondary Indicators (2	or more required)
☐ Surface V	Vater (A1)		☐ Salt Crust (B	11)			☐ Surface Soil Cracks	` '
	er Table (A2)		Aquatic Inve		` '		Sparsely Vegetated	
Saturation	` '		Hydrogen Su				Drainage Patterns (E	,
☐ Water Ma	` '		☐ Dry-Season		, ,			res on Living Roots (C3)
	Deposits (B2)		Oxidized Rhi		es on Living	Roots (C3)	(where tilled) Crayfish Burrows (Ca	8)
☐ Drift Depo			☐ Presence of		d Iron (C4)		☐ Saturation Visible on	
☐ Algai Mat	or Crust (B4)		☐ Thin Muck S				☐ Gaturation Visible on ☐ Geomorphic Position	
-	n Visible on Aerial I	magery (R7)					☐ FAC-Neutral Test (D	
	ained Leaves (B9)	illagery (D7)			,		☐ Frost-Heave Hummo	,
Field Obser	. ,		Depth	Des	crihe Record	led Data (streat	m gauge, monitoring well,	aerial nhotos, previous
i icia Obser	vationo.	Yes	No (inches)), if available:	in gaage, monitoring wen,	acriai priotos, previous
Surface Wat	er present?		×					
Water Table	present?		\boxtimes					
Saturation P	resent?		\boxtimes					
(includes cap	oillary fringe)	=						
Wetland Hy	drology Present?	\boxtimes						
Remarks: W	etland hydrology inc	dicators D2	and D5 are met.	•				
I								

Project/Site: Sweetland Wind Project	City/County:	Hand Count	ty	Sampling Date: 10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC			tate: SD	Sampling Point: SP-668
Investigator(s): T. Beemer, W. Hirst	Section	n, Township	_	 ION, R66W
Landform (hillslope, terrace, etc.) toeslope	Local relief (cond	cave, conve		Slope (%): 4 %
Subregion (LRR): Northern Great Plains Spring Wheat Region			Long: -98.805	D-1
Soil Map Unit Name: Glenham loam, undulating	1 44.000	5010	NWI Classi	
Are climate/hydrologic conditions on the site typical for this time of	f year? X Yes	□No	(If no, explain in	
	,	_	(2, 2	,
Vegetation Soil Hydrology	Are "No	rmal Circum	stances" present?	
Significantly Disturbed?	(If need	ed, explain a	any answers in Ren	marks.)
Naturally Problematic?				
SUMMARY OF FINDINGS – Attach site map showing sar	mpling point loc	ations, tra	nsects, importa	nt features, etc.
	Remarks: Upland sa	ample plot a	djacent 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				
Abso	olute Dominant	Indicator	Dominance Test	t Worksheet:
Tree Stratum (Plot size: <u>30'</u>) % Co	•	Status	Number of Domin	nant Species that
1	<u>%</u>		are OBL, FACW,	or FAC
2	<u>%</u> %		(excluding FAC-):	. <u> </u>
3	<u>%</u>		Total Number of I	
) % = Total Cove	er	Species Across A	All Strata: 2 (B)
Sapling/Shrub Stratum (Plot size: 15')			Percent of Domin	
1	<u> </u>		are OBL, FACW,	or FAC: 0% (A/B)
2	<u></u>		Prevalence Inde	y Worksheet
3	<u> </u>			
4	<u> </u>		Total % Cov	
5	<u>%</u>		OBL species FACW species	% x 1 = 0 % x 2 = 0
	<u> </u>	er	FAC species	${}$ % $\times 2 = 0$ $\times 3 = 0$
Herb Stratum (Plot size: <u>5'</u>) 1. <i>Bromus inermis</i> 20	<u>0 %</u> Y	UPL	FACU species	% x 4 = 0
	0 % Y	FACU	UPL species	% x 5 = 0
3. <u>Octana parima</u> 20	<u> </u>	1700	Column Totals:	0% (A)0(B)
4	%		Prevalence Inde	x = B/A =
5	%		Hydrophytic Vec	getation Indicators:
6	<u> </u>			_
7	<u> </u>		-	for Hydrophytic Vegetation
8	<u>%</u>		2 Dominance	Test is >50%
9	<u>%</u> %	-	3 Prevalence	Index is ≤3.0¹
_40	0 % = Total Cove	er		cal Adaptations ¹ (Provide Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30'</u>) 1	<u>%</u>		☐ Problematic H	lydrophytic Vegetation ¹ (explain)
2	%			dric soil and wetland hydrology
0	<u> </u>	er	must be present,	unless disturbed or problematic
Bare Ground in Herb Stratum 60 %			Hydrophytic Vege	etation Present? Yes No
Remarks: Hydrophytic vegetation is not present. Photograph C-55	5.			

Profile Description: (Describe to the dep	Jin needed to docu			c absence of indicators.)			
Depth Matrix	Re	edox 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	-		
				_			
					-		
¹ Type: C=Concentration, D=Depletion, RM	=Reduced Matrix, C	S=Covered or Coa	ated Sand Grains	² Location: PL=Pore	e Lining, M=Matrix		
Hydric Soil Indicators: (Applicable to all	LRRs, unless othe	rwise noted.)		Indicators for Problem	natic Hydric Soils³:		
☐ Histosol (A1)	☐ Sandy Gle	eyed Matrix (S4)		☐ 1 cm Muck (A9) (LR)	R I, J)		
☐ Histic Epipedon (A2)	☐ Sandy Re	dox (S5)		☐ Coast Prairie Redox	(A16) (LRR F, G, H)		
☐ Black Histic (A3)	☐ Stripped N	, ,		☐ Dark Surface (S7) (L	•		
☐ Hydrogen Sulfide (A4)		ucky Mineral (F1)		☐ High Plains Depress			
Stratified Layers (A5) (LRR F)		eyed Matrix (F2)		(LRR H outside of	•		
☐ 1 cm Muck (A9) (LRR F, G, H)	Depleted			☐ Reduced Vertic (F18	•		
☐ Depleted Below Dark Surface (A11)		rk Surface (F6)		Red Parent Material			
☐ Thick Dark Surface (A12)	•	Dark Surface (F7)		☐ Very Shallow Dark S☐ Other (Explain in Re			
Sandy Mucky Mineral (S1)		pressions (F8)	10)				
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G		ns Depressions (F ² 2 & 73 of LRR H)	16)	³ Indicators of hydrophyt wetland hydrology must			
3 cm whicky real of real (33) (LRK F)	(MERCA 7.	L a 70 of Link ii,		disturbed or problemation			
Restrictive Layer (if present):				Hydric Soil Present?			
Type:	Type: Depth (inches):						
HYDROLOGY							
Wetland Hydrology Indicators:							
	d; check all that app	l <u>v)</u>		Secondary Indicators (2	2 or more required)		
Wetland Hydrology Indicators:	nd; check all that app ☐ Salt Crust (B			Secondary Indicators (2			
Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2)	☐ Salt Crust (B	11) rtebrates (B13)		☐ Surface Soil Cracks ☐ Sparsely Vegetated	(B6) Concave Surface (B8)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3)	☐ Salt Crust (B☐ Aquatic Inver☐ Hydrogen Su	11) tebrates (B13) llfide Odor (C1)		☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (I	(B6) Concave Surface (B8) B10)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	☐ Salt Crust (B☐ Aquatic Inver☐ Hydrogen Su☐ Dry-Season N	11) rtebrates (B13) Ilfide Odor (C1) Water Table (C2)		☐ Surface Soil Cracks ☐ Sparsely Vegetated ☐ Drainage Patterns (I ☐ Oxidized Rhizosphe	(B6) Concave Surface (B8) B10)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season		ng Roots (C3)	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled)	(B6) Concave Surface (B8) B10) eres on Living Roots (C3)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season Oxidized Rhi (where no	Thich control	,	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C	(B6) Concave Surface (B8) B10) eres on Living Roots (C3)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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 (B Aquatic Inver Hydrogen Su Dry-Season Oxidized Rhi (where no	The trebrates (B13) of the trebrates (B13) of the trebrates (B13) of the trebrates of the t	,	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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)	Salt Crust (B Aquatic Invertible Hydrogen Su Dry-Season V Oxidized Rhi (where not) Presence of Thin Muck St	tebrates (B13) Iffide Odor (C1) Water Table (C2) zospheres on Livin tilled) Reduced Iron (C4) urface (C7)	,	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Position	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require) 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)	Salt Crust (B Aquatic Invertible Hydrogen Su Dry-Season V Oxidized Rhi (where not) Presence of Thin Muck St	tebrates (B13) Iffide Odor (C1) Water Table (C2) zospheres on Livin tilled) Reduced Iron (C4) urface (C7)	,	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Position FAC-Neutral Test (E	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require) 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)	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season \ Oxidized Rhi (where not Presence of Thin Muck St	tebrates (B13) Iffide Odor (C1) Water Table (C2) zospheres on Livii t tilled) Reduced Iron (C4) urface (C7) in in Remarks)		Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (C	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require) 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)	Salt Crust (B Aquatic Invertible Hydrogen Su Dry-Season V Oxidized Rhi (where not) Presence of Thin Muck St	tebrates (B13) Iffide Odor (C1) Water Table (C2) zospheres on Livin tilled) Reduced Iron (C4) urface (C7) in in Remarks) Describe Reco		Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible of Geomorphic Position FAC-Neutral Test (E	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require) 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:	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season \ Oxidized Rhi (where nor Presence of Thin Muck So Other (Explain	tebrates (B13) Iffide Odor (C1) Water Table (C2) zospheres on Livin tilled) Reduced Iron (C4) urface (C7) in in Remarks) Describe Reco	orded Data (stre	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (C	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require) 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:	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season \ Oxidized Rhi (where no) Presence of Thin Muck So Other (Explain	tebrates (B13) Iffide Odor (C1) Water Table (C2) zospheres on Livin tilled) Reduced Iron (C4) urface (C7) in in Remarks) Describe Reco	orded Data (stre	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (C	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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: Yes Surface Water present?	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season V Oxidized Rhi (where no) Presence of Thin Muck St (r) Depth (inches)	tebrates (B13) Iffide Odor (C1) Water Table (C2) zospheres on Livin tilled) Reduced Iron (C4) urface (C7) in in Remarks) Describe Reco	orded Data (stre	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (C	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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: Yes Surface Water present? Water Table present?	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season \ Oxidized Rhi. (where nor Presence of Thin Muck St Thin M	tebrates (B13) Iffide Odor (C1) Water Table (C2) zospheres on Livin tilled) Reduced Iron (C4) urface (C7) in in Remarks) Describe Reco	orded Data (stre	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (C	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require) 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: Yes Surface Water present? Water Table present?	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season \ Oxidized Rhi. (where nor Presence of Thin Muck St Thin M	tebrates (B13) Iffide Odor (C1) Water Table (C2) zospheres on Livin tilled) Reduced Iron (C4) urface (C7) in in Remarks) Describe Reco	orded Data (stre	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (C	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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: Yes Surface Water present? Water Table present? Saturation Present? (includes capillary fringe)	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season \ Oxidized Rhi (where no) Presence of Thin Muck So Other (Explain Depth (inches) Depth Inches	tebrates (B13) Iffide Odor (C1) Water Table (C2) zospheres on Livin tilled) Reduced Iron (C4) urface (C7) in in Remarks) Describe Reco	orded Data (stre	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (C	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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: Yes Surface Water present? Water Table present? Saturation Present? (includes capillary fringe) Wetland Hydrology Present?	Salt Crust (B Aquatic Inver Hydrogen Su Dry-Season \ Oxidized Rhi (where no) Presence of Thin Muck So Other (Explain Depth (inches) Depth Inches	tebrates (B13) Iffide Odor (C1) Water Table (C2) zospheres on Livin tilled) Reduced Iron (C4) urface (C7) in in Remarks) Describe Reco	orded Data (stre	Surface Soil Cracks Sparsely Vegetated Drainage Patterns (I Oxidized Rhizosphe (where tilled) Crayfish Burrows (C Saturation Visible or Geomorphic Position FAC-Neutral Test (C	(B6) Concave Surface (B8) B10) eres on Living Roots (C3) C8) n Aerial Imagery (C9) n (D2) D5) ocks (D7) (LRR F)		

Project/Site: Sweetland Wind Project	City/County: Har	nd County	Sampling Date: 10/17/2018
Applicant/Owner: Sweetland Wind Farm, LLC		State: SD	Sampling Point: SP-669
Investigator(s): T. Beemer, W. Hirst	Section, T		 「110N, R66W
Landform (hillslope, terrace, etc.) toeslope	Local relief (concave		01 (01)
Subregion (LRR): Northern Great Plains Spring Wheat Region	n Lat: 44.365936	6 Long: <u>-98.7</u>	799860 Datum: NAD83
Soil Map Unit Name: Tetonka silt loam, 0 to 1 percent slopes			assification: PEM1C
Are climate/hydrologic conditions on the site typical for this time of	f year? X Yes	☐ No (If no, explain	
Vegetation Soil Hydrology	Are "Norma	al Circumstances" preser	nt? ⊠ Yes □ No
Significantly Disturbed? Naturally Problematic?	(If needed,	explain any answers in F	Remarks.)
, – – –	mpling point locati	one transpote impo	rtant foatures, etc
SUMMARY OF FINDINGS – Attach site map showing sar			tant reatures, etc.
Yes No I Hydrophytic Vegetation Present?	Remarks: Upland samp	ole plot.	
Hydric Soil Present?			
Wetland Hydrology Present? □ ⊠			
Is the Sampled Area within a Wetland?			
VECETATION . Has esigntific names of plants			
VEGETATION – Use scientific names of plants	alada Dana'a ant la		
Tree Stratum (Plot size: 30') Abso		Status	est Worksheet:
1	<u>%</u>	Number of Dor	minant Species that
2	<u>%</u>	(excluding FAC	
3	<u>%</u>	Total Number	
4	<u>%</u>	Species Acros	
) % = Total Cover	Percent of Dor	minant Species that
Sapling/Shrub Stratum (Plot size: 15') 1	<u>%</u>	are OBL, FAC	
2.	<u>%</u>		
3.	%		dex Worksheet:
4	<u>%</u>	Total % 0	Cover of: Multiply by:
5	<u>%</u>	OBL species	% x 1 =0
) % = Total Cover	FACW species	% x2 = 0 % x3 = 0
Herb Stratum (Plot size: <u>5'</u>)	20.07	FACILISPACIO	
1. <u>Bromus inermis</u> 10 2.	00 % Y	UPL species	% x 5 = 0
3	<u></u>	Column Totals	s: <u>0</u> % (A) <u>0</u> (B)
4	%	Prevalence In	dex = B/A =
5	%	Hydrophytic \	/egetation Indicators:
6	<u>%</u>		
7	<u>%</u>		st for Hydrophytic Vegetation
8	<u>%</u>		ce Test is >50%
9	<u>%</u>	_	ce Index is ≤3.0 ¹
	00 % = Total Cover	4 Morpholo supporting data	gical Adaptations ¹ (Provide in Remarks or on a separate sheet)
1	%	☐ Problemation	c Hydrophytic Vegetation ¹ (explain)
2	% = Total Cover		hydric soil and wetland hydrology nt, unless disturbed or problematic
	<u>, ,, </u>		egetation Present? Yes No
Bare Ground in Herb Stratum 0 %	•	75	
Remarks: Hydrophytic vegetation is not present. Photograph C-50	ნ.		

Profile Desc	ription: (Describe	to the dept	h needed to docu	ment th	e indicator o	r confirm the	absence of indicators.)		
Depth	Matrix		R	edox 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=C	oncentration, D=Dep	pletion, RM=	Reduced Matrix, C	S=Cove	red or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil	Indicators: (Applic	cable to all l	RRs, unless othe	erwise n	oted.)		Indicators for Problema	ntic Hydric Soils ³ :	
☐ Histosol (A1)		☐ Sandy Gl	eyed Ma	trix (S4)		1 cm Muck (A9) (LRR	l, J)	
☐ Histic Epi	pedon (A2)		☐ Sandy Re				☐ Coast Prairie Redox (A16) (LRR F, G, H)	
☐ Black His	, ,		☐ Stripped I				☐ Dark Surface (S7) (LF	RR G)	
	Sulfide (A4)		☐ Loamy M	-			☐ High Plains Depression		
	Layers (A5) (LRR F		Loamy GI				(LRR H outside of N	ILRA 72 & 73)	
	k (A9) (LRR F, G, F		☐ Depleted				☐ Reduced Vertic (F18) ☐ Red Parent Material (TC2)	
	Below Dark Surface	e (A11)	☐ Redox Da		, ,		☐ Very Shallow Dark Su	•	
	k Surface (A12)		☐ Depleted		, ,		Other (Explain in Rem	, ,	
	ucky Mineral (S1) ucky Peat or Peat (\$	Co) /I DD C	☐ Redox De					,	
	cky Peat or Peat (S	, ,			of LRR H)		³ Indicators of hydrophytic wetland hydrology must b		
3 cm wac	ky real of real (30	5) (LKK F)	(MEIOA)		Litteriny		disturbed or problematic	be present, unless	
Restrictive	_ayer (if present):						Hydric Soil Present?		
Type:		D	epth (inches):						
HYDROLOG	Υ								
Wetland Hy	drology Indicators	:							
Primary India	cators (minimum of	one required	; check all that app	oly)			Secondary Indicators (2	or more required)	
☐ Surface V	Vater (A1)		☐ Salt Crust (B	311)			☐ Surface Soil Cracks (B6)	
	er Table (A2)		☐ Aquatic Inve	,	s (B13)		☐ Sparsely Vegetated Concave Surface (B8)		
☐ Saturation			 ☐ Hydrogen St				☐ Drainage Patterns (B		
☐ Water Ma			☐ Dry-Season				Oxidized Rhizospher		
☐ Sediment	Deposits (B2)		Oxidized Rhi		es on Living I	Roots (C3)	(where tilled)		
☐ Drift Depo	osits (B3)		(where no				☐ Crayfish Burrows (C8	•	
	or Crust (B4)		☐ Presence of				☐ Saturation Visible on	0 , (,	
☐ Iron Depo			☐ Thin Muck S				Geomorphic Position	, ,	
_	n Visible on Aerial II	magery (B7)	Other (Expla	ın ın Ker	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 Record ections, etc.)		ım gauge, monitoring well, a	aerial photos, previous	
Surface Wat	er present?		☑						
Water Table	present?		☑						
Saturation P	resent?		<u> </u>						
(includes cap	oillary fringe)	_							
Wetland Hy	drology Present?								
Remarks: W	etland hydrology inc	dicators are r	not met.						

Project/Site: Sweetland Wind Farm	Cit	y/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				
				Range: S6, T111N, R66W		
Landform (hillslope, terrace, etc.)terrace						
Subregion (LRR): Northern Great Plains Spring Wheat F						
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 pe				•		
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?			(If neede	ed, explain any answers in Remarks)		
•	! !!					
SUMMARY OF FINDINGS – Attach site map showing	ing sampii	ng point loc	ations, tr	ransects, important features, etc.		
Yes No Hydrophytic Vegetation Present? □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □						
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	% %			are OBL, FACW, or FAC		
3.	0.4			(excluding FAC-):0_(A)		
4.	%			Total Number of Dominant Species Across All Strata: 1 (B)		
	0 %	= Total Cover				
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				OBL species		
5	<u>%</u> 0 %	= Total Cover		FACW species% x 2 =0		
Harb Stratum (Diet eine 5 ft)	<u> </u>	= Total Covel		FAC species% x 3 =0		
Herb Stratum (Plot size: <u>5 ft.</u>) 1. <i>Bromus inermis</i>	95 %	٧	UPL	FACU species% x 4 =0		
Bromus inermis Helianthus maximiliani	3 %	N	FACU	UPL species% x 5 =0 Column Totals:0% (A)0(B)		
3. Symphyotrichum pilosum	2 %	N	FACU	···		
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 9						
10.				☐ 3 Prevalence Index is ≤3.0 ¹		
	100 %	= Total Cover		☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)		
Woody Vine Stratum (Plot size: <u>30 ft.</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 indicators are not met. Ph	otograph C-	-57.				

Profile Desc	ription: (Describe	to the de	epth r	needed to docum	nent th	e indicator o	r confirm the	absence of indicators.)		
Depth	Matrix			Re	dox Fe	atures				
(inches)	Color (moist)	%		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	10YR 3/1	93		10YR 3/4	7	С	M	silty clay loam		
8-16	10YR 3/1	100						clay		
16-22	10YR 2/1	97		10YR 4/1	3	D	M	clay		
		<u> </u>								
		-								
¹Type: C=Co	ncentration, D=De	pletion, RI	M=Re	duced Matrix, CS	S=Cove	red or Coated	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil I	ndicators: (Appli	cable to a	II LRI	Rs, unless other	wise n	oted.)		Indicators for Problem	atic Hydric Soils ³ :	
☐ Histosol (A	\1)			☐ Sandy Gle	yed Ma	trix (S4)		1 cm Muck (A9) (LRF	R I, J)	
☐ Histic Epip	pedon (A2)			☐ Sandy Red	dox (S5))		☐ Coast Prairie Redox	(A16) (LRR F, G, H)	
☐ Black Hist	` '			☐ Stripped M	,	,		☐ Dark Surface (S7) (L	,	
☐ Hydrogen				☐ Loamy Mu	cky Min	neral (F1)		☐ High Plains Depressi	ons (F16)	
	_ayers (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		
	Surface (A12)			☐ Depleted [, ,		☐ Very Shallow Dark S☐ Other (Explain in Rer	, ,	
•	cky Mineral (S1)	20) / DD	~ II\	Redox Dep		` ,				
	icky Peat or Peat (\$3 ky Peat or Peat (\$3			☐ High Plain: (MLRA 72		, ,		³ Indicators of hydrophyti wetland hydrology must		
3 CITI MUC	ky Feat of Feat (53) (LKK F)	,	(MEIXA 72		JI LIKIK III)		disturbed or problematic		
Restrictive L	ayer (if present):							Hydric Soil Present?		
Type:	, , ,		Dept	h (inches):				⊠ Yes □ No		
		_								
Remarks: Hy	dric soil indicator F	6 is met.								
HYDROLO	GY									
Wetland Hyd	rology Indicators	:								
Primary Indic	ators (minimum of	one requir	ed; ch	neck all that apply	<u>v)</u>			Secondary Indicators (2	or more required)	
☐ Surface W	ater (A1)			☐ Salt Crust (B1	1)			☐ Surface Soil Cracks (B6)		
☐ High Wate	er Table (A2)			☐ Aquatic Invert	ebrates	s (B13)		☐ Sparsely Vegetated Concave Surface (B8)		
☐ Saturation	(A3)			☐ Hydrogen Sul	fide Od	lor (C1)		☐ Drainage Patterns (E	310)	
☐ Water Ma	rks (B1)			□ Dry-Season V		, ,			res on Living Roots (C3)	
	Deposits (B2)			Oxidized Rhiz		es on Living I	Roots (C3)	(where tilled)	0)	
☐ Drift Depo	, ,			(where not		d Iron (C1)		☐ Crayfish Burrows (C		
☐ Algal Mat	, ,			☐ Presence of F☐ Thin Muck Su		` ,		☐ Saturation Visible or☐ Geomorphic Position		
☐ Iron Depo				☐ Other (Explain	,	,		☐ FAC-Neutral Test (D	, ,	
	Visible on Aerial I	magery (E	37)	☐ Other (Explain	I III IXGI	iiaiko)		☐ Frost-Heave Hummo	,	
☐ Water-Sta	ined Leaves (B9)				1					
Field Observ	ations:	Yes	No	Depth (inches)		cribe Record ections, etc.)		m gauge, monitoring well,	aerial photos, previous	
Surface Wate	er present?		\boxtimes			-, ,				
Water Table	·									
Saturation Pr										
(includes cap										
	Irology Present?		\boxtimes							
	etland hydrology inc			met.	ı					
. tomanto. We	a.ia ii, arology iiic		5 .100							

Project/Site: Sweetland Wind Farm	Cit	y/County: H	and Count	y Sampling Date: 10/9/2018
Applicant/Owner: Sweetland Wind Farm, LLC			St	ate: SD Sampling Point: SP-705
				Range: S1, T111N, R67W
Landform (hillslope, terrace, etc.)depression				
Subregion (LRR): Northern Great Plains Spring Wheat R				
Soil Map Unit Name: Glenham-Propser loams, 1 to 6 per				NWI Classification: PEM1A
Are climate/hydrologic conditions on the site typical for this ti				(If no, explain in Remarks)
	ino or your.		4	(ii iio, explain iii remaile)
Vegetation Soil Hydrolo	gy	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	ng point loc	ations, tr	ransects, important features, etc.
Yes No				ample plot. Normal hydrologic conditions are not
Hydrophytic Vegetation Present?	present	due to recent	raintaii.	
Hydric Soil Present? □ ☑ Wetland Hydrology Present? □ ☑				
Is the Sampled Area within a Wetland?				
VEGETATION – Use scientific names of plants				
	Absolute		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
3.	<u>//</u>			(excluding FAC-):0(A)
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: 0% (A/B)
1.	<u>%</u>			are OBL, FACW, OF FAC.
2	<u>%</u>			Prevalence Index Worksheet:
3	<u>%</u>			
4				Total % Cover of: Multiply by:
5	%			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/		LIDI	FACU species % x 4 = 0
Bromus inermis Ambrosia artemisiifolia	<u>50 %</u> 15 %	<u>Y</u>	UPL FACU	UPL species % x 5 = 0
Xanthium strumarium	10 %	N	FAC	Column Totals:0 % (A)0 (B)
4. Poa pratensis	10 %		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 10.	<u>%</u>		-	☐ 3 Prevalence Index is ≤3.0 ¹
10.	85 %	= Total Cover		☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	0.4			☐ 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
Bare Ground in Herb Stratum15 %	<u> </u>	- Total Gover		Hydrophytic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation indicators are not met. Pho	otograph C	-58.		
	3. a.p a			

		to the dept				or confirm the	absence of indicators.)	
Depth	Matrix			dox Fe			_	
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 2/1	100					silty clay loam	
			·					
								-
	-							-
			·		. ———			
-	-					·		
¹Type: C=Co	oncentration, D=De	pletion, RM=	Reduced Matrix, CS	S=Cove	red or Coate	d Sand Grains	² Location: PL=Pore	E Lining, M=Matrix
Hydric Soil I	ndicators: (Appli	cable to all l	_RRs, unless other	rwise n	oted.)		Indicators for Problem	natic Hydric Soils ³ :
☐ Histosol (/	A1)		☐ Sandy Gle	eved Ma	trix (S4)		1 cm Muck (A9) (LR	R I. J)
☐ Histic Epi	,		☐ Sandy Red	•	. ,		☐ Coast Prairie Redox	
☐ Black Hist			☐ Stripped M				☐ Dark Surface (S7) (L	
☐ Hydrogen	` '		Loamy Mu	•	,		☐ High Plains Depress	,
	Layers (A5) (LRR F	=)	Loamy Gle	-			(LRR H outside of	MLRA 72 & 73)
	k (A9) (LRR F, G, I		☐ Depleted N	-			☐ Reduced Vertic (F18	•
	Below Dark Surface		☐ Redox Da				☐ Red Parent Material	
☐ Thick Dar	k Surface (A12)	•	☐ Depleted [Dark Su	rface (F7)		☐ Very Shallow Dark S	
☐ Sandy Mu	icky Mineral (S1)		Redox De				☐ Other (Explain in Re	marks)
☐ 2.5 cm Mu	ucky Peat or Peat (S2) (LRR G ,	H) High Plain	s Depre	ssions (F16)		3Indicators of hydrophyt	ic vegetation and
☐ 5 cm Muc	ky Peat or Peat (S3	3) (LRR F)	(MLRA 72	2 & 73 c	of LRR H)		wetland hydrology must	be present, unless
Dootrictive I	aver (if present).						disturbed or problematic	<i>;</i>
	.ayer (if present):	_					Hydric Soil Present?	
Type:		_ U	epth (inches):				☐ Yes ☒ No	
HYDROLO								
_	Irology Indicators							
Primary Indic	ators (minimum of	one required	; check all that appl	_			Secondary Indicators (2	2 or more required)
Surface W	` '		Salt Crust (B	,			Surface Soil Cracks	` '
☐ High Wate			Aquatic Inver					Concave Surface (B8)
☐ Saturation			Hydrogen Su				Drainage Patterns (
☐ Water Ma	` '		☐ Dry-Season V		, ,			eres on Living Roots (C3)
	Deposits (B2)		Oxidized Rhiz		es on Living	Roots (C3)	(where tilled)	'0 \
☐ Drift Depo	, ,		(where not ☐ Presence of F	-	d Iron (C4)		☐ Crayfish Burrows (C☐ Saturation Visible o	
☐ Algal Mat			☐ Thin Muck Su				☐ Saturation Visible of ☐ Geomorphic Positio	
☐ Iron Depo	` '	maganı (P7)	Other (Explain				☐ FAC-Neutral Test ([
	n Visible on Aerial I iined Leaves (B9)	magery (br)	Other (Explain		namo,		☐ Frost-Heave Humm	
_	· ,		Danth					
Field Observ	ations:	Yes N	Depth lo (inches)			ed Data (strear , if available:	m gauge, monitoring well,	aerial photos, previous
Surface Wate	er present?				, ,			
Water Table	•		<u> </u>					
Saturation Pr			<u> </u>					
(includes cap								
	Irology Present?							
Remarks: We	etland hydrology ind	uicator D2 IS	met.					

Project/Site: Sweetland Wind Farm	Cit	y/County: Ha	and Count	y Sampling Date: 10/9/2018		
Applicant/Owner: Sweetland Wind Farm, LLC			St	ate: SD Sampling Point: SP-706		
				Range: S2, T111N, R67W		
Landform (hillslope, terrace, etc.)depression						
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)		
			4	(ii iio, explain iii remaile)		
Vegetation Soil Hydrolo	gy	Are "Norma	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	ransects, important features, etc.		
Yes No Hydrophytic Vegetation Present? □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □						
VEGETATION – Use scientific names of plants						
· · · · · · · · · · · · · · · · · · ·	Absolute	Dominant	Indicator	Dominance Test Worksheet:		
Tree Stratum (Plot size: <u>30 ft.</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> 0 %	= Total Cover		Species Across All Strata: 1 (B)		
Sanling/Shruh Stratum (Dlot size: 15 ft)	<u> </u>	= Total Cover		Percent of Dominant Species that		
Sapling/Shrub Stratum (Plot size: 15 ft.) 1.	%			are OBL, FACW, or FAC: 0% (A/B)		
1						
3.	<u>%</u>			Prevalence Index Worksheet:		
4.				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 ft.</u>)				FACU species		
1. Poa pratensis	<u>95 %</u>	<u>Y</u>	FACU	UPL species		
2. <u>Echinochloa crus-galli</u>	3 %	<u>N</u>	FAC	Column Totals: 0 % (A) 0 (B)		
3. Xanthium strumarium	2 %	<u>N</u>	FAC	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	%	 .		☐ 4 Morphological Adaptations¹ (Provide		
W 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	<u>100 %</u>	= Total Cover		supporting data in Remarks or on a separate sheet)		
Woody Vine Stratum (Plot size: <u>30 ft.</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 Stratum0 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No		
Remarks: Hydrophytic vegetation indicators are not met. Ph	otograph C-	-59.				

Profile Desc	ription: (Describe	to the dep	th needed to docum	nent th	e indicator o	r confirm the	absence of indicators.)		
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (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=Cd	oncentration, D=Dep	oletion, RM=	Reduced Matrix, CS	=Cove	red or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix	
Hydric Soil I	ndicators: (Applic	cable to all	LRRs, unless other	wise n	oted.)		Indicators for Problem	atic Hydric Soils ³ :	
☐ Histosol (A1)		☐ Sandy Gle	yed Ma	atrix (S4)		1 cm Muck (A9) (LRI	R I, J)	
☐ Histic Epi	pedon (A2)		☐ Sandy Red	lox (S5	5)		☐ Coast Prairie Redox	(A16) (LRR F, G, H)	
☐ Black His	` '		☐ Stripped M	,	,		☐ Dark Surface (S7) (L	,	
☐ Hydrogen			Loamy Mud	-			High Plains Depress	ions (F16)	
	Layers (A5) (LRR F		Loamy Gle	-	. ,		(LRR H outside of	•	
	k (A9) (LRR F, G, F		☐ Depleted M				☐ Reduced Vertic (F18☐ Red Parent Material	,	
	Below Dark Surface	e (A11)	☐ Redox Dari		` '		☐ Very Shallow Dark S		
	k Surface (A12)		☐ Depleted D ☐ Redox Dep		, ,		Other (Explain in Re		
	ɪcky Mineral (S1) ucky Peat or Peat (\$	S2) (I DD C			` '				
	ky Peat or Peat (S3		(MLRA 72		, ,		³ Indicators of hydrophyti wetland hydrology must		
	ky r cat or r cat (oc) (Little)	(- ,		disturbed or problematic		
Restrictive I	ayer (if present):						Hydric Soil Present?		
Type:		D	epth (inches):				☐ Yes ⊠ No		
		_							
Remarks: Hy	dric soil indicators a	are not met.							
HYDROLO	GY								
Wetland Hyd	drology Indicators	:							
Primary Indic	ators (minimum of	one required	l; check 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 Wate	er Table (A2)		☐ Aquatic Invert	ebrates	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		es on Living F	Roots (C3)	(where tilled)		
☐ Drift Depo			(where not		(0.1)		☐ Crayfish Burrows (C		
_	or Crust (B4)		☐ Presence of R		` ,		☐ Saturation Visible or		
☐ Iron Depo		(- -)	☐ Thin Muck Su	,	•		Geomorphic Position	` '	
	n Visible on Aerial I	magery (B7)	Other (Explain	ı ın Kei	marks)		☐ FAC-Neutral Test (☐ ☐ Frost-Heave Humme	,	
☐ Water-Sta	ained Leaves (B9)			1			☐ FIOSI-Heave Hullilli	OCKS (D7) (LKK F)	
Field Observ	vations:	Yes I	Depth No (inches)		scribe Recorde pections, etc.),		m gauge, monitoring well,	aerial photos, previous	
Surface Wate	er present?		\boxtimes	'	. /				
Water Table	•								
Saturation P	•								
(includes cap		ا	<u> </u>						
	drology Present?	\boxtimes							
	etland hydrology inc			ı					
. to.manto. vvi			, a 22 aro mot.						

Project/Site: Sweetland Wind Farm	Ci	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-708					
				Range: S7, T111N, R66W			
Landform (hillslope, terrace, etc.) depression							
Subregion (LRR): Northern Great Plains Spring Wheat							
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				(If no, explain in Remarks)			
	unic or your			(ii no, explain iii remano)			
Vegetation Soil Hydrol	ogy	Are "Norm	nal Circums	stances" present? Yes No			
Significantly Disturbed? \square Naturally Problematic? \square \square			(If neede	ed, explain any answers in Remarks)			
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Is the Sampled Area within a Wetland? Yes No □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □							
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 2.	<u> </u>			are OBL, FACW, or FAC			
3.	0.4			(excluding FAC-):0(A)			
4.	%		-	Total Number of Dominant			
	0 %	= Total Cover	<u></u>	Species Across All Strata:1_(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 obe, i how, or i ho(Arb)			
2	%			Prevalence Index Worksheet:			
3							
4				Total % Cover of: Multiply by:			
5	%			OBL species% x 1 =0 FACW species% x 2 =0			
	0 %	= Total Cover	r	FAC species			
Herb Stratum (Plot size: <u>5 ft.</u>)	75.0/		LIDI	FACU species % x 4 = 0			
1. Glycine max 2.	<u>75 %</u> %	<u> </u>	UPL	UPL species % x 5 =0			
2				Column Totals: <u>0</u> % (A) <u>0</u> (B)			
4.	<u> </u>			Prevalence Index = B/A =			
5.	%		-	Hydrophytic Vegetation Indicators:			
6.	%						
7	%			1 Rapid Test for Hydrophytic Vegetation			
8	%			☐ 2 Dominance Test is >50%			
9	<u>%</u>			☐ 3 Prevalence Index is ≤3.0 ¹			
10.	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>)				☐ Problematic Hydrophytic Vegetation¹ (explain)			
1.	%			¹ Indicators of hydric soil and wetland hydrology			
2	<u>%</u> 0 %	= Total Cove		must be present, unless disturbed or problematic			
Bare Ground in Herb Stratum25 %	<u> </u>	- 10tal 00V6	•	Hydrophytic Vegetation Present? ☐ Yes ☒ No			
Remarks: Hydrophytic vegetation indicators are not met. The	he only vege	tation observe	d was agri	cultural sovbean, Photograph C-60.			
,	. , 90			-7			

Profile Desc	ription: (Describe	to the de	pth ne	eded to docum	ent the	e indicator o	r confirm the	absence of indicators.)			
Depth	Matrix			Red	dox Fea	atures					
(inches)	Color (moist)	%	Co	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-16	10YR 2/1	100						silty clay loam			
						· ·					
						· ·					
17 0 0		- <u></u>						21 (1 D) D			
	oncentration, D=De	•					Sand Grains	² Location: PL=Pore			
l <u> </u>	ndicators: (Appli	cable to al	ILKK			-		Indicators for Problem	•		
☐ Histosol (/	,			☐ Sandy Gley				1 cm Muck (A9) (LRF			
☐ Histic Epip				☐ Sandy Red				Coast Prairie Redox			
☐ Black Hist	` '			Stripped Ma				☐ Dark Surface (S7) (L	,		
Hydrogen				Loamy Muc	-			☐ High Plains Depressi (LRR H outside of I			
	Layers (A5) (LRR I			Loamy Gley				•	•		
	k (A9) (LRR F, G, I			☐ Depleted M				☐ Reduced Vertic (F18)			
	Below Dark Surfac	e (A11)		Redox Dark		` '		☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF 12)			
	k Surface (A12)			☐ Depleted D				Other (Explain in Remarks)			
	icky Mineral (S1)	CO) // DE 1	.	Redox Dep		` '					
	ucky Peat or Peat (, H)	☐ High Plains (MLRA 72		, ,		³ Indicators of hydrophyti			
☐ 5 cm Muc	ky Peat or Peat (S	3) (LRR F)		(WILKA 12	a /3 0	I LKK II)		wetland hydrology must disturbed or problematic			
Restrictive I	.ayer (if present):							Hydric Soil Present?			
	ayer (ii present).		Donth	(inches):				☐ Yes ☐ No			
Type:		_	Deptin	(inches):				☐ res ⊠ No			
HYDROLO	GY										
Wetland Hyd	Irology Indicators	:									
Primary Indic	ators (minimum of	one require	ed; che	eck all that apply	<u>)</u>			Secondary Indicators (2	or more required)		
☐ Surface W	/ater (A1)		Г	Salt Crust (B1	1)			☐ Surface Soil Cracks	(B6)		
☐ High Wate	` '		_	_]Aquatic Inverte	,	s (B13)		☐ Sparsely Vegetated	Concave Surface (B8)		
☐ Saturation]Hydrogen Sulf				☐ Drainage Patterns (E			
☐ Water Ma	rks (B1)			_ ☐ Dry-Season W				Oxidized Rhizosphe	res on Living Roots (C3)		
☐ Sediment	Deposits (B2)			Oxidized Rhizo	ospher	es on Living F	Roots (C3)	(where tilled)	. ,		
☐ Drift Depo	sits (B3)			(where not	tilled)			☐ Crayfish Burrows (C			
☐ Algal Mat	or Crust (B4)		_	Presence of R		` '		☐ Saturation Visible or	Aerial Imagery (C9)		
☐ Iron Depo	sits (B5)			Thin Muck Sur	•	•		☐ Geomorphic Position			
☐ Inundation	n Visible on Aerial I	magery (B	7) [Other (Explain	in Rer	marks)		☐ FAC-Neutral Test (D	,		
☐ Water-Sta	ined Leaves (B9)							☐ Frost-Heave Hummo	ocks (D7) (LRR F)		
Field Observ	ations:	Yes	No	Depth (inches)		cribe Recorde		m gauge, monitoring well,	aerial photos, previous		
Surface Water	er present?		\boxtimes								
Water Table	•		\boxtimes								
Saturation Pr											
(includes cap											
	Irology Present?		\boxtimes								
					1						
Remarks: We	etland hydrology inc	dicators are	not m	net.							
1											
1											

Project/Site: Sweetland Wind Farm	Cit	y/County: Ha	and County	y Sampling Date:10/11/2018
Applicant/Owner: _Sweetland Wind Farm, LLC	St	ate: SD Sampling Point: SP-713		
Investigator(s): K. Russo, J. Kensinger		Section, 7	ownship,	Range:S23, T111N, R67W
Landform (hillslope, terrace, etc.) _ swale	Local	relief (concave	e, convex,	none): concave Slope (%): 1 %
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)
				,
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				
Yes No Hydrophytic Vegetation Present?				ample plot located in W-710, an emergent wetland. e not present due to recent rainfall.
Hydric Soil Present?		, ,		·
Wetland Hydrology Present? □ □				
Is the Sampled Area within a Wetland?				
VECETATION . Has escentific names of plants				
VEGETATION – Use scientific names of plants	Λ h a a l t a	Daminant	la dia atau	Deminance Test Westerheat
Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1	<u>%</u>	<u> </u>		Number of Dominant Species that are OBL, FACW, or FAC
2	<u>%</u>			(excluding FAC-): (A)
3	<u>%</u>			Total Number of Dominant
4	<u>%</u>	Tatal Cause		Species Across All Strata:(B)
Conline (Chrish Ctratum (Diet eine 45 ft)	0 %	= Total Cover		Percent of Dominant Species that
Sapling/Shrub Stratum (Plot size: 15 ft.) 1.	%			are OBL, FACW, or FAC:(A/B)
1				
3.	<u>%</u>			Prevalence Index Worksheet:
4.				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 ft.</u>)				FACU species % x 4 = 0
Spartina pectinata Using the second of the second	<u>95 %</u>	· ·	FACW	UPL species% x 5 =0
Helianthus maximiliani 3.	<u>5 %</u> %	<u>N</u>	FACU	Column Totals:0 % (A)0 (B)
4.	<u> </u>			Prevalence Index = B/A =
5.				Hydrophytic Vegetation Indicators:
6.	%			
7	<u>%</u>			
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: <u>30 ft.</u>)				☐ Problematic Hydrophytic Vegetation¹ (explain)
1 2	<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 0 %		- 10tai 00voi		Hydrophytic Vegetation Present? ⊠ Yes ☐ No
Remarks: The Rapid Test is met. Photograph C-61.				

Profile Desc	ription: (Describe	to the depth	needed to docum	ent 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 2/1	94	10YR 4/4	6 C	M	silty clay loam			
	-	· — — –							
		· — — –							
		· —— –			·		-		
		· —— –							
¹Type: C=Co	oncentration, D=Dep	pletion, RM=F	Reduced Matrix, CS=	=Covered or Coate	d Sand Grains	² Location: PL=Pore	e Lining, M=Matrix		
Hydric Soil I	ndicators: (Applic	cable to all L	RRs, unless otherv	vise noted.)		Indicators for Problem	natic Hydric Soils ³ :		
☐ Histosol (A1)		☐ Sandy Gley	ed Matrix (S4)		☐ 1 cm Muck (A9) (LR	R I, J)		
☐ Histic Epi	pedon (A2)		☐ Sandy Red	ox (S5)		☐ Coast Prairie Redox	(A16) (LRR F, G, H)		
Black Hist	` '		Stripped Ma	` '		Dark Surface (S7) (L	,		
Hydrogen		_	-	ky Mineral (F1)		☐ High Plains Depress	ions (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)									
	k (A9) (LRR F, G, F		☐ Depleted M			☐ Red Parent Material	,		
	Below Dark Surface k Surface (A12)	e (A11)		ark Surface (F6)		☐ Very Shallow Dark S			
	icky Mineral (S1)			☐ Other (Explain in Re					
	ucky Peat or Peat (\$	S2) (LRR G. I	☐ Redox Deprior ☐ High Plains	Depressions (F16)	³ Indicators of hydrophyt			
	ky Peat or Peat (S3	, ,		& 73 of LRR H)	,	wetland hydrology must			
	,	, ,				disturbed or problemation			
Restrictive L	ayer (if present):					Hydric Soil Present?			
Type:		De	pth (inches):						
Remarks: Hy	dric soil indicator F	6 is met.							
HYDROLO	GY								
Wetland Hyd	Irology Indicators	:							
Primary Indic	ators (minimum of	one required;	check all that apply	<u>)</u>		Secondary Indicators (2	2 or more required)		
☐ Surface V	/ater (A1)		☐ Salt Crust (B11	1)		☐ Surface Soil Cracks	(B6)		
☑ High Wate	er Table (A2)		☐ Aquatic Inverte	brates (B13)		☐ Sparsely Vegetated Concave Surface (B8)			
			☐ Hydrogen Sulfi	de Odor (C1)		□ Drainage Patterns (
☐ Water Ma	rks (B1)		□ Dry-Season W	ater Table (C2)			eres on Living Roots (C3)		
	Deposits (B2)		Oxidized Rhizo		Roots (C3)	(where tilled)	20)		
☐ Drift Depo	. ,		(where not t ☐ Presence of Re	•		☐ Crayfish Burrows (C			
_	or Crust (B4)			☐ Saturation Visible of ☐ Geomorphic Positio					
☐ Iron Depo		(D7)	☐ Thin Muck Sur☐ Other (Explain	` '		☐ Geomorphic Positio	` '		
	n Visible on Aerial Ir	magery (B7)	☐ Other (Explain	iii iteiliaiks)		☐ Frost-Heave Humm	•		
☐ water-Sta	ained Leaves (B9)		5 4						
Field Observ	/ations:	Yes No	Depth (inches)	Describe Record inspections, etc.		m gauge, monitoring well,	aerial photos, previous		
Surface Wate	er present?]						
Water Table	present?		0						
Saturation Pr	resent?		0						
(includes cap	oillary fringe)								
Wetland Hyd	drology Present?]						
Remarks: We	etland hydrology inc	dicators A2, A	3, D2, and D5 are m	net.					
I									

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?			(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.
$\begin{array}{ccc} & & \text{Yes} & \text{No} \\ \text{Hydrophytic Vegetation Present?} & & \square & \boxtimes \end{array}$	emerge	ent wetland. No		ample plot located adjacent to W-710, an logic 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			

		to the dep				or confirm the	absence of indicators.)	
Depth							_	
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 3/1	100				·	silty clay loam	-
	-							-
	-					·		-
	-					·		-
					<u> </u>			
¹Type: C=Co	ncentration, D=De	pletion, RM	=Reduced Matrix, C	S=Cove	red or Coated	d Sand Grains	² Location: PL=Pore	E Lining, M=Matrix
			LRRs, unless othe				Indicators for Problem	
☐ Histosol (/	A1)		☐ Sandy Gle	eved Ma	trix (S4)		1 cm Muck (A9) (LR	R I. J)
☐ Histic Epip	,		☐ Sandy Re	•	, ,		☐ Coast Prairie Redox	
☐ Black Hist			☐ Stripped N				☐ Dark Surface (S7) (L	
☐ Hydrogen	` '		☐ Loamy Mu	,	•		☐ High Plains Depress	,
	_ayers (A5) (LRR F	=)	☐ Loamy GI	-			(LRR H outside of	
	k (A9) (LRR F, G, I		☐ Depleted	-			☐ Reduced Vertic (F18	3)
	Below Dark Surface		☐ Redox Da				☐ Red Parent Material	(TF2)
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7)							☐ Very Shallow Dark S	Surface (TF 12)
	cky Mineral (S1)			Other (Explain in Re	marks)			
•	ıcky Peat or Peat (S2) (LRR G	☐ Redox De , H) ☐ High Plair				³ Indicators of hydrophyt	ic vegetation and
	ky Peat or Peat (S				of LRR H)		wetland hydrology must	
	,	, (,					disturbed or problemation	
Restrictive L	ayer (if present):						Hydric Soil Present?	
Type:	,	[Depth (inches):				☐ Yes ⊠ No	
		_			_			
HYDROLO	ev.							
	Irology Indicators		d; check all that app	lv)			Secondary Indicators (2	2 or more required)
	•	ono regano					<u> </u>	
☐ Surface W	` '		☐ Salt Crust (B	,	- (D40)		☐ Surface Soil Cracks	` '
☐ High Wate			Aquatic Inve					Concave Surface (B8)
☐ Saturation☐ Water Ma			☐ Hydrogen Su☐ Dry-Season \				☐ Drainage Patterns (eres on Living Roots (C3)
_	Deposits (B2)		Oxidized Rhi		` ,	Pooto (C2)	(where tilled)	eres on Living Roots (Co)
☐ Drift Depo			(where no		es on Living	Noois (C3)	☐ Crayfish Burrows (C	28)
☐ Algal Mat	, ,		☐ Presence of		d Iron (C4)		☐ Saturation Visible o	
☐ Iron Depo			☐ Thin Muck S				☐ Geomorphic Positio	
-	າ Visible on Aerial I	magery (B7					☐ FAC-Neutral Test ([
	ined Leaves (B9)	magery (Dr	, —		,		☐ Frost-Heave Humm	
_	· ,		Depth			15		
Field Observ	ations:	Yes	No (inches)		cribe Record ections, etc.)	,	m gauge, monitoring well,	aerial photos, previous
Surface Wate	ar nresent?		\boxtimes	""		, available.		
	•							
Water Table								
Saturation Pr			⊠					
(includes cap			5 7					
wetland Hyd	Irology Present?							
Remarks: We	etland hydrology ind	dicators are	not met.					
1								

Project/Site: Sweetland Wind Farm	Ci	ty/County: H	and Count	y Sampling Date: <u>10/11/2018</u>		
Applicant/Owner: Sweetland Wind Farm, LLC						
Investigator(s): K. Russo, J. Kensinger				Range: S26, T111N, R67W		
Landform (hillslope, terrace, etc.) terrace	Loca	I relief (concav	e, convex,	none): none Slope (%): 0 %		
Subregion (LRR): Northern Great Plains Spring Wheat						
Soil Map Unit Name: Prosper-Stickney loams, nearly le				NWI Classification: N/A		
Are climate/hydrologic conditions on the site typical for this				(If no, explain in Remarks)		
	-		<u> </u>	(ii no, oxpiaii ii realiano)		
Vegetation Soil Hydrol	••	Are "Norm	nal Circums	stances" present? Yes No		
Significantly Disturbed? \square Naturally Problematic? \square \square			(If neede	ed, explain any answers in Remarks)		
•			`	,		
SUMMARY OF FINDINGS – Attach site map show	ing sampl	ing point loc	ations, t	ransects, important features, etc.		
Yes No Hydrophytic Vegetation Present? ☐ ☑	ample plot. Normal hydrologic conditions are l. Soil and vegetation have been disturbed by					
Hydric Soil Present? □ ☑ ☑ ☑ Wetland Hydrology Present? □ ☑ ☑		tural activities.				
Is the Sampled Area within a Wetland?						
is the Sampled Area within a Wetland?						
VEGETATION – Use scientific names of plants						
T (PL) (CO ()	Absolute		Indicator	Dominance Test Worksheet:		
Tree Stratum (Plot size: <u>30 ft.</u>) 1	% Cover %	Species?	Status	Number of Dominant Species that		
2.				are OBL, FACW, or FAC (excluding FAC-): 0 (A)		
3	%			Total Number of Dominant		
4	%			Species Across All Strata: 1 (B)		
Conline/Chrish Ctrotum /Diot circs 45 ft	0 %	= Total Cover	r	Percent of Dominant Species that		
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>) 1.	%			are OBL, FACW, or FAC: 0% (A/B)		
1 2						
3.	0.4			Prevalence Index Worksheet:		
4.				Total % Cover of: Multiply by:		
5	%			OBL species% x 1 =0		
	0 %	= Total Cover	r	FACW species		
Herb Stratum (Plot size: <u>5 ft.</u>)				FACU species		
1. Glycine max	<u>40 %</u>	<u>Y</u>	<u>UPL</u>	UPL species		
2.	<u>%</u>			Column Totals: <u>0</u> % (A) <u>0</u> (B)		
3	<u>%</u>			Prevalence Index = B/A =		
5.	<u> </u>			Hydrophytic Vegetation Indicators:		
6.	%					
7.	%			☐ 1 Rapid Test for Hydrophytic Vegetation		
8.	%			☐ 2 Dominance Test is >50%		
9.	<u>%</u>			☐ 3 Prevalence Index is ≤3.0 ¹		
10.	40 %	= Total Cover	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		
Bare Ground in Herb Stratum 60 %		. otal ooro	•	Hydrophytic Vegetation Present? ☐ Yes ⊠ No		
Remarks: Hydrophytic vegetation indicators are not met. The	he only vege	tation present	is agricultu	ral soybean. Photograph C-63.		
, , , ,	, 5	•	5			

Profile Desc	ription: (Describe	to the de	oth needed	to docum	ent the	indicator o	r confirm the	absence of indicators.)			
Depth	Matrix			Rec	lox Fea	itures					
(inches)	Color (moist)	%	Color (m	noist)	%	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=Cd	oncentration, D=De	pletion, RM	=Reduced	Matrix, CS	=Cover	ed or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil I	ndicators: (Appli	cable to all	LRRs, unl	ess otherv	vise no	oted.)		Indicators for Problem	natic Hydric Soils ³ :		
☐ Histosol (A1)			Sandy Gley	ed Mat	rix (S4)		1 cm Muck (A9) (LRI	R I, J)		
☐ Histic Epi	pedon (A2)			Sandy Red	ox (S5)			☐ Coast Prairie Redox	(A16) (LRR F, G, H)		
☐ Black Hist	` '			Stripped Ma	•	,		☐ Dark Surface (S7) (L	,		
☐ Hydrogen				oamy Muc				☐ High Plains Depress	ions (F16)		
	Layers (A5) (LRR F			oamy Gley				(LRR H outside of	•		
	k (A9) (LRR F, G, I			Depleted M				Reduced Vertic (F18	,		
	Below Dark Surface	e (A11)		Redox Dark		` '		☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF 12)			
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)								Other (Explain in Re	, ,		
-	icky Mineral (S1)	CO) /I DD (_	•		` '					
	ucky Peat or Peat (ky Peat or Peat (S3			ngn Plains (MLRA 72		ssions (F16)		³ Indicators of hydrophyti wetland hydrology must			
	ky i eat of i eat (50) (L IXIX I)	,	(u	. =		disturbed or problematic			
Restrictive L	ayer (if present):							Hydric Soil Present?			
Type:			Depth (inch	es):				☐ Yes ☐ No			
		_									
Remarks: Hy	dric soil indicators	are not met									
HYDROLO	GY										
Wetland Hyd	drology Indicators	:									
Primary Indic	ators (minimum of	one require	d; check all	that apply)			Secondary Indicators (2	2 or more required)		
☐ Surface V	Vater (A1)		☐ Salt	Crust (B1	1)			☐ Surface Soil Cracks	(B6)		
☐ High Wate	er Table (A2)		Aqu	atic Inverte	brates	(B13)		☐ Sparsely Vegetated Concave Surface (B8)			
☐ Saturation				rogen Sulfi				☐ Drainage Patterns (I			
☐ Water Ma	rks (B1)		☐ Dry-	Season W	ater Ta	ble (C2)		Oxidized Rhizosphe	eres on Living Roots (C3)		
☐ Sediment	Deposits (B2)					es on Living F	Roots (C3)	(where tilled)			
☐ Drift Depo	osits (B3)		_ `	here not t				Crayfish Burrows (C			
-	or Crust (B4)			sence of R		` ,		Saturation Visible or			
☐ Iron Depo			_	Muck Sur	•	•		Geomorphic Position	, ,		
	n Visible on Aerial I	magery (B7	') 🗆 Otn	er (Explain	ın Ken	narks)		FAC-Neutral Test (D	•		
☐ Water-Sta	ained Leaves (B9)							☐ Frost-Heave Humm	OCKS (D7) (LRR F)		
Field Observ	vations:	Yes		epth ches)		cribe Recorde ections, etc.),		m gauge, monitoring well,	aerial photos, previous		
Surface Wate	er present?		\boxtimes	·	iiiop.	30110110, 010.),	, ii availabio.				
Water Table	•										
Saturation Pr	•	_									
(includes cap			⊠								
	drology Present?		\boxtimes								
					1						
Remarks: We	etland hydrology ind	licators are	not met.								
1											

Project/Site: Sweetland Wind Farm	Cit	y/County: H	and County	Sampling Date:10/12/2018				
Applicant/Owner: Sweetland Wind Farm, LLC	St	ate: SD Sampling Point: SP-717						
	Investigator(s): K. Russo, J. Kensinger Section, Townsh							
Landform (hillslope, terrace, etc.)depression								
Subregion (LRR): Northern Great Plains Spring Wheat R								
Soil Map Unit Name: Tetonka silt loam, 0 to 1 percent sk				NWI Classification: PEM1C				
Are climate/hydrologic conditions on the site typical for this ti			⊠ No	(If no, explain in Remarks)				
	-		<u> </u>	(ii no, explain iii recinance)				
Vegetation Soil Hydrolo	ogy	Are "Norm	al Circums	tances" present? 🛛 Yes 🔲 No				
Significantly Disturbed?			(If neede	ed, explain any answers in Remarks)				
, – – –			`	,				
SUMMARY OF FINDINGS – Attach site map showi	ng sampli	ng point loc	ations, tr	ansects, important features, etc.				
Yes No Hydrophytic Vegetation Present?								
VEGETATION – Use scientific names of plants								
	Absolute		Indicator	Dominance Test Worksheet:				
Tree Stratum (Plot size: <u>30 ft.</u>)	% Cover	Species?	Status	Number of Dominant Species that				
1	<u>%</u> <u>%</u>			are OBL, FACW, or FAC				
3	0.4			(excluding FAC-):1_(A)				
4.				Total Number of Dominant Species Across All Strata: 1 (B)				
	0 %	= Total Cover		<u></u>				
Sapling/Shrub Stratum (Plot size: 15 ft.)				Percent of Dominant Species that are OBL, FACW, or FAC: 100% (A/B)				
1.	<u></u> %			are OBE, I AGW, OF I AG.				
2	<u>%</u>			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 % x 3 = 0				
Herb Stratum (Plot size: <u>5 ft.</u>)	00.0/	V	E40	FACU species % x 4 = 0				
Echinochloa crus-galli Rumex crispus	<u>80 %</u> 10 %	<u>Y</u> N	<u>FAC</u> FAC	UPL species % x 5 = 0				
2	<u>10 %</u>	<u></u>	TAC	Column Totals:0 % (A)0 (B)				
4.	%			Prevalence Index = B/A =				
5.	%			Hydrophytic Vegetation Indicators:				
6.	%							
7	%			1 Rapid Test for Hydrophytic Vegetation				
8.	<u>%</u>							
9 10.	<u>%</u>			☐ 3 Prevalence Index is ≤3.0 ¹				
10.	90 %	= Total Cover		☐ 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)				
Woody Vine Stratum (Plot size: <u>30 ft.</u>)	0.4			☐ 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				
Bare Ground in Herb Stratum 10 %		- Total Gover		Hydrophytic Vegetation Present? ⊠ Yes ☐ No				
Remarks: The Dominance Test is met. Photograph C-64.								

Profile Desc	ription: (Describe	to the depti	n needed to docum	ent th	e indicator o	r confirm the	absence of indicators.)			
Depth	Matrix		Red	dox Fe	atures					
(inches)	Color (moist)	%	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	<u>D</u>	M				
		· -								
-		· 								
-		· -								
-		· 								
¹Type: C=Ce	oncentration, D=Dep	pletion, RM=F	Reduced Matrix, CS	=Cove	red or Coated	I Sand Grains	² Location: PL=Pore	E Lining, M=Matrix		
Hydric Soil	Indicators: (Applic	cable to all L	RRs, unless other	wise n	oted.)		Indicators for Problem	atic Hydric Soils ³ :		
☐ Histosol (A1)		☐ Sandy Gley	ed Ma	atrix (S4)		1 cm Muck (A9) (LRI	R I, J)		
☐ Histic Epi	pedon (A2)		☐ Sandy Red	ox (S5	5)		☐ Coast Prairie Redox	(A16) (LRR F, G, H)		
☐ Black His	` '		☐ Stripped Management	,	,		☐ Dark Surface (S7) (LRR G)			
	Sulfide (A4)		☐ Loamy Mud	cky Mir	neral (F1)		☐ High Plains Depress	ions (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)										
	k (A9) (LRR F, G, F			Reduced Vertic (F18	,					
	Below Dark Surface	e (A11)			` '		Red Parent Material			
	k Surface (A12)			☐ 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) ☐ 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										
S cili ivide	oky i eat of i eat (oc) (L IXIX I)	(2.0.12	u	o. =		disturbed or problematic			
Restrictive I	_ayer (if present):						Hydric Soil Present?			
Type:		De	epth (inches):				⊠ Yes □ No			
			<u> </u>							
Remarks: Hy	dric soil indicator F	6 is met.								
HYDROLO	GY									
Wetland Hy	drology Indicators	:								
Primary India	cators (minimum of	one required;	check all that apply	<u>')</u>			Secondary Indicators (2	2 or more required)		
☐ Surface V	Vater (A1)		☐ Salt Crust (B1	1)			☐ Surface Soil Cracks (B6)			
_	er Table (A2)		☐ Aquatic Invert	,	s (B13)		☐ Sparsely Vegetated Concave Surface (B8)			
			☐ Hydrogen Sulf				☐ Drainage Patterns (B10)			
☐ Water Ma	ırks (B1)		☐ Dry-Season W	/ater T	able (C2)		☐ Oxidized Rhizosphe	res on Living Roots (C3)		
☐ Sediment	Deposits (B2)		Oxidized Rhiz		res on Living F	Roots (C3)	(where tilled)			
☐ Drift Depo	osits (B3)		(where not				☐ Crayfish Burrows (C			
_	or Crust (B4)		☐ Presence of R		` ,		☐ Saturation Visible or			
☐ Iron Depo			☐ Thin Muck Su	•	•		☐ Geomorphic Position	` '		
	n Visible on Aerial I	magery (B7)	Other (Explain	ı ın Rei	marks)		☐ FAC-Neutral Test (□	,		
☐ Water-Sta	ained Leaves (B9)						☐ Frost-Heave Humm	OCKS (D7) (LKK F)		
Field Obser	vations:	Yes N	Depth o (inches)		scribe Recordo pections, etc.)		ım gauge, monitoring well,	aerial photos, previous		
Surface Wat	er present?]		,					
Water Table	present?		4							
Saturation P	•		<u> </u>							
(includes car		<u>-</u>	-							
	drology Present?]							
	etland hydrology inc			-1						
		,, / ·	_,							
1										

Applicant/Owner Sweetland Wind Farm, LLC State SD Sampling Point SP-718
Number of Dominant Species that are Stratum Section Section
Landform (hillslope, terrace, etc.) _ terrace
Subregion (LRR): Northern Great Plains Spring Wheat Region Lat: 44.41653 Long: 98.811671 Datum: NAD83
Naturally Problematic Tetonka slit loam, 0 to 1 percent slopes
Are climate/hydrologic conditions on the site typical for this time of year?
Vegetation Vegetation Vegetation Soil Hydrology Are "Normal Circumstances" present? Yes No
Significantly Disturbed?
Naturally Problematic?
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present?
Yes No Hydrophytic Vegetation Present?
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Is the Sampled Area within a Wetland? Absolute Species Species Status
Hydric Soil Present?
Wetland Hydrology Present? □ ⊠ Is the Sampled Area within a Wetland? □ ⊠ VEGETATION – Use scientific names of plants Tree Stratum (Plot size: 30 ft.) Absolute % Cover Species? Dominant Species Indicator Species (excluding FAC-): Dominant Species that are OBL, FACW, or FAC (excluding FAC-): Number of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 0 (excluding F
VEGETATION – Use scientific names of plants Tree Stratum (Plot size: 30 ft.) Absolute % Cover Species? Dominant Species status Indicator Status Number of Dominant Species that are OBL, FACW, or FAC (excluding FAC-):
VEGETATION – Use scientific names of plants Tree Stratum (Plot size: 30 ft.) Absolute % Cover Species? Species? Dominant Species that are OBL, FACW, or FAC (excluding FAC-): Number of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): O (A) 3. 4. 9/6 ————————————————————————————————————
Absolute Dominant Indicator Species? Status
Tree Stratum (Plot size: 30 ft.) % Cover Species? Status Number of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 0 (A) 3.
1. % Number of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 0 (A) 3. % Total Number of Dominant Species Across All Strata: 1 (B) 4. % Percent of Dominant Species that are OBL, FACW, or FAC: 0% (A/B) 2. % Percent of Dominant Species that are OBL, FACW, or FAC: 0% (A/B) 3. % Prevalence Index Worksheet: 4. % Total % Cover of: Multiply by: 5. % OBL species % x1 = 0 FACW species % x2 = 0 FACW species % x3 = 0 FACU species % x4 = 0
2
3.
1
Sapling/Shrub Stratum (Plot size: 15 ft.) Percent of Dominant Species that are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum
1. % 2. % 3. % 4. % 5. % Herb Stratum (Plot size: 5 ft.) Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL species % x1 = 0 FACW species % x2 = 0 FAC species % x3 = 0 FACU species % x3 = 0 FACU species % x4 = 0
3.
4. % Total % Cover of: Multiply by: 5. % OBL species % x 1 = 0 FACW species % x 2 = 0 FAC species % x 3 = 0 FACU species % x 4 = 0
5.
Herb Stratum (Plot size: $\underline{5 \text{ ft.}}$) FAC species $\frac{\%}{\%} \times 3 = \underline{0}$ FACU species $\frac{\%}{\%} \times 4 = \underline{0}$
FACU species%
1. Glycine max 60 % Y UPL LIPI species % x 5 = 0
1. Glycine max 60 % Y UPL UPL species % x 5 = 0 2. % Column Totals: 0 % (A) 0 (B)
3. " " " " " " " " " " " " " " " " " " "
4 Prevalence Index = B/A =
5 % Hydrophytic Vegetation Indicators:
6
0 Department Text in 1500
10 %
60 % = Total Cover
Woody Vine Stratum (Plot size: 30 ft.) □ Problematic Hydrophytic Vegetation¹ (explain)
1
must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 40 %
Remarks: Hydrophytic vegetation indicators are not met. The only vegetation present is agricultural sovbean. Photograph C-65.
Remarks: Hydrophytic vegetation indicators are not met. The only vegetation present is agricultural soybean. Photograph C-65.

Depth Markix Rodox Features Loc Texture Remarks			to the dep				or confirm the	absence of indicators.)		
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains TLocation: PL=Pore Lining, M=Matrix										
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Matrix,				Color (moist)	<u>%</u>	Type'	Loc ²		Remarks	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: I camb (Asi) (LRR I, J) Cast (LRR II, J) Cast (LRR I, J) Cast (LRI I, J) Cast (L	0-16	101R 2/1	100			. ———		slity clay loam		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Indicators (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Indicators (Applicable (APP) Indicators (Applicable (APP) Indicators (APP) Indicat									-	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Indicators (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Indicators (Applicable (APP) Indicators (Applicable (APP) Indicators (APP) Indicat		-							-	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Indicators (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Indicators (Applicable (APP) Indicators (Applicable (APP) Indicators (APP) Indicat		-		-		· ——				
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Indicators (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Indicators (Applicable (APP) Indicators (Applicable (APP) Indicators (APP) Indicat						·				
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: I camb (Asi) (LRR I, J) Cast (LRR II, J) Cast (LRR I, J) Cast (LRI I, J) Cast (L										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: I camb (Asi) (LRR I, J) Cast (LRR II, J) Cast (LRR I, J) Cast (LRI I, J) Cast (L		1							-	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: I camb (Asi) (LRR I, J) Cast (LRR II, J) Cast (LRR I, J) Cast (LRI I, J) Cast (L	¹Type: C=Co	ncentration, D=De	pletion, RM=	Reduced Matrix, CS	S=Cove	red or Coate	d Sand Grains	² Location: PL=Pore	E Lining, M=Matrix	
Histic Epipedon (A2)										
Histic Epipedon (A2)	☐ Histosol (/	\1)		☐ Sandy Gle	eved Ma	trix (S4)		☐ 1 cm Muck (A9) (LR	R I. J)	
Black Histic (A3)	. —	,		•	•	. ,		, , ,		
Hydrogen Sulfide (A4)										
Stratified Layers (A5) (LRR F)								_	,	
1 cm Muck (A9) (LRR F, G, H)			=)	·	-					
Depleted Below Dark Surface (A11)				·	-			•	•	
Thick Dark Surface (A12)								,	•	
Sandy Mucky Mineral (S1)	- •		· (/ \		` ,					
□ 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 situation of hydrology must be present, unless disturbed or problematic situation of hydrology must be present, unless disturbed or problematic situation of hydrology must be present, unless disturbed or problematic situation of hydrology must be present, unless disturbed or problematic situation of hydrology must be present, unless disturbed or problematic situation of hydrology must be present, unless disturbed or problematic situation of hydrology must be present, unless disturbed or problematic situation of hydrology must be present, unless disturbed or problematic situation of hydrology must be present, unless disturbed or problematic situation of hydrology must be present, unless disturbed or problematic situation of hydrology must be present, unless disturbed or problematic situation of hydrology must be present, unless disturbed or problematic situation of hydrology must be present; lifety and the left of hydrology must be present, unless disturbed or problematic situation of hydrology must be present, unless disturbed or problematic situation of hydrology must be present; lifety lifety situation of hydrology must be present, unless disturbed or problematic situation of hydrology must be present, unless disturbed or problematic situation of hydrology must be present, unless disturbed or present?		, ,								
S cm Mucky Peat or Peat (S3) (LRR F)	•	• , ,	S2) (LRR G							
Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Type: Soll present? HYDROLOGY Wetland Hydrology Indicators are not met. HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (2 or more required)				, —	•	` ,				
Remarks: Hydric soil indicators are not met. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Surface Water (A1) Surface Water (A2) Sediment Deposits (B2) Oradized Rhizospheres on Living Roots (C3) Sediment Deposits (B3) Algal Mat or Crust (B4) From Poposits (B3) Algal Mat or Crust (B4) From Poposits (B5) Individual Mydrace (C7) Surface Water (A1) Depth (mohe and tilled) From Deposits (B5) Invindation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Yes No Depth (inches) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Water Table present? Water Table Water Present? Water Table Present? Water Table Water Present? Water Table Present? Water Table Water Present? Water Table Water Present? Water Table Water Present? Water Table Water		ny rout or rout (Ot) (= :(::)	•		,				
Type: Depth (inches): Yes No Remarks: Hydric soil indicators are not met. ### HYDROLOGY ### Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	Restrictive L	aver (if present):						Hydric Soil Present?		
Remarks: Hydric soil indicators are not met. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required: check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Sulf Crust (B11) Sulface Soil Cracks (B6) Hydrogen Sulfide Odor (C1) Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Mere not tilled) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Ves No (inches) Surface Water present? Water Table present? Water Table present? Wetland Hydrology Present? Surface Water present? Sur		ayor (ii procont).	Г	enth (inches):				-		
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Sulface Water (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Sufface Mater Marks (B1) Oxidized Rhizospheres on Living Roots (C3) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Iron Deposits (B3) Into Deposits (B5) Into Deposits (B5) Water-Stained Leaves (B9) Field Observations: Ves No Depth (inches) Surface Water Marks (B1) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Wetland Hydrology Present? Wetland Hydrology Present? Wetland Hydrology Present? Wetland Hydrology Present? Wetland Hydrology Present? Water Table (C2) Secondary Indicators (2 or more required) Secondary Indicators (2 or more required) Surface Soil Cracks (B6) Surface Soil Cracks (B10) Surface Soil Cracks (B10) Surface Soil Cracks (B6) Surface Soil Cracks (B10) Surface So			_					100 140		
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Concave Surface (B8) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Drift Deposits (B3) (where not tilled) Crayfish Burrows (C8) (where tilled) I Iron Deposits (B5) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Water-Stained Leaves (B9) Tother (Explain in Remarks) Escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Surface Water present? Yes No (inches) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Water Table present? Saturation P										
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) Surface Water (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Saturation Visible on Aerial Imagery (B7) Mater-Stained Leaves (B9) Field Observations: Ves No Surface Water Table (P2) Secondary Indicators (2 or more required) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Sparsely Vegetated Concave Surface (C3) (where tilled) Surface Raivance (C2) Sparsely Vegetated Concave Surface (C3) (where tilled) Sparsely Vegetated Concave Surface (C3) (where tilled) Sparsely Vegetated Concave Surface (C3) (where tilled) Sparsel Vegetaren (B10) Sparsel Veg										
Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6)	_			li abadi all that anni				Cocondon Indicators (
High Water Table (A2)		•	one required					•		
Saturation (A3)		` '		_ `	,				` '	
Water Marks (B1)	-									
Sediment Deposits (B2)								-		
Drift Deposits (B3)	_	` '		_ •		, ,	D : (00)		eres on Living Roots (C3)	
Algal Mat or Crust (B4)						es on Living	Roots (C3)	,	`&\	
Iron Deposits (B5)		` '		_ `		d Iron (C4)				
□ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ FAC-Neutral Test (D5) □ Frost-Heave Hummocks (D7) (LRR F) Field Observations: Ves No Cinches) □ Depth (inches) □ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Surface Water present? □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □										
Water-Stained Leaves (B9) Field Observations: Yes No (inches) Depth (inches) Surface Water present? Water Table present? Saturation Present? (includes capillary fringe) Wetland Hydrology Present?		` '	magan, (D7)							
Field Observations: Yes No Depth (inches) Surface Water present? Water Table present? Saturation Present? (includes capillary fringe) Wetland Hydrology Present? Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Previous inspections, etc.), if available: Surface Water gauge, monitoring well, aerial photos, previous inspections, etc.), if available: Wetland Hydrology Present? Wetland Hydrology Present?			magery (B7)	☐ Other (Explai	II III IXCI	narks)				
Yes No (inches) inspections, etc.), if available: Surface Water present?	☐ water-Sta	ined Leaves (B9)			1				OCKS (D1) (EKK1)	
Surface Water present?	Field Observ	rations:	Yes 1				,	m gauge, monitoring well,	aerial photos, previous	
Water Table present?	Surface Wate	er present?		\boxtimes		-, -, -, -,	,			
Saturation Present?		•								
(includes capillary fringe) Wetland Hydrology Present?										
Wetland Hydrology Present?				<u> </u>						
				☑						
Remarks: Wetland hydrology indicators are not met.	wetland Hyd	rology Present?		<u> </u>						
	Remarks: We	tland hydrology ind	dicators are	not met.						

Project/Site: Sweetland Wind Farm	Cit	y/County: H	and County	Sampling Date: 10/12/2018					
Applicant/Owner: _ Sweetland Wind Farm, LLC	Applicant/Owner: Sweetland Wind Farm, LLC								
	Investigator(s): K. Russo, J. Kensinger Section, Towns								
Landform (hillslope, terrace, etc.) swale									
Subregion (LRR): Northern Great Plains Spring Wheat R									
				NWI Classification: N/A					
Are climate/hydrologic conditions on the site typical for this ti			⊠ No	(If no, explain in Remarks)					
			<u> </u>	(ii rio, explain iii recinance)					
Vegetation Soil Hydrolo	gy	Are "Norm	al Circums	tances" 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?									
VEGETATION – Use scientific names of plants									
T. (PL + 1 - 20 ft)	Absolute		Indicator	Dominance Test Worksheet:					
Tree Stratum (Plot size: 30 ft.) 1.	% Cover	Species?	Status	Number of Dominant Species that					
1	<u>%</u> %			are OBL, FACW, or FAC					
3.	0.4			(excluding FAC-):(A)					
4.	%			Total Number of Dominant Species Across All Strata: (B)					
	0 %	= Total Cover							
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)				Percent of Dominant Species that are OBL, FACW, or FAC: (A/B)					
1	<u>%</u>			(\\					
2				Prevalence Index Worksheet:					
3	<u>%</u>			Total % Cover of: Multiply by:					
4 5.	<u>%</u> %		_	OBL species					
5	0 %	= Total Cover		FACW species					
Herb Stratum (Plot size: <u>5 ft.</u>)	0 70	- 10tal 00vcl		FAC species% x 3 =0					
1. Spartina pectinata	<u>95 %</u>	Υ	FACW	FACU species% x 4 =0					
2.	<u>%</u>	- _	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	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>								
7. 8.	<u>%</u> %			2 Dominance Test is >50%					
9.				☐ 3 Prevalence Index is ≤3.0¹					
10.	%			_					
Wash Vine Chrotum (Distains 20 ft.)	95 %	= Total Cover		4 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)					
Woody Vine Stratum (Plot size: <u>30 ft.</u>) 1.	%			☐ 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 Stratum5 %				Hydrophytic Vegetation Present? ⊠ Yes ☐ No					
Remarks: The Rapid Test is met. Photograph C-66.									

Profile Desc	ription: (Describe	to the depth	needed to docum	ent 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 2/1	96	10YR 3/3	4 C	M	silty clay				
					. 					
l ———					·					
					·		•			
					·					
¹Type: C=Co	oncentration, D=Dep	oletion, RM=R	Reduced Matrix, CS=	=Covered or Coate	ed Sand Grains	² Location: PL=Pore	e Lining, M=Matrix			
Hydric Soil I	ndicators: (Applic	able to all L	RRs, unless otherv	vise noted.)		Indicators for Problem	natic Hydric Soils ³ :			
☐ Histosol (A1)		☐ Sandy Gley	ed Matrix (S4)		☐ 1 cm Muck (A9) (LR	R I, J)			
☐ Histic Epi	pedon (A2)		☐ Sandy Red			☐ Coast Prairie Redox	(A16) (LRR F, G, H)			
☐ Black Hist	` '		Stripped Ma	, ,		Dark Surface (S7) (L	,			
Hydrogen			·	ky Mineral (F1)		☐ High Plains Depress (LRR H outside of	ions (F16)			
	Layers (A5) (LRR F		☐ Loamy Gley			Reduced Vertic (F18	•			
	k (A9) (LRR F, G, F		☐ Depleted M			☐ Red Parent Material	,			
	Below Dark Surface k Surface (A12)	; (AII)		ark Surface (F6)		☐ Very Shallow Dark S				
	icky Mineral (S1)		Redox Depi	, ,		☐ Other (Explain in Re				
-	ucky Peat or Peat (\$	S2) (LRR G. F		Depressions (F16)	³ Indicators of hydrophyt				
	ky Peat or Peat (S3			& 73 of LRR H)	,	wetland hydrology must				
	,	, ,				disturbed or problemation				
Restrictive L	ayer (if present):					Hydric Soil Present?				
Type:		De	pth (inches):							
		-								
Remarks: Hy	dric soil indicator F	6 is met.								
HYDROLO	GY									
Wetland Hyd	Irology Indicators	1								
Primary Indic	ators (minimum of	one required;	check all that apply	<u>)</u>		Secondary Indicators (2 or more required)			
Surface ₩	/ater (A1)		☐ Salt Crust (B11	1)		☐ Surface Soil Cracks	(B6)			
☐ ☐ High Wate	er Table (A2)		☐ Aquatic Inverte	brates (B13)		☐ Sparsely Vegetated	Concave Surface (B8)			
			☐ Hydrogen Sulfi			☐ Drainage Patterns (B10)				
☐ Water Ma	rks (B1)		☐ Dry-Season W	ater Table (C2)		Oxidized Rhizosphe	eres on Living Roots (C3)			
☐ Sediment	Deposits (B2)		Oxidized Rhizo		Roots (C3)	(where tilled)				
☐ Drift Depo			(where not t	•		☐ Crayfish Burrows (C				
Algal Mat	, ,		☐ Presence of Re	` ,		☐ Saturation Visible o				
☐ Iron Depo		(5-)	☐ Thin Muck Sur☐ Other (Explain	, ,		☑ Geomorphic Positio☑ FAC-Neutral Test (I	` '			
	n Visible on Aerial II	magery (B7)	☐ Other (Explain	iii Keiliaiks)		☐ Frost-Heave Humm	•			
☐ water-Sta	nined Leaves (B9)			1			OCKS (D1) (LIKK 1)			
Field Observ	rations:	Yes No	Depth (inches)	Describe Recor inspections, etc		m gauge, monitoring well,	aerial photos, previous			
Surface Wate	er present?		0.5							
Water Table	present?		0							
Saturation Pr	esent?									
(includes cap	oillary fringe)									
Wetland Hyd	drology Present?]							
Remarks: We	etland hydrology inc	licators A1, A	2, A3, D2, and D5 a	re met.						
1										

Project/Site: Sweetland Wind Farm	City	/County: Ha	and County	Sampling Date:10/12/2018
Applicant/Owner: Sweetland Wind Farm, LLC	Sta	ate: SD Sampling Point: SP-720		
	Range: S18, T111N, R66W			
Landform (hillslope, terrace, etc.) hillslope	none): convex Slope (%): 5 %			
Subregion (LRR): Northern Great Plains Spring Wheat R				
				NWI Classification: N/A
Are climate/hydrologic conditions on the site typical for this ti			⊠ No	(If no, explain in Remarks)
	-		_	,
Vegetation Soil Hydrolo	ogy	Are "Norma	al Circums	tances" present? ☐ Yes No
Significantly Disturbed? Naturally Problematic?			(If neede	ed, explain any answers in Remarks)
, – – –			`	,
SUMMARY OF FINDINGS – Attach site map showing	ng samplin	ng point loca	ations, tr	ansects, important features, etc.
Yes No				ample plot located adjacent to W-712, an
Hydrophytic Vegetation Present?	rainfall.	it wetland. No	rmai nyard	ologic conditions are not present due to recent
Hydric Soil Present? □ ☑ Wetland Hydrology Present? □ ☑				
Is the Sampled Area within a Wetland?				
VEGETATION – Use scientific names of plants				
			Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: <u>30 ft.</u>)		Species?	Status	Number of Dominant Species that
1	<u>%</u>			are OBL, FACW, or FAC
2	<u>%</u> <u>%</u>			(excluding FAC-): 0 (A)
3 4	<u></u>			Total Number of Dominant
		= Total Cover		Species Across All Strata: 2 (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	%			OBL species% x 1 =0 FACW species% x 2 =0
	<u>0 %</u> :	= Total Cover		FAC species
Herb Stratum (Plot size: <u>5 ft.</u>)				FACU species
1. Schedonorus arundinaceus	<u>50 %</u>	<u>Y</u> Y	FACU	UPL species% x 5 =0
Bromus inermis Poa pratensis	<u>20 %</u> <u>15 %</u>		UPL FACU	Column Totals: 0 % (A) 0 (B)
4. Solidago rugosa	5 %	N N	FAC	Prevalence Index = B/A =
5.	<u> </u>		17.0	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.	<u>%</u> 90 %	= Total Cover		☐ 4 Morphological Adaptations¹ (Provide
Woody Vino Stratum (Diot cize: 20 ft.)		- 10tai 00voi		supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: 30 ft.) 1	%			☐ Problematic Hydrophytic Vegetation¹ (explain)
2.				¹ Indicators of hydric soil and wetland hydrology
		= Total Cover	_	must be present, unless disturbed or problematic
Bare Ground in Herb Stratum 10 %				Hydrophytic Vegetation Present? ☐ Yes ☒ No
Remarks: Hydrophytic vegetation indicators are not met. Ph	otograph C-6	67.	'	

		to the dep				or confirm the	absence of indicators.)	
Depth	Matrix			edox Fe			_	
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 2/2	100	·-				silty clay loam	
	-				· ——			
					· ——			
							-	
					·			
¹Type: C=Co	oncentration, D=De	pletion, RM:	=Reduced Matrix, CS	S=Cove	red or Coate	d Sand Grains	² Location: PL=Pore	Lining, M=Matrix
			LRRs, unless othe				Indicators for Problem	
☐ Histosol (/	41)		☐ Sandy Gle	eved Ma	trix (S4)		1 cm Muck (A9) (LR	R I. J)
☐ Histic Epi	,		☐ Sandy Re	•	, ,		☐ Coast Prairie Redox	
☐ Black Hist			☐ Stripped N				☐ Dark Surface (S7) (L	
☐ Hydrogen	` '		☐ Loamy Mu	•	•		☐ High Plains Depress	,
	Layers (A5) (LRR F	=)	☐ Loamy Gle	-			(LRR H outside of	
	k (A9) (LRR F, G, I		☐ Depleted I	-			☐ Reduced Vertic (F18)
	Below Dark Surface		☐ Redox Da				☐ Red Parent Material	(TF2)
-	k Surface (A12)	- ()	☐ Depleted I		` '		☐ Very Shallow Dark S	urface (TF 12)
	icky Mineral (S1)		☐ Redox De				Other (Explain in Re	marks)
	ucky Peat or Peat (S2) (LRR G				1	³ Indicators of hydrophyt	ic vegetation and
	ky Peat or Peat (S		(MLRA 7	•	, ,		wetland hydrology must	
	,	, ,					disturbed or problemation	
Restrictive L	ayer (if present):						Hydric Soil Present?	
Type:	,	Г	Depth (inches):				☐ Yes ☒ No	
		_						
HYDROLO	GY							
Wetland Hyd	Irology Indicators	:						
Primary Indic	ators (minimum of	one require	d; check all that appl	y)			Secondary Indicators (2	2 or more required)
☐ Surface W	/ater (A1)		☐ Salt Crust (B	11)			☐ Surface Soil Cracks	(B6)
☐ High Wate	er Table (A2)		☐ Aquatic Inver	tebrates	s (B13)		☐ Sparsely Vegetated	Concave Surface (B8)
☐ Saturation	n (A3)		☐ Hydrogen Su				☐ Drainage Patterns (
☐ Water Ma	rks (B1)		☐ Dry-Season \	Nater Ta	able (C2)		Oxidized Rhizosphe	res on Living Roots (C3)
☐ Sediment	Deposits (B2)		Oxidized Rhiz	zospher	es on Living	Roots (C3)	(where tilled)	
☐ Drift Depo	sits (B3)		(where not	•			Crayfish Burrows (C	
☐ Algal Mat	or Crust (B4)		Presence of I				Saturation Visible or	
☐ Iron Depo	sits (B5)		Thin Muck Su				Geomorphic Position	
☐ Inundation	n Visible on Aerial I	magery (B7) ☐ Other (Explai	n in Rer	narks)		☐ FAC-Neutral Test (□	
☐ Water-Sta	ined Leaves (B9)						☐ Frost-Heave Humm	ocks (D7) (LRR F)
Field Observ	rations:	Yes	Depth No (inches)			led Data (strea	m gauge, monitoring well,	aerial photos, previous
Surface Met	or proceed?		_ ` ` '	IIIsp	Collons, ElG.	,, ii available.		
Surface Wate	•		×					
Water Table			×					
Saturation Pr			⊠					
(includes cap		_	_					
Wetland Hyd	Irology Present?							
Remarks: We	etland hydrology ind	dicators are	not met.					
İ								

Project/Site: Sweetland Wind Project		City/Cou	nty: H	and Coun	ty	Sampling	Date: 9/30/201	9
Applicant/Owner: Scout Clean Energy		State: SD	 Samp	ling Point: SP-	901			
Investigator(s): W. Hirst		;	Section,	Township	, Range:	S3, T110N, R66W	, <u></u>	
Landform (hillslope, terrace, etc.) drainage		Local relie	f (conca	ve, convex	x, none):	concave	Slope (%):	5 %
Subregion (LRR): Northern Great Plains Spring Whea	at Region	Lat:	44.3592	93	Long:	-98.745067	Datum: NAD8	33
Soil Map Unit Name: Java-Glenham loams, hilly	<u> </u>					VI Classification:	NA	
Are climate/hydrologic conditions on the site typical for this	is time of y	/ear?] Yes	⊠ No	(If no, ex	plain in Remarks.)		
Vegetation Soil Hydi	rology	Δ	\re "Norr	nal Circum	nstances" p	resent? X Yes	☐ No	
Significantly Disturbed?					·			
Naturally Problematic?		(1	needed	ı, expiairi a	any answer	s in Remarks.)		
SUMMARY OF FINDINGS – Attach site map show	ing sam	pling poi	nt locat	tions, tra	ınsects, in	nportant featur	es, etc.	
Yes N	No Re	emarks: We	etland sa	mple plot	located in F	PEM W-901. WET:	S analysis for this	3
Hydrophytic Vegetation Present?	□ re	gion shows	prior 3 r	month peri	iod has bee	en wetter than norn	nal for this time o	f year.
-								
, , , ,								
Is the Sampled Area within a Wetland?								
VEGETATION – Use scientific names of plants								
Tree Stratum (Plot size: 30')	Absolu % Cov			Indicator Status	Dominan	ice Test Workshe	et:	
1		/ег зрес <u>%</u>	JIES!	Status		of Dominant Speci	es that	
2.		%			are OBL, (excluding	FACW, or FAC	1	(A)
3.		%	<u> </u>		,	· ,	<u>-</u>	_(' ')
4		<u>%</u>				nber of Dominant Across All Strata:	2	_(B)
	0	<u>%</u> = Tot	al Cover			of Dominant Specie	·	_` ′
Sapling/Shrub Stratum (Plot size: <u>15'</u>)		0/				FACW, or FAC:		(A/B)
1 2.	-	<u>%</u> %						
3.		%			Prevalen	ce Index Worksh	eet:	
4.		%			Tota	al % Cover of:	Multiply by	<u>":</u>
5.		%			OBL spe		<u>)</u> % x 1 = <u>50</u>)
	0	<u>%</u> = Tot	al Cover		FACW sp			<u>) </u>
Herb Stratum (Plot size: <u>5'</u>)		0/	,	0.01	FAC spe FACU sp		0% x3= <u>(</u> 0% x4= 80	<u>)</u>
1. Eleocharis obtusa	50 20		<u>(</u>	OBL	UPL spe)
Bromus arvensis Carex sp.			<u>r </u>	FACU	Column	Totals: 70)% (A) <u>13</u> 0	(B)
4.		% <u>1</u>	<u> </u>		Prevalen	nce Index = B/A =	1.85	
5		%			Hydronhy	vtic Vegetation Ir	ndicators:	
6.		%			•	, ,		
7		<u>%</u>	 ;			id Test for Hydrop	, ,	
8.		<u>%</u>			2 Dom	ninance Test is >50	0%	
9	-	<u>%</u>			□ 3 Prev	/alence Index is ≤3	3.0 ¹	
	75		al Cover			phological Adaptat g data in Remarks o		neet)
Woody Vine Stratum (Plot size: 30') 1		%			☐ Proble	ematic Hydrophytic	Vegetation¹ (exp	olain)
2		%			1 Indicator	rs of hydric soil an present, unless dis	d wetland hydrol	ogy
	0	<u>70</u> = 10t	al Cover			tic Vegetation Pre	<u> </u>	
Bare Ground in Herb Stratum 25 %					Пушорпу	uc vegetation rie	sociiti 🖂 162 [
Remarks: Prevalence Index for hydrophytic vegetation is r	met. Photo	ograph C-6	8.					

Profile Desc	ription: (Describe	to the depti	n needed to docum	ent th	e indicator o	r confirm the	absence of indicators.)			
Depth	Matrix		Red	dox Fe	atures					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-14	10YR 3/1	90	10YR 3/6	10	С	М	Mucky Clay			
14-24	10YR 3/1	95	10YR 3/6	5	C	M	Silty Clay			
-		· —— –								
		· —— –			·					
-		· —— –								
-		· —— –								
-		· —— –			·					
¹Type: C=Co	oncentration, D=De _l	pletion, RM=I	Reduced Matrix, CS	=Cove	red or Coated	Sand Grains	² Location: PL=Pore	Lining, M=Matrix		
Hydric Soil	Indicators: (Applic	cable to all L	RRs, unless other	wise n	oted.)		Indicators for Problema	atic Hydric Soils³:		
☐ Histosol (A1)		☐ Sandy Gley	ed Ma	trix (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 Management	•	•		☐ Dark Surface (S7) (LI	RR G)		
	Sulfide (A4)		☐ Loamy Mud	-			☐ High Plains Depression			
	Layers (A5) (LRR F		Loamy Gle				(LRR H outside of N	•		
	k (A9) (LRR F, G, F	-	☐ Depleted M	-			Reduced Vertic (F18)			
	Below Dark Surface	e (A11)	⊠ Redox Darl		, ,		☐ Red Parent Material (☐ Very Shallow Dark St	•		
	k Surface (A12)		☐ Depleted D		, ,		☐ Other (Explain in Ren	'		
_	ucky Mineral (S1)	CO) /I DD C	Redox Dep		, ,			•		
	ucky Peat or Peat (Sky Peat (S		H) ☐ High Plains (MLRA 72		, ,		³ Indicators of hydrophytic wetland hydrology must			
	ky Feat Of Feat (53) (LKK F)	(MEIOA 12	u 10 c	, Likik II,		disturbed or problematic	be present, unless		
Restrictive I	_ayer (if present):						Hydric Soil Present?			
Type:		De	epth (inches):				⊠ Yes □ No			
Remarks: Hy	dric soil indicator F	6 is met.								
HYDROLOG	iY									
Wetland Hyd	drology Indicators	:								
Primary Indic	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	s (B13)		☐ Sparsely Vegetated (Concave Surface (B8)		
			☐ Hydrogen Sulf				☐ Drainage Patterns (B10)			
☐ Water Ma	ırks (B1)		☐ Dry-Season W	/ater Ta	able (C2)		Oxidized Rhizospher	es on Living Roots (C3)		
☐ Sediment	Deposits (B2)		Oxidized Rhiz		es on Living F	Roots (C3)	(where tilled)			
☐ Drift Depo			(where not				☐ Crayfish Burrows (C8			
_	or Crust (B4)		☐ Presence of R		, ,		☐ Saturation Visible on			
☐ Iron Depo			☐ Thin Muck Su	•	,		☐ Geomorphic Position	` '		
_	n Visible on Aerial I	magery (B7)	☐ Other (Explain	ı ın Rer	narks)		☐ FAC-Neutral Test (D	,		
☐ Water-Sta	ained Leaves (B9)			_			☐ Frost-Heave Hummo	CKS (D7) (LKK F)		
Field Obser	vations:	Yes N	Depth o (inches)		cribe Recorde ections, etc.),		ım gauge, monitoring well, a	aerial photos, previous		
Surface Water	er present?		11							
Water Table	present?		0							
Saturation P	•									
(includes cap										
	drology Present?]							
			.2, A3, B10, and D2	are me	et.					
	,		. , .,							
İ										

Project/Site: Sweetland Wind Project		Ci	ty/County:	land Coun	ty	Sampling ¹	Date: 9/30/2019	
Applicant/Owner: Scout Clean Energy	— Samp	ling Point: SP-902						
Investigator(s): W. Hirst			Section,	Township	, Range: S	 3, T110N, R66W		
Landform (hillslope, terrace, etc.) hillslope		Loc	al relief (conca			onvex	Slope (%): 5 %	
Subregion (LRR): Northern Great Plains Spring Whea	at Regi	on	Lat: 44.3592	264	Long: _9	18.745101	Datum: NAD83	
Soil Map Unit Name: Java-Glenham loams, hilly				-	_	Classification:	NA .	
Are climate/hydrologic conditions on the site typical for thi	is time	of year?	Yes	⊠ No	(If no, expla	ain in Remarks.)		
								
<u> </u>	lrology		Are "Nor	mal Circun	nstances" pres	sent? X Yes	☐ No	
Significantly Disturbed?	H		(If neede	d, explain	any answers i	n Remarks.)		
SUMMARY OF FINDINGS – Attach site map show	− ⁄ing sa	amplin	g point loca	tions, tra	ınsects, imp	portant featur	es, etc.	
`	No						1. WETS analysis for	
							normal for this time of	
	\boxtimes	year.						
Wetland Hydrology Present?	\boxtimes							
Is the Sampled Area within a Wetland?								
VEGETATION – Use scientific names of plants								
		solute	Dominant	Indicator	Dominance	e Test Workshe	et:	
Tree Stratum (Plot size: <u>30'</u>) 1.		Cover	Species?	Status	Number of I	Dominant Specie	es that	
1. 2.		<u>%</u> %			,	ACW, or FAC	0 (4)	
3.		%			(excluding F	·	0_(A)	
4.		%				er of Dominant ross All Strata:	1 (B)	
	_	0 %	= Total Cove	r			,	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)						Dominant Specie ACW, or FAC:	es that 0%_(A/B	3)
1.		<u>%</u>						
2		<u>%</u> %			Prevalence	Index Worksh	eet:	
3 4		// 0			Total ^c	% Cover of:	Multiply by:	
5.		%		-	OBL specie	es	% x 1 = 0	
		0 %	= Total Cove		FACW spe		% x 2 = 0	
Herb Stratum (Plot size: <u>5'</u>)					FAC specie FACU spec		$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	
1. <u>Bromus arvensis</u>		80 %	<u>Y</u>	FACU	UPL specie		% x 5 = 0	
2. Poa pratensis		<u>20 %</u>	<u>N</u>	FACU	Column To		0 % (A) 0 (B))
Taraxacum officinale Cirsium arvense		5 % 5 %	<u>N</u> N	FACU FACU	Prevalence	e Index = B/A =		
4. <u>Cirsium arvense</u> 5		%		1700		ic Vegetation In		
6.		%			' ' '	Ū		
7		<u>%</u>				Test for Hydropl	, ,	
8.		<u>%</u>			2 Domin	ance Test is >50)%	
9	_	<u>%</u> %			☐ 3 Preval	ence Index is ≤3	3.0 ¹	
		110 %	= Total Cove	r	4 Morph supporting d	ological Adaptat lata in Remarks o	tions ¹ (Provide or on a separate sheet)	
Woody Vine Stratum (Plot size: <u>30'</u>) 1		%			☐ Problem	atic Hydrophytic	Vegetation¹ (explain)	
2	_	%			¹ Indicators	of hydric soil an	d wetland hydrology turbed or problematic	
	_	0 %	= Total Cove	r	-		<u> </u>	
Bare Ground in Herb Stratum0 %					Hydrophytic	; vegetation Pre	sent? Yes No	
Remarks: Hydrophytic vegetation is not present. Photogra	aph C-6	89.						

Profile Desc	ription: (Describe	to the depth	needed to docum	ent the	indicator o	r confirm the	absence of indicators.)			
Depth	Matrix		Red	ox Fea						
(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	oncentration, D=Dep	oletion, RM=F	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 otherv	vise no	oted.)		Indicators for Problema	ntic Hydric Soils³:		
☐ Histosol (A1)		☐ Sandy Gley	ed Mat	rix (S4)		1 cm Muck (A9) (LRR	(I, J)		
☐ Histic Epi	pedon (A2)		☐ Sandy Redo				☐ Coast Prairie Redox (· · · · · · · · · · · · · · · · · · ·		
☐ Black His			Stripped Ma				☐ Dark Surface (S7) (LF			
☐ Hydrogen	Sulfide (A4)		☐ Loamy Muc	ky Mine	eral (F1)		☐ High Plains Depression	ons (F16)		
☐ Stratified	Layers (A5) (LRR F	·)	☐ Loamy Gley	ed Mat	trix (F2)		(LRR H outside of N	ILRA 72 & 73)		
1 cm Muc	k (A9) (LRR F, G, F	· ·	☐ Depleted M	atrix (F	3)		☐ Reduced Vertic (F18)			
☐ Depleted	Below Dark Surface	e (A11)	☐ Redox Dark	Surfac	ce (F6)		Red Parent Material (· ·		
☐ Thick Dar	k Surface (A12)		☐ Depleted Da	ark Sur	face (F7)		☐ Very Shallow Dark Su			
☐ Sandy Mu	ucky Mineral (S1)		Redox Depi	ession	s (F8)		☐ Other (Explain in Rem	narks)		
☐ 2.5 cm M	ucky Peat or Peat (S2) (LRR G , 1					³ Indicators of hydrophytic	vegetation and		
5 cm Muc	ky Peat or Peat (S3	3) (LRR F)	(MLRA 72	& 73 of	f LRR H)		wetland hydrology must be disturbed or problematic			
Restrictive I	_ayer (if present):						Hydric Soil Present?			
Type:		_ De	pth (inches):				☐ Yes ☒ No			
HYDROLOG	iΥ									
Wetland Hyd	drology Indicators									
Primary Indic	cators (minimum of	one required;	check all that apply	<u>)</u>			Secondary Indicators (2	or more required)		
☐ Surface V	Vater (A1)		☐ Salt Crust (B11	1)			☐ Surface Soil Cracks (B6)		
	er Table (A2)		☐ Aquatic Inverte	,	(B13)		☐ Sparsely Vegetated (
☐ Saturation			 ☐ Hydrogen Sulfi	de Odo	or (C1)		☐ Drainage Patterns (B10)			
 ☐ Water Ma			☐ Dry-Season W		, ,		Oxidized Rhizospher	·		
☐ Sediment	Deposits (B2)		Oxidized Rhizo	sphere	s on Living I	Roots (C3)	(where tilled)			
☐ Drift Depo	osits (B3)		(where not t				☐ Crayfish Burrows (C8	•		
☐ Algal Mat	or Crust (B4)		Presence of Re				Saturation Visible on	• • • •		
☐ Iron Depo	osits (B5)		☐ Thin Muck Sur	•	,		☐ Geomorphic Position			
☐ Inundatio	n Visible on Aerial Iı	magery (B7)	☐ Other (Explain	in Rem	narks)		☐ FAC-Neutral Test (D	·		
☐ Water-Sta	ained Leaves (B9)						☐ Frost-Heave Hummo	cks (D7) (LRR F)		
Field Obser	vations:	Yes N	Depth c (inches)			ed Data (strea , if available:	ım gauge, monitoring well, a	aerial photos, previous		
Surface Water	er present?		0	'	,					
Water Table	•									
Saturation P	•									
(includes cap			<u> </u>							
	drology Present?		1							
				1						
remarks: NO	wetland hydrology	แนเผสเขาร สา	z preserit.							

Project/Site: Sweetland Wind Project		City/County: _ H	Hand Coun	_{ty} s	ampling Date: 9/30/2019	
Applicant/Owner: Scout Clean Energy		State: SD Sampling Point:				
Investigator(s): W. Hirst		Section,	, Township	, Range: <u>S10, T11</u>	0N, R66W	
Landform (hillslope, terrace, etc.) hillslope		ocal relief (conca			Slope (%): 5 %	
Subregion (LRR): Northern Great Plains Spring Wheat	t Region	Lat: 44.3543	380	Long: -98.7539	91 Datum: NAD83	
Soil Map Unit Name: Glenham-Java loams, rolling	J			NWI Classifi		
Are climate/hydrologic conditions on the site typical for this	s time of ye	ar? 🔲 Yes	⊠ No	(If no, explain in R		
					B., D.,	
<u> </u>	ology ¬	Are "Nor	mal Circun	nstances" present?	⊠ Yes □ No	
Significantly Disturbed? Naturally Problematic?	┪	(If neede	d, explain	any answers in Rema	arks.)	
SUMMARY OF FINDINGS – Attach site map showi	– ing samp∣	ling point loca	itions. tra	nsects. importan	t features, etc.	
<u> </u>					is region shows prior 3 month	
				mal for this time of y		
	\boxtimes					
Wetland Hydrology Present?	\boxtimes					
Is the Sampled Area within a Wetland?	\boxtimes					
VEGETATION – Use scientific names of plants						
	Absolute		Indicator	Dominance Test \	Worksheet:	
Tree Stratum (Plot size: <u>30'</u>)	% Cove		Status	Number of Domina	ant Species that	
1 2				are OBL, FACW, o	or FAC	
3.				(excluding FAC-):	0_(A)	
4.				Total Number of De		
	0 %	= Total Cove	r	Species Across All		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Percent of Domina are OBL, FACW, o		
1.	%			410 002,171011,0		
2				Prevalence Index	Worksheet:	
3. 4.				Total % Cove	er of: Multiply by:	
5.	%			OBL species	% x 1 = 0	
	0 %		r	FACW species	% x 2 = 0	
Herb Stratum (Plot size: <u>5'</u>)				FAC species	% x 3 = 0	
1. Trifolium repens			FACU	FACU species UPL species	% x 4 = 0 % x 5 = 0	
2. Poa pratensis	<u>50 %</u>		FACU	Column Totals:		
3. <u>Cirsium arvense</u>	<u>5 %</u>		FACU	Prevalence Index		
4 5	%				· · · · · · · · · · · · · · · · · · ·	
6.	%			Hydrophytic Vege	etation indicators:	
7.	%			☐ 1 Rapid Test fo	r Hydrophytic Vegetation	
8				☐ 2 Dominance T	est is >50%	
9				☐ 3 Prevalence In	ndex is ≤3.0¹	
10					l Adaptations¹ (Provide Remarks or on a separate sheet)	
Woody Vine Stratum (Plot size: <u>30'</u>) 1	%			☐ Problematic Hy	drophytic Vegetation¹ (explain)	
2.	%			¹ Indicators of hydr	ic soil and wetland hydrology	
	0 %	_ = Total Cove	r	must be present, u	nless disturbed or problematic	
Bare Ground in Herb Stratum0 %				Hydrophytic Veget	ation Present? ☐ Yes ☒ No	
Remarks: Hydrophytic vegetation is not present. Photography	ph C-70.					

Profile Desc	ription: (Describe	to the dep	th needed to docun	nent th	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
0-24	10YR 4/2	100					Sandy Clay Loam	
		. ——						
	-	· ·			· ——			_
	-	· —— ·			· ——			
		· ·			· ——			
¹Type: C=Co	ncentration, D=De	pletion, RM	Reduced Matrix, CS	=Cove	red or Coated	I Sand Grains	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil I	ndicators: (Appli	cable to all	LRRs, unless other	wise n	oted.)		Indicators for Problema	atic Hydric Soils³:
☐ Histosol (A	\1)		☐ Sandy Gle	yed Ma	trix (S4)		1 cm Muck (A9) (LRR	R I, J)
☐ Histic Epip	oedon (A2)		☐ Sandy Red	lox (S5))		☐ Coast Prairie Redox ((A16) (LRR F, G, H)
☐ Black Hist	` '		☐ Stripped M	•	•		☐ Dark Surface (S7) (LI	'
☐ Hydrogen			☐ Loamy Mu	-			☐ High Plains Depression	
	_ayers (A5) (LRR F		Loamy Gle	-			(LRR H outside of N	•
	k (A9) (LRR F, G, F	-	☐ Depleted M				Reduced Vertic (F18)	
	Below Dark Surface	e (A11)	☐ Redox Dar		` '		☐ Red Parent Material (☐ Very Shallow Dark St	•
<u> </u>	Surface (A12)		☐ Depleted D		, ,		☐ Other (Explain in Ren	' '
-	cky Mineral (S1)	CO) /I DD C	Redox Dep		` '		` '	,
	icky Peat or Peat (\$ ky Peat or Peat (\$3		, H)				³ Indicators of hydrophytic wetland hydrology must	
5 cm wac	ky Feat of Feat (30) (LKK F)	(MEION / E		, Littin,		disturbed or problematic	be present, unless
Restrictive L	ayer (if present):						Hydric Soil Present?	
Type:		_ [epth (inches):				☐ Yes ☒ No	
Remarks: No	hydric soil indicato	rs are prese	ent.					
	•							
HYDROLOG								
-	Irology Indicators							
Primary Indic	ators (minimum of	one required	d; check all that apply	<u>/)</u>			Secondary Indicators (2	or more required)
☐ Surface W	` '		☐ Salt Crust (B1	,			☐ Surface Soil Cracks	` '
☐ High Wate			Aquatic Invert		. ,		Sparsely Vegetated	
Saturation	` '		☐ Hydrogen Sul				☐ Drainage Patterns (B	,
☐ Water Mai	` '		☐ Dry-Season V		٠,,		Oxidized Rhizospher (where tilled)	res on Living Roots (C3)
	Deposits (B2)		Oxidized Rhiz (where not		es on Living I	Roots (C3)	☐ Crayfish Burrows (C8	3)
☐ Drift Depo			☐ Presence of R	,	d Iron (C4)		☐ Saturation Visible on	
☐ Algal Mat☐ Iron Depo			☐ Thin Muck Su				☐ Geomorphic Position	
	รแร (ฮอ) า Visible on Aerial I	madery (R7					☐ FAC-Neutral Test (D	
_	ined Leaves (B9)	magery (D7			,		☐ Frost-Heave Hummo	,
Field Observ	· ,		Depth	Des	cribe Record	ed Data (strea	m gauge, monitoring well, a	aerial photos previous
l lold Obool (4	Yes I	No (inches)		ections, etc.)		in gaage, menicering weil, t	aonai priotoc, providao
Surface Water	er present?		⊠0					
Water Table	oresent?							
Saturation Pr	esent?		<u> </u>					
(includes cap	illary fringe)							
Wetland Hyd	Irology Present?		\boxtimes					
Remarks: No	wetland hydrology	indicators a	re present.					
1								





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.



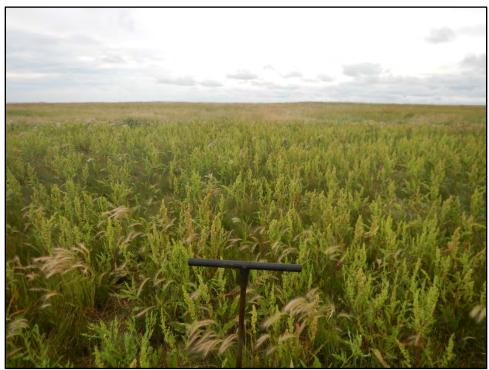


Photograph C-9: View of SP-516 in PEM W-507, facing north.



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 intermittent stream (S-)003, facing downstream.



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Photograph C-72: View of intermittent S-004, facing upstream.



Photograph C-73: View of ephemeral S-502, facing downstream.



Photograph C-74: View of ephemeral S-504, facing downstream.





Photograph C-75: View of ephemeral S-508, facing downstream.



Photograph C-76: View of ephemeral S-510, facing upstream.





Photograph C-77: View of ephemeral S-513, facing upstream.



Photograph C-78: View of ephemeral S-514, facing across.





Photograph C-79: View of ephemeral S-516, facing upstream.



Photograph C-80: View of ephemeral S-517, facing upstream.





Photograph C-81: View of ephemeral S-518, facing downstream.



Photograph C-82: View of ephemeral S-519, facing upstream.





Photograph C-83: View of ephemeral S-521, facing downstream.



Photograph C-84: View of ephemeral S-522, facing downstream.





Photograph C-85: View of intermittent S-523, facing downstream.



Photograph C-86: View of ephemeral S-526, facing downstream.





Photograph C-87: View of ephemeral S-701, facing downstream.



Photograph C-88: View of ephemeral S-702, facing downstream.





Photograph C-89: View of ephemeral S-703, facing upstream.



Photograph C-90: View of ephemeral S-704, facing downstream.



Photograph C-91: View of ephemeral S-705, facing downstream.



Photograph C-92: View of ephemeral S-707, facing downstream.





Photograph C-93: View of ephemeral S-708, facing downstream.



Photograph C-94: View of ephemeral S-901, facing downstream.





Photograph C-95: View of Photo Point (PP-)008 in Project Area representative of upland pasture, facing west.



Photograph C-96: View of PP-503 in Project Area representative upland pasture, facing west.





Photograph C-97: View of PP-505 in Project Area representative upland pasture, facing east.



Photograph C-98: View of PP-512 in Project Area representative upland swale, facing north.





Photograph C-99: View of PP-514 in Project Area representative upland swale, facing west.



Photograph C-100: View of PP-526 in Project Area representative upland area that has hydric soil or NWI data, facing north.





Photograph C-101: View of PP-529 in Project Area representative upland area that has hydric soil or NWI data, facing west.



Photograph C-102: View of PP-530 in Project Area representative upland area that has hydric soil or NWI data, facing west.





Photograph C-103: View of PP-533 in Project Area representative upland area that has hydric soil or NWI data, facing east.



Photograph C-104: View of PP-537 in Project Area representative upland area that has hydric soil or NWI data, facing south.





Photograph C-105: View of PP-551 in Project Area representative upland area that has hydric soil or NWI data, facing west.



Photograph C-106: View of PP-565 in Project Area representative upland swale, facing east.





Photograph C-107: View of PP-577 in Project Area representative upland area that has hydric soil or NWI data, facing west.



Photograph C-108: View of PP-593 in Project Area representative upland pasture, facing west.





Photograph C-109: View of PP-599 in Project Area representative upland swale, facing south.

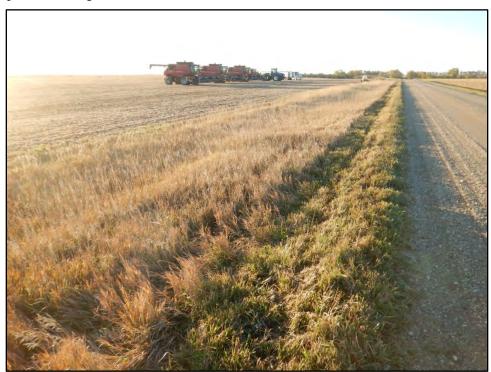


Photograph C-110: View of PP-605 in Project Area representative upland swale, facing west.





Photograph C-111: View of PP-628 in Project Area representative upland pasture, facing north.



Photograph C-112: View of PP-632 in Project Area representative roadside drainage, facing south.





Photograph C-113: View of PP-694 in Project Area representative roadside drainage, facing south.



Photograph C-114: View of PP-696 in Project Area representative roadside drainage, facing south.





Photograph C-115: View of PP-701 in Project Area representative upland pasture, facing north.



Photograph C-116: 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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