



Hub City Energy Park

Aberdeen, South Dakota

Application for an Energy Conversion Facility Permit

Docket EL26-XXX

Appendix H – Wetland Delineation Report

October 2026



Wetland Delineation Report

**NorthWestern Energy – Hub City Energy
Park**

Brown County, South Dakota

May 2026

Prepared by HDR Engineering:

Alex Brazeal

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Introduction

NorthWestern Energy Public Service Corporation d/b/a (NorthWestern Energy) is planning to develop the Hub City Energy Park; a new, three-unit nominal 131 megawatt (MW) simple cycle combustion turbine facility (Project). The Project is adjacent to the existing Aberdeen Generating Station south of Aberdeen, SD and will interconnect to the electric grid at 115 kV via a new, on-site substation and will be fed natural gas from a nearby interstate pipeline. The Project covers approximately 176 acres within Section 25, Township 123N, Range 64W in Brown County, SD (Study Area; **Figure 1**).

A wetland delineation of the Study Area was completed on April 9th and May 7th, 2026, by Alex Brazeal of HDR Engineering.

Methodology

A desktop evaluation of the Study Area was completed prior to the field delineation to identify areas of potential wetlands. The desktop evaluation included a review of the following data sources:

- U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) (USGS, 2023).
- U.S. Fish and Wildlife Service (USFWS) The National Wetland Inventory (NWI) – Version 2.0 (USFWS, 2023).
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Hydric soil classification from Web Soil Survey (Soil Survey Staff, 2025).
- U.S. Army Corps of Engineers (USACE) Antecedent Precipitation Tool (APT) (USACE, 2025).
- A time series of aerial imagery available on Google Earth.

Suspected wetland areas identified from both the desktop evaluation and field observations were sampled to confirm the presence or absence of wetland conditions. An area was considered a wetland if it met the three USACE-defined requisite criteria, hydrophytic vegetation, hydric soils, and wetland hydrology, as provided in the *Corps of Engineers Wetlands Delineation Manual* (Manual; USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region* (Supplement; USACE 2010). Sample point locations and wetland boundaries were collected using an EOS Arrow 100 global navigation satellite system (GNSS) producing sub-meter horizontal accuracy.

Photographs were taken to characterize the general landform, document site conditions, and represent wetland or upland conditions at each sample point location.

Results

Desktop Evaluation

The NWI included seven palustrine emergent wetlands within the Study Area (**Figure 2**). Web Soil Survey indicated two predominantly hydric soils and seven predominantly nonhydric soils with hydric inclusions (**Table 1**; **Figure 2**). The time series review of aerial imagery showed changes in land use over time which has affected the hydrology of the Study Area to include several areas of human-made depressional wetland features (e.g. road ditches, impoundments, cultivation).

Table 1. Summary of Soils

Map Unit Name	Map Unit Symbol	Percent Hydric	Acres	Percent of Study Area
Aberdeen-Nahon silty clay loams, 0 to 2 percent slopes	G472A	2.0	77.2	43.8
Harmony-Aberdeen silty clay loams, 0 to 2 percent slopes	G866A	2.0	55.3	31.4
Nahon-Aberdeen-Exline silt loams, 0 to 2 percent slopes	G851A	2.0	29.2	16.5
Tonka silt loam, silty substratum, 0 to 1 percent slopes	G007A	94.0	7.7	4.4
Bearden silt loam, 0 to 2 percent slopes	G431A	11.0	5.2	2.9
Aberdeen-Urban land complex, 0 to 2 percent slopes	G649A	3.0	1.3	0.7
Renshaw-Fordville loams, 0 to 2 percent slopes	G274A	2.0	0.5	0.3
Total			176.4	100

Field Delineation

The APT indicated that conditions were normal at the time of the delineation on April 9th and drier than normal on May 7th (**Attachment A**). Wetland determination data forms are included in **Attachment B**. Photographs are included in **Attachment C**.

Delineated Wetlands

Wetland 1 is a shallow, depressional wetland located in a harvested agricultural field. Overland runoff from the adjacent uplands provides the primary source of hydrology and flows southwest into the east road ditch of 387th Avenue.

Wetland 2 is a depressional wetland located in a fallow agricultural field. Hydrology is provided to this wetland via overland runoff from the surrounding uplands and flows south into Wetland 6b.

Wetland 3 is a wetland fringe located adjacent to an open water feature. This wetland feature formed within an excavated ditch of a former railroad. This area receives surface water from the northwest and drains south into Wetland 4.

Wetland 4 is a grass buffer located along the eastern edge of the Study Area. This wetland was seemingly formed from previous excavation and grading to form the ditch of a historic roadway and receives overland flow from the surrounding uplands and W-3 to the north. Surface water within W-4 flows south before exiting the Study Area to the east via the 135th Street road ditch. Upland sample points taken east of this W-4 identified multiple field approaches that do not contain culverts. These areas provide upland breaks along the flow path between the Study Area and Moccasin Creek to the east.

Wetland 5 is located within the north road ditch of 135th Street. This area receives overland flow from the surrounding uplands and drain east into W-6a. There was no observed continuous surface connection between W-5 and W-6a due to the absence of culverts through the upland field approach.

Wetland 6a/6b are also located within the north road ditch of 135th Street and connected via culvert. Surface water from W-5 to the west and W-2 to the north flows into this area.

Table 2. Aquatic Resource Summary

Aquatic Resource	Latitude (Dec. Deg.)	Longitude (Dec. Deg.)	Cowardin Classification	Area (acres)
Wetland 1	45.43499517	-98.49304134	PEM1A	3.70
Wetland 2	45.43315798	-98.48540058	PEM1C	23.94
Wetland 3	45.43592951	-98.48390453	PEM1Cx	0.58
Wetland 4	45.43042926	-98.48332787	PEM1Cx	0.82
Wetland 5	45.43050121	-98.4931478	N/A	0.34
Wetland 6a	45.43048399	-98.49077298	N/A	0.42
Wetland 6b	45.43046693	-98.48816995	N/A	0.43
Total				30.23

Upland Sampling Points

Upland sampling points were recorded at several locations within the Study Area within NWI features and to evaluate the presence or absence of a continuous surface connection to Moccasin Creek, a Water of the United States (WOTUS).

09U – Upland sampling point observed and recorded within an NWI wetland feature identified during the desktop evaluation. This sampling point, recorded in a cultivated and harvested crop field displayed problematic vegetation and lack of hydric soils and hydrology indicators.

10U – Recorded at field approach and documented lack upland conditions and lack of continuous surface connection via culvert from delineated Wetland 5 and Wetland 6a.

11U – Sampling point recorded at field approach and documented upland conditions as well as a lack of culvert or other conveyance of surface water from Wetland 2 to Wetland 4.

12U – Sampling point located at a field approach documenting upland conditions and lack of continuous surface connection via culvert from Wetland 4 to the east toward Moccasin Creek.

Conclusion

Six (6) wetlands totaling 30.23 acres were delineated within the Study Area. There is no apparent continuous surface connection from any of the delineated wetlands within the Study Area to Moccasin Creek or other WOTUS per the clarification on the definition of “continuous surface connection” provided in the memorandum released by the Environmental Protection Agency (EPA) on March 12th, 2025 (**Figure 3**).¹

This report, along with the accompanying geographic information system (GIS) spatial data should be used to identify avoidance and minimization opportunities where practicable and to quantify unavoidable impacts to wetlands as a result of future project development. Data provided in this report may be used for planning purposes as well as to assist the USACE in determining the jurisdictional status of wetlands within the Study Area.

If the wetlands are determined non-jurisdictional at the federal level, they remain waters of the State as defined in SDCL 34A-2-2(12) and discharge of any pollutant, including fill that would impair the wetland is subject to regulatory requirements at the state level under ARSD 74:51:01:11. Compliance with ARSD 74:51:01:11 can be achieved through coordination with DANR in accordance with their Grace Permit memorandum dated June 5, 2025.

¹ <https://www.epa.gov/system/files/documents/2025-03/2025cscguidance.pdf>

Figure 1. Project Location

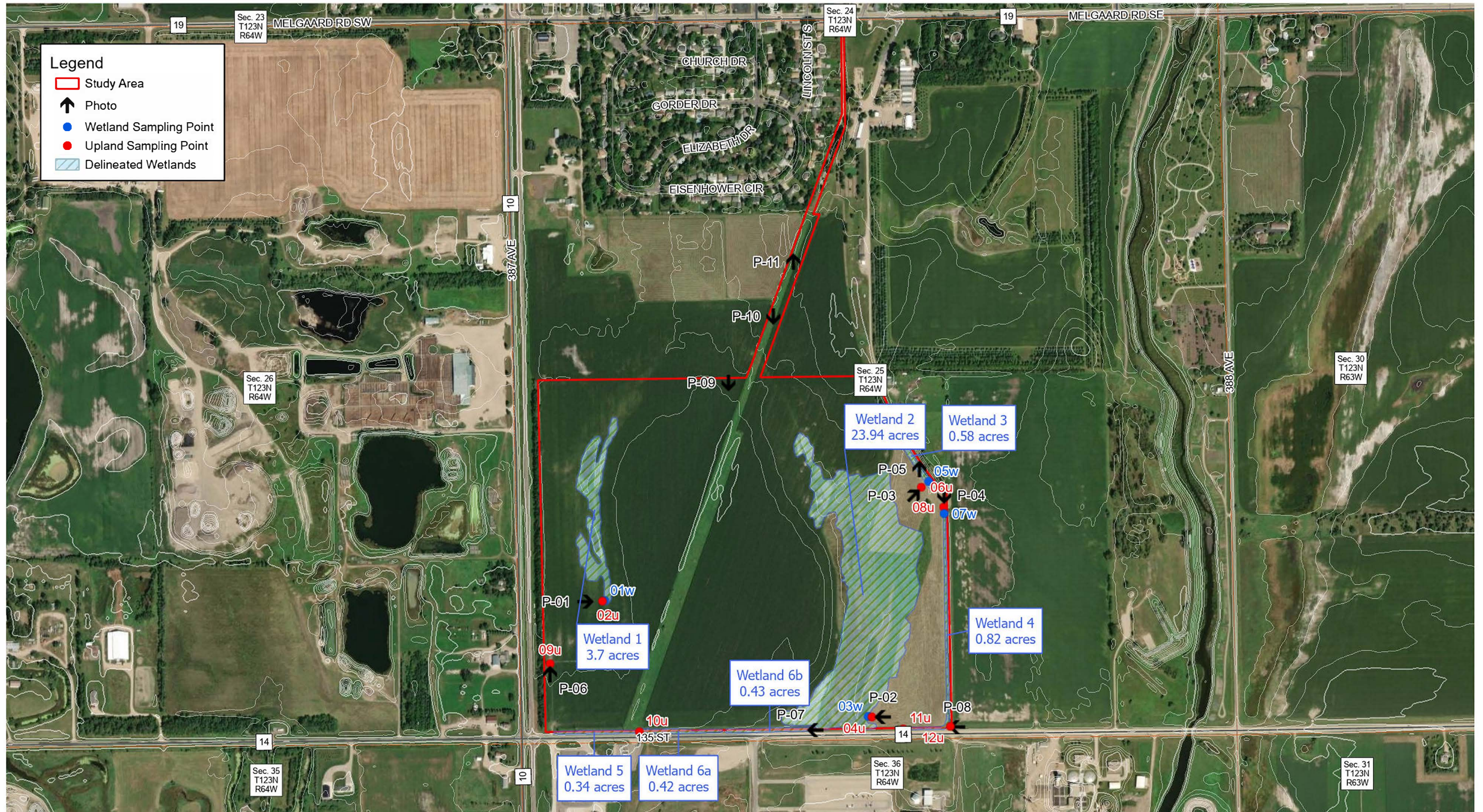


NORTHWESTERN ENERGY

Figure 2. National Wetland Inventory & Hydric Soils



Figure 3. Aquatic Resources Delineation Map



AQUATIC RESOURCES DELINEATION MAP

Hub City Energy Park, Brown County, SD

NORTHWESTERN ENERGY



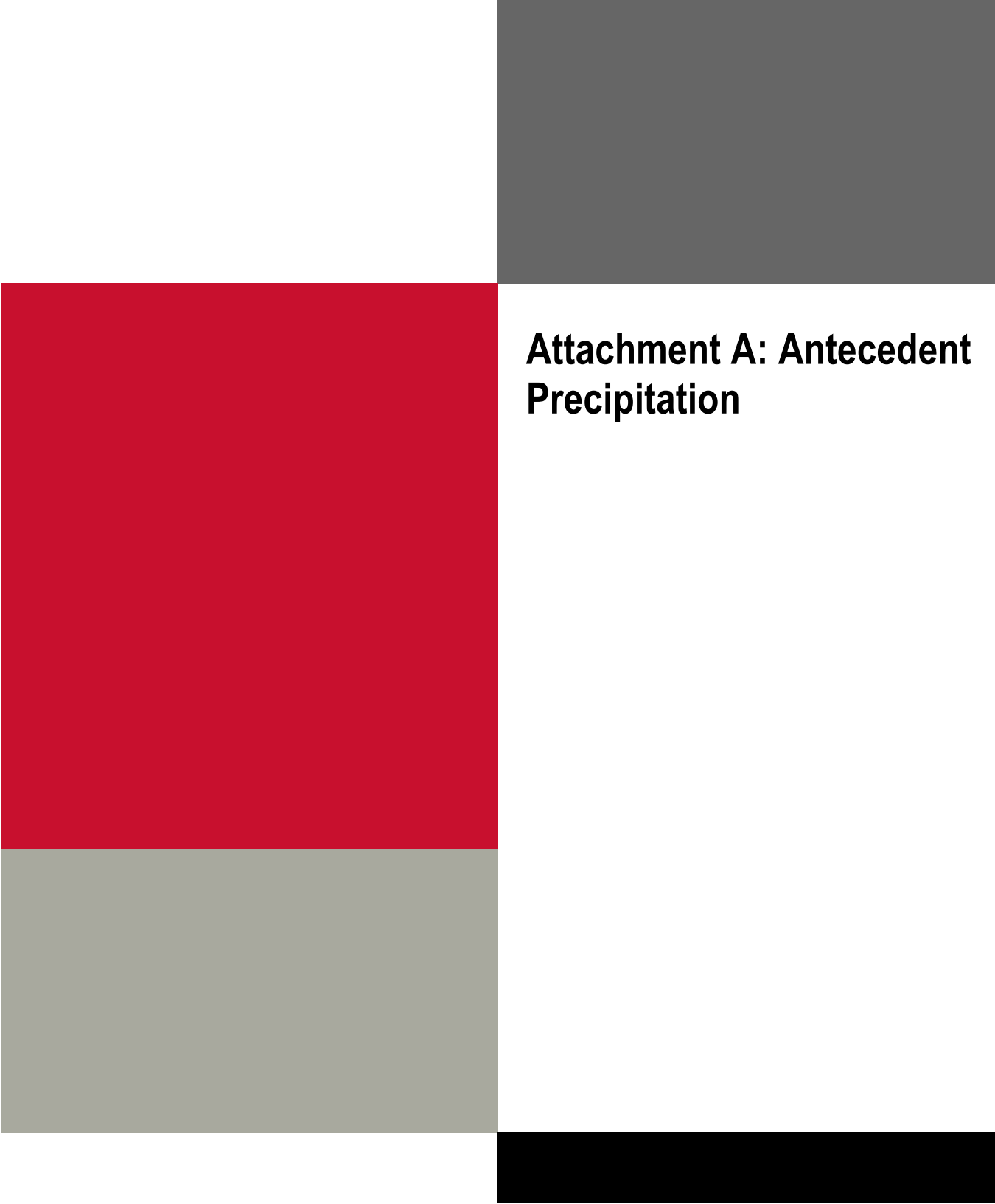
0 700 Feet



*Elevation contours derived from 3DEP elevation data (2-foot intervals)

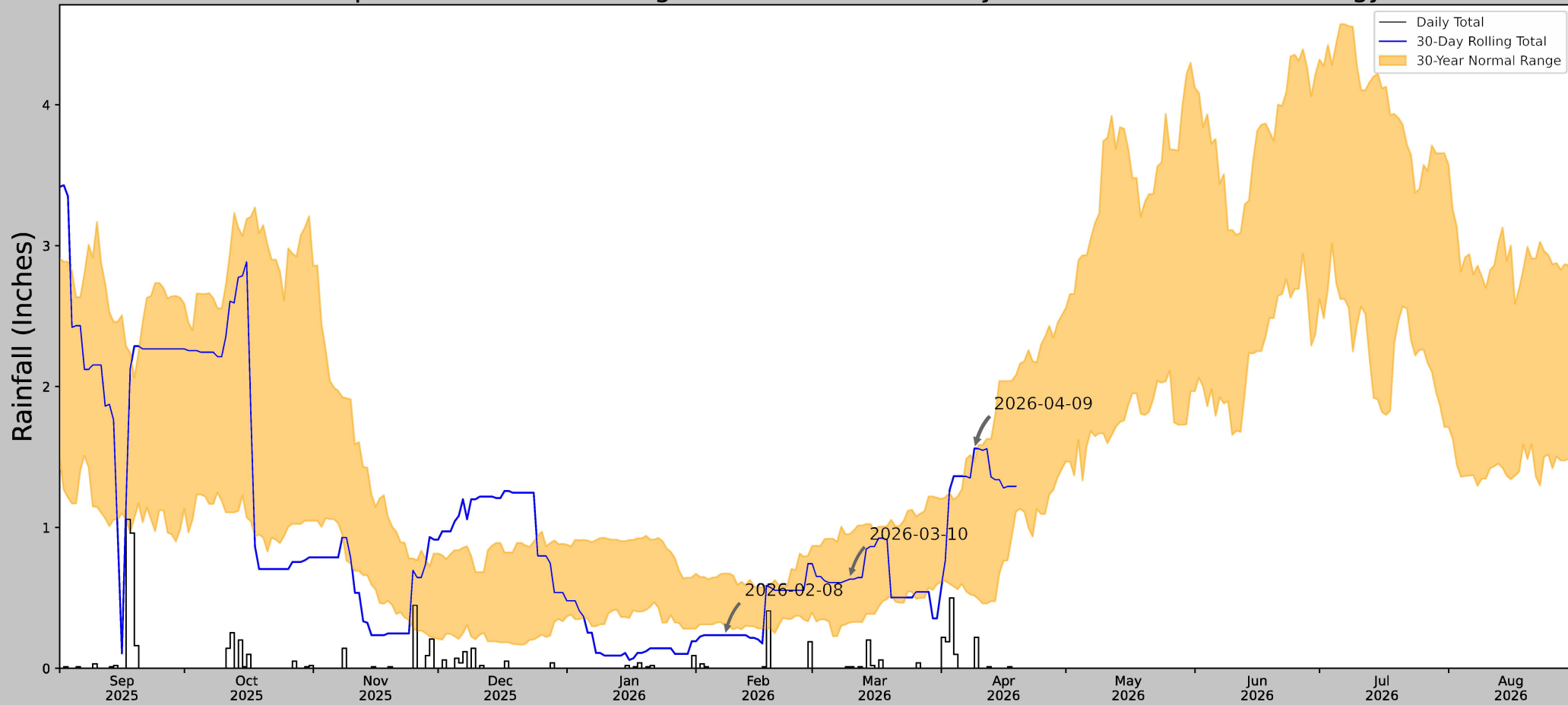
References

- Cowardin, L. M.; Carter, V.; Golet, F. C.; LaRoe, E. T. (1979). *Classification of Wetlands and Deepwater Habitats of the United States*. Washington, D.C.: United States Department of Interior, Fish and Wildlife Service Report No. FWS/OBS/-79/31.
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- USGS. (2023). *National Hydrography Dataset (high resolution)*. U.S. Geological Survey. Retrieved from <https://www.usgs.gov/national-hydrography/access-national-hydrography-products>

A decorative graphic on the left side of the page consists of several overlapping rectangles. A large red rectangle is positioned in the middle-left. To its right, a grey rectangle is partially visible. Below the red rectangle, a light grey rectangle extends to the left edge. At the bottom, a black rectangle is visible, partially overlapping the light grey one.

Attachment A: Antecedent Precipitation

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	45.43285, -98.48558
Observation Date	2026-04-09
Elevation (ft)	1292.493
Drought Index (PDSI)	Moderate wetness (2026-03)
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-04-09	0.516929	1.465748	1.559055	Wet	3	3	9
2026-03-10	0.325591	0.954331	0.633858	Normal	2	2	4
2026-02-08	0.301575	0.674803	0.23622	Dry	1	1	1
Result							Normal Conditions - 14

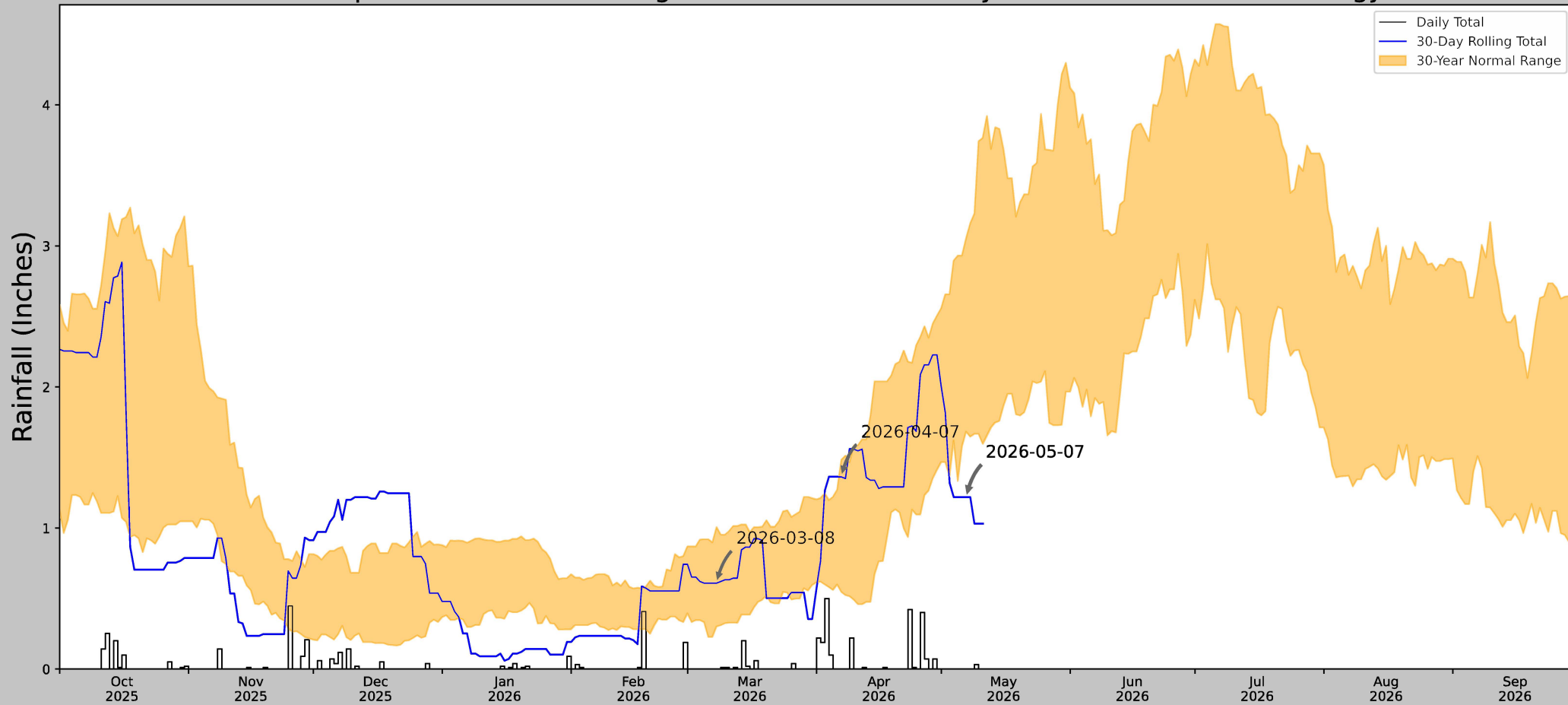
Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0



Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
ABERDEEN	45.4558, -98.4133	1382.874	3.846	90.381	2.078	11353	90

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	45.43285, -98.48558
Observation Date	2026-05-07
Elevation (ft)	1292.493
Drought Index (PDSI)	Moderate wetness (2026-04)
WebWIMP H ₂ O Balance	Dry Season

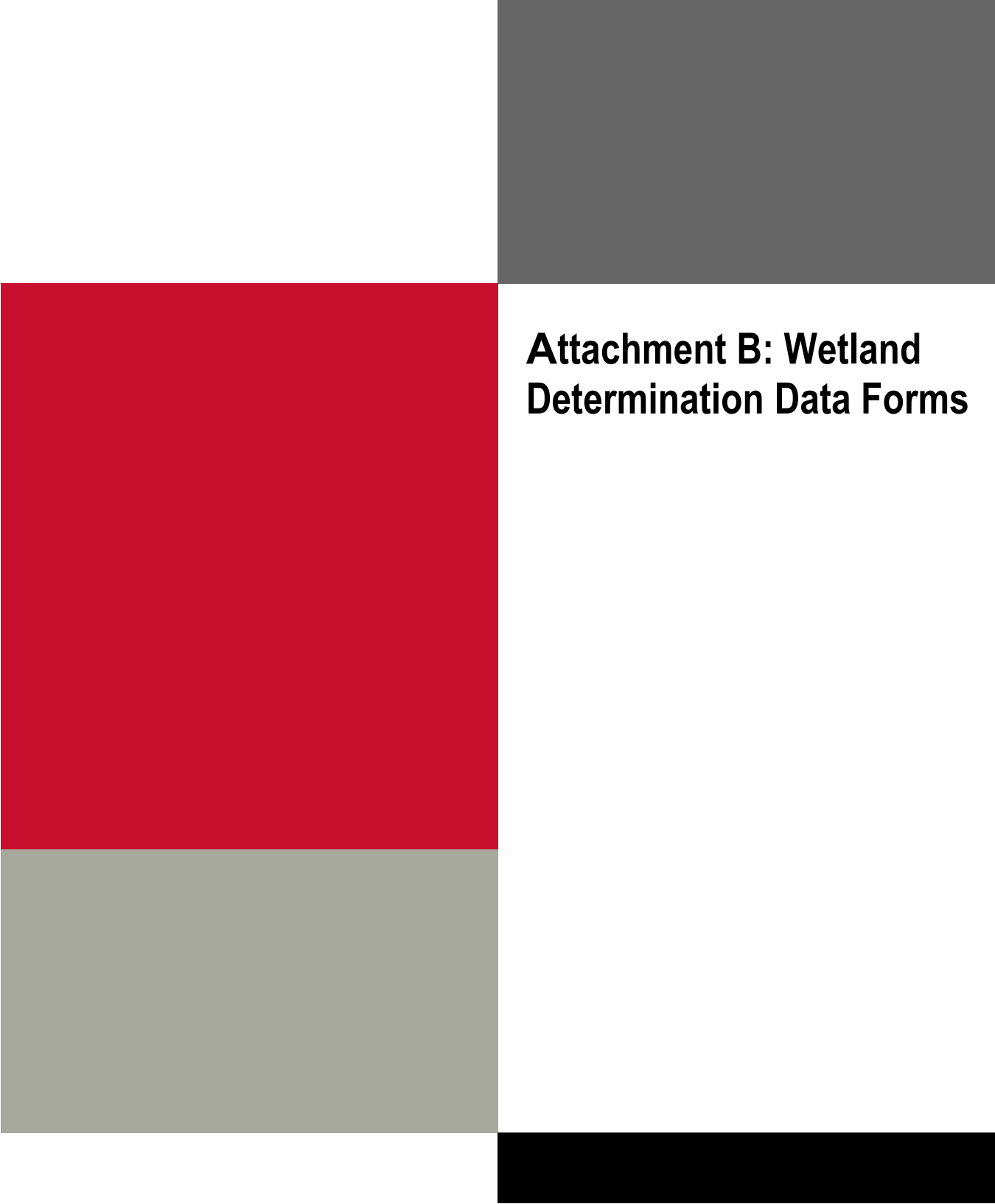
30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-05-07	1.683465	3.054725	1.220472	Dry	1	3	3
2026-04-07	0.547638	1.482677	1.362205	Normal	2	2	4
2026-03-08	0.302362	1.006693	0.610236	Normal	2	1	2
Result							Drier than Normal - 9

Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0



Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
ABERDEEN	45.4558, -98.4133	1382.874	3.846	90.381	2.078	11353	90



Attachment B: Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Hub City Energy Park City/County: Brown County Sampling Date: 4/9/2026
 Applicant/Owner: Northwestern Energy State: SD Sampling Point: 01w
 Investigators: Alex Brazeal Section, Township, Range S 25 T 123N R 64W
 Landform (hillslope, terrace, etc.): None Local Relief (concave, convex, none): None Slope(%) 0
 Subregion (LRR): Sub-Region (LRR) Lat: 45.433165 Long: -98.492817 Datum: NAD83
 Soil Map Unit Name: G472A - Aberdeen-Nahon silty clay loams, 0 to 2 percent slopes NWI Classification: PEM1A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If No, explain in Remarks)
 Are Vegetation X, Soil X, Hydrology X, significantly disturbed? Are "Normal Circumstances" present? Yes No X
 Are Vegetation , Soil , Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	

Remarks:
 Sample point collected in cultivated agricultural field. Significantly disturbed vegetation and soil present.

VEGETATION— Use scientific names of plants.		<u>Absolute % Cover</u>	<u>Dominant Species</u>	<u>Indicator Status</u>	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
<u>Tree Stratum</u>						Prevalence Index Worksheet: <table> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species</td> <td>x 1 =</td> </tr> <tr> <td>FACW species</td> <td>x 2 =</td> </tr> <tr> <td>FAC species</td> <td>x 3 =</td> </tr> <tr> <td>FACU species</td> <td>x 4 =</td> </tr> <tr> <td>UPL species</td> <td>x 5 =</td> </tr> <tr> <td>Column Totals:</td> <td><u>0</u> (A) <u> </u> (B)</td> </tr> <tr> <td colspan="2"><i>Prevalence Index = B/A =</i> <u> </u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species	x 1 =	FACW species	x 2 =	FAC species	x 3 =	FACU species	x 4 =	UPL species	x 5 =	Column Totals:	<u>0</u> (A) <u> </u> (B)	<i>Prevalence Index = B/A =</i> <u> </u>
Total % Cover of:	Multiply by:																				
OBL species	x 1 =																				
FACW species	x 2 =																				
FAC species	x 3 =																				
FACU species	x 4 =																				
UPL species	x 5 =																				
Column Totals:	<u>0</u> (A) <u> </u> (B)																				
<i>Prevalence Index = B/A =</i> <u> </u>																					
<u>Shrub Stratum</u>																					
<u>Herb Stratum</u> (Plot size: <u>5 Ft</u>)																					
<u>Zea mays</u>		<u>10</u>	<u>Y</u>	<u>UPL</u>																	
		<u>10</u>	<u>=Total Cover</u>																		
<u>Vine Stratum</u>					Hydrophytic Vegetation Indicators: <u> </u> Rapid Test for Hydrophytic Vegetation <u> </u> Dominance Test > 50% <u> </u> Prevalence Index ≤ 3.0 <u> </u> Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>X</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
% Bare Ground in Herb Stratum <u>90</u>					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																

Remarks: (Include photo numbers here or on a separate sheet.)
 Vegetation within the study area has been greatly disturbed due to history of agricultural activities. Sample point meets problematic hydrophytic vegetation

SOIL

Sampling Point: 01w

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 to 8	10YR 3 / 1	100					SILT LOAM	
8 to 16	10YR 2 / 1	100					SILTY CLAY	
16 to 24	10YR 2 / 1	98	10YR 5/6	2	C	M	CLAY	

¹Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Stratified Layers (A5) LRR F | ☐ Loamy Gleyed Matrix (F2) |
| ☐ 1 cm Muck (A9) LRRF G, H | ☐ Depleted Matrix (F3) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) |
| ☐ 5 cm Mucky Peat or Peat (S3) | (MLRA 72 73 of LRR H) |

Indicators for Problematic Hydric Soils: ³

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16)
(LRR H outside of MLRA 72 73)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☒ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.☐ Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Soil within the study area has been greatly disturbed due to history of agricultural activities. Sample point meets problematic hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Fauna (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres along Living Roots (C3)
(where not tilled) |
| ☐ Drift Deposits (B3) | ☐ Presence of Reduced Iron (C4) |
| ☐ Algal Mat or Crust (B4) | ☐ Thin Muck Surface (C7) |
| ☐ Iron Deposits (B5) | ☐ Other (Explain in Remarks) |
| ☐ Inundation Visible on Aerial Imagery (B7) | |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ 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 Imag.(C9)
- ☒ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present?	Yes _____ No <u>X</u>	Depth (inches): _____
Water Table Present?	Yes _____ No <u>X</u>	Depth (inches): _____
Saturation Present?	Yes _____ No <u>X</u>	Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sample point meets sufficient wetland hydrology indicators.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Hub City Energy Park City/County: Brown County Sampling Date: 4/9/2026
 Applicant/Owner: Northwestern Energy State: SD Sampling Point: 02u
 Investigators: Alex Brazeal Section, Township, Range S 25 T 123N R 64W
 Landform (hillslope, terrace, etc.): None Local Relief (concave, convex, none): None Slope(%) 1
 Subregion (LRR): Sub-Region (LRR) Lat: 45.433153 Long: -98.492881 Datum: NAD83
 Soil Map Unit Name: G472A - Aberdeen-Nahon silty clay loams, 0 to 2 percent slopes NWI Classification: PEM1A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If No, explain in Remarks)
 Are Vegetation X, Soil X, Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes No X
 Are Vegetation , Soil , Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland?	Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>		
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>		

Remarks:
 Sample point collected in cultivated agricultural field. Significantly disturbed vegetation and soil present.

VEGETATION— Use scientific names of plants.	Absolute % Cover	Dominant Species	Indicator Status																	
<u>Tree Stratum</u>				Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
<u>Shrub Stratum</u>																				
<u>Herb Stratum</u> (Plot size: <u>5 Ft</u>)																				
<u>Zea mays</u>	<u>10</u>	<u>Y</u>	<u>UPL</u>																	
	<u>10</u>	<u>=Total Cover</u>																		
<u>Vine Stratum</u>																				
				Prevalence Index Worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>10</u> (A)</td> <td><u>50</u> (B)</td> </tr> <tr> <td colspan="2"><i>Prevalence Index = B/A = <u>5.00</u></i></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>10</u> (A)	<u>50</u> (B)	<i>Prevalence Index = B/A = <u>5.00</u></i>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>10</u>	x 5 = <u>50</u>																			
Column Totals: <u>10</u> (A)	<u>50</u> (B)																			
<i>Prevalence Index = B/A = <u>5.00</u></i>																				
				Hydrophytic Vegetation Indicators: <u> </u> Rapid Test for Hydrophytic Vegetation <u> </u> Dominance Test > 50% <u> </u> Prevalence Index ≤ 3.0 <u> </u> Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																

% Bare Ground in Herb Stratum 90

Remarks: (Include photo numbers here or on a separate sheet.)

Sample point does not meet hydrophytic vegetation indicator.

US Army Corps of Engineers



Great Plains – Version 2.0

SOIL

Sampling Point: 02u

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)		%	Color (moist)	%	Type ¹	Loc ²	
0 to 10	10YR	3 / 1	100					SILT LOAM
10 to 18	10YR	2 / 1	100					CLAY LOAM
18 to 24	10YR	2 / 1	100					CLAY

¹Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) LRR F
- ☐ 1 cm Muck (A9) LRRF 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)
- ☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16)
(MLRA 72 73 of LRR H)

Indicators for Problematic Hydric Soils: ³

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16)
(LRR H outside of MLRA 72 73)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

☐ Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Sample point does not meet hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Fauna (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
(where not tilled)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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 Imag.(C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
Water Table Present? Yes _____ No X Depth (inches): _____
Saturation Present? Yes _____ No X Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sample point does not meet sufficient wetland hydrology indicators.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Hub City Energy Park City/County: Brown County Sampling Date: 4/9/2026
 Applicant/Owner: Northwestern Energy State: SD Sampling Point: 03w
 Investigators: Alex Brazeal Section, Township, Range S 25 T 123N R 64W
 Landform (hillslope, terrace, etc.): None Local Relief (concave, convex, none): Concave Slope(%) 1
 Subregion (LRR): Sub-Region (LRR) Lat: 45.430707 Long: -98.485340 Datum: NAD83
 Soil Map Unit Name: G851A - Nahon-Aberdeen-Exline silt loams, 0 to 2 percent slopes NWI Classification: PEM1C
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If No, explain in Remarks)
 Are Vegetation , Soil , Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>		
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>		

Remarks:
 Sample point collected in grass dominated area adjacent to fallow agricultural field.

VEGETATION— Use scientific names of plants.		<u>Absolute % Cover</u>	<u>Dominant Species</u>	<u>Indicator Status</u>	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
<u>Tree Stratum</u>						Prevalence Index Worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>10</u></td> <td>x 1 = <u>10</u></td> </tr> <tr> <td>FACW species <u>85</u></td> <td>x 2 = <u>170</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>180</u> (B)</td> </tr> <tr> <td colspan="2"><i>Prevalence Index = B/A = <u>1.89</u></i></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>10</u>	x 1 = <u>10</u>	FACW species <u>85</u>	x 2 = <u>170</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>95</u> (A)	<u>180</u> (B)	<i>Prevalence Index = B/A = <u>1.89</u></i>
Total % Cover of:	Multiply by:																				
OBL species <u>10</u>	x 1 = <u>10</u>																				
FACW species <u>85</u>	x 2 = <u>170</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>95</u> (A)	<u>180</u> (B)																				
<i>Prevalence Index = B/A = <u>1.89</u></i>																					
<u>Shrub Stratum</u>																					
<u>Herb Stratum</u> (Plot size: <u>5 Ft</u>)																					
Phalaris arundinacea	<u>45</u>	<u>Y</u>	<u>FACW</u>																		
Spartina pectinata	<u>30</u>	<u>Y</u>	<u>FACW</u>																		
Eleocharis palustris	<u>10</u>	<u>N</u>	<u>OBL</u>		Hydrophytic Vegetation Indicators: <u>X</u> Rapid Test for Hydrophytic Vegetation <u>X</u> Dominance Test > 50% <u>X</u> Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
Persicaria pensylvanica	<u>10</u>	<u>N</u>	<u>FACW</u>																		
	<u>95</u> =Total Cover																				
<u>Vine Stratum</u>					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																

% Bare Ground in Herb Stratum 5

Remarks: (Include photo numbers here or on a separate sheet.)

Sample point meets hydrophytic vegetation indicator.

US Army Corps of Engineers



Great Plains – Version 2.0

SOIL

Sampling Point: 03w

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

Depth (inches)	Matrix			Redox Features				Texture	Remarks
	Color (moist)		%	Color (moist)	%	Type ¹	Loc ²		
0 to 6	10YR	3 / 2	100					SILT LOAM	
6 to 10	10YR	3 / 1	98	10YR 5/6	2	C	M	SILT LOAM	
10 to 24	10YR	2 / 1	97	10YR 5/6	3	C	M	SILTY CLAY	

¹Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) LRR F
☐ 1 cm Muck (A9) LRRF 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)
☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16)
 (MLRA 72 73 of LRR H)

Indicators for Problematic Hydric Soils: ³

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
 (LRR H outside of MLRA 72 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

☐ Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Sample point meets hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Fauna (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres along Living Roots (C3)
 (where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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 Imag.(C9)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
 Water Table Present? Yes _____ No X Depth (inches): _____
 Saturation Present? Yes _____ No X Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sample point meets sufficient wetland hydrology indicators.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Hub City Energy Park City/County: Brown County Sampling Date: 4/9/2026
 Applicant/Owner: Northwestern Energy State: SD Sampling Point: 04u
 Investigators: Alex Brazeal Section, Township, Range S 25 T 123N R 64W
 Landform (hillslope, terrace, etc.): None Local Relief (concave, convex, none): None Slope(%) 1
 Subregion (LRR): Sub-Region (LRR) Lat: 45.430693 Long: -98.485231 Datum: NAD83
 Soil Map Unit Name: G851A - Nahon-Aberdeen-Exline silt loams, 0 to 2 percent slopes NWI Classification: PEM1C
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If No, explain in Remarks)
 Are Vegetation , Soil , Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland?	Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>		
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>		

Remarks:
 Sample point collected in grass dominated area adjacent to fallow agricultural field.

VEGETATION— Use scientific names of plants.		Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet:	
<u>Tree Stratum</u>					Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)	
<u>Shrub Stratum</u>					Total Number of Dominant Species Across all Strata: <u>3</u> (B)	
<u>Herb Stratum</u> (Plot size: <u>5 Ft</u>)					Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)	
Poa annua		40	Y	FACU	Prevalence Index Worksheet: Total % Cover of: <u>90</u> (A) Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>30</u> x 2 = <u>60</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>40</u> x 4 = <u>160</u> UPL species <u>20</u> x 5 = <u>100</u> Column Totals: <u>90</u> (A) <u>320</u> (B) Prevalence Index = B/A = <u>3.56</u>	
Phalaris arundinacea		30	Y	FACW		
Bromus inermis		20	Y	UPL		
		90	=Total Cover			
<u>Vine Stratum</u>					Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation <u> </u> Dominance Test > 50% <u> </u> Prevalence Index ≤ 3.0 <u> </u> Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation (Explain) <u> </u> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
% Bare Ground in Herb Stratum <u>10</u>					Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	

Remarks: (Include photo numbers here or on a separate sheet.)

Sample point does not meet hydrophytic vegetation indicator.

US Army Corps of Engineers



Great Plains – Version 2.0

SOIL

Sampling Point: 04u

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)		%	Color (moist)	%	Type ¹	Loc ²	
0 to 10	10YR	3 / 1	100					SILT LOAM
10 to 16	10YR	2 / 1	100					SILTY CLAY
16 to 24	10YR	2 / 1	100					CLAY

¹Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) LRR F
- ☐ 1 cm Muck (A9) LRRF 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)
- ☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16)
(MLRA 72 73 of LRR H)

Indicators for Problematic Hydric Soils: ³

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16)
(LRR H outside of MLRA 72 73)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

☐ Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Sample point does not meet hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Fauna (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
(where not tilled)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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 Imag.(C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
Water Table Present? Yes _____ No X Depth (inches): _____
Saturation Present? Yes _____ No X Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sample point does not meet sufficient wetland hydrology indicators.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Hub City Energy Park City/County: Brown County Sampling Date: 5/7/2026
 Applicant/Owner: Northwestern Energy State: SD Sampling Point: 05w
 Investigators: Alex Brazeal Section, Township, Range S 25 T 123N R 64W
 Landform (hillslope, terrace, etc.): Toe of Slope Local Relief (concave, convex, none): Concave Slope(%) 5
 Subregion (LRR): Sub-Region (LRR) Lat: 45.43539047 Long: -98.48348999 Datum: NAD83
 Soil Map Unit Name: G431A - Bearden silt loam, 0 to 2 percent slopes NWI Classification: PEM1Cx
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If No, explain in Remarks)
 Are Vegetation , Soil , Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	

Remarks:
 Sample point taken in vegetated buffer adjacent to fallow agricultural field. Prior three month period was drier than normal.

VEGETATION— Use scientific names of plants.

<u>Absolute % Cover</u>	<u>Dominant Species</u>	<u>Indicator Status</u>
<u>55</u>	<u>Y</u>	<u>FACW</u>
<u>30</u>	<u>Y</u>	<u>UPL</u>
<u>10</u>	<u>N</u>	<u>OBL</u>
<u>5</u>	<u>N</u>	<u>FACW</u>
<u>100</u>	<u>=Total Cover</u>	

Tree Stratum

Shrub Stratum

Herb Stratum (Plot size: 5 Ft)

<u>Phalaris arundinacea</u>	<u>55</u>	<u>Y</u>	<u>FACW</u>
<u>Bromus inermis</u>	<u>30</u>	<u>Y</u>	<u>UPL</u>
<u>Typha latifolia</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
<u>Persicaria pensylvanica</u>	<u>5</u>	<u>N</u>	<u>FACW</u>

Vine Stratum

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across all Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>10</u>	x 1 = <u>10</u>
FACW species <u>60</u>	x 2 = <u>120</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>30</u>	x 5 = <u>150</u>
Column Totals: <u>100</u> (A)	<u>280</u> (B)
<u>Prevalence Index = B/A = 2.80</u>	

Hydrophytic Vegetation Indicators:

 Rapid Test for Hydrophytic Vegetation
 Dominance Test > 50%
X Prevalence Index ≤ 3.0
 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation (Explain)
 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

% Bare Ground in Herb Stratum 0

Remarks: (Include photo numbers here or on a separate sheet.)

Sample point meets hydrophytic vegetation indicator.

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Great Plains – Version 2.0

SOIL

Sampling Point: 05w

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 to 4	10YR 2 / 1	100					CLAY	
4 to 10	10YR 2 / 1	83	10YR 5/6	3	C	M	CLAY LOAM	
4 to 10	10YR 5 / 1	10	10YR 4/6	4	C	M	CLAY	
10 to 18	10YR 2 / 1	100					CLAY LOAM	

¹Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) LRR F
- ☐ 1 cm Muck (A9) LRRF 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)
- ☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16) (MLRA 72 73 of LRR H)

Indicators for Problematic Hydric Soils: ³

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16) (LRR H outside of MLRA 72 73)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

☐ Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:
Sample point meets hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Fauna (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres along Living Roots (C3) (where not tilled)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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 Imag.(C9)
- ☒ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? Yes X No _____ Depth (inches): 10

(includes capillary fringe)

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Sample point meets sufficient wetland hydrology indicators.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Hub City Energy Park City/County: Brown County Sampling Date: 5/7/2026
 Applicant/Owner: Northwestern Energy State: SD Sampling Point: 06u
 Investigators: Alex Brazeal Section, Township, Range S 25 T 123N R 64W
 Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope(%) 2
 Subregion (LRR): Sub-Region (LRR) Lat: 45.43536377 Long: -98.48355103 Datum: NAD83
 Soil Map Unit Name: G431A - Bearden silt loam, 0 to 2 percent slopes NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If No, explain in Remarks)
 Are Vegetation , Soil , Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland?	Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>		
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>		

Remarks:
 Sample point taken on hillslope in vegetated buffer adjacent to fallow agricultural field. Prior three month period was drier than normal.

VEGETATION— Use scientific names of plants.		Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
<u>Tree Stratum</u>						Prevalence Index Worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>70</u></td> <td>x 5 = <u>350</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>410</u> (B)</td> </tr> <tr> <td colspan="2"><i>Prevalence Index = B/A = <u>4.10</u></i></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>70</u>	x 5 = <u>350</u>	Column Totals: <u>100</u> (A)	<u>410</u> (B)	<i>Prevalence Index = B/A = <u>4.10</u></i>
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<u>Shrub Stratum</u>																					
<u>Herb Stratum</u> (Plot size: <u>5 Ft</u>)																					
Bromus inermis <u>70</u> Y UPL Phalaris arundinacea <u>30</u> N FACW <u>100</u> =Total Cover																					
<u>Vine Stratum</u>					Hydrophytic Vegetation Indicators: <u> </u> Rapid Test for Hydrophytic Vegetation <u> </u> Dominance Test > 50% <u> </u> Prevalence Index ≤ 3.0 <u> </u> Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																

% Bare Ground in Herb Stratum 0

Remarks: (Include photo numbers here or on a separate sheet.)

Sample point does not meet hydrophytic vegetation indicator.

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Great Plains – Version 2.0

SOIL

Sampling Point: 06u

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)		%	Color (moist)	%	Type ¹		
0 to 6	10YR	3 / 1	100				SILT LOAM	
6 to 10	10YR	2 / 1	100				CLAY	
10 to 20	10YR	2 / 1	100				CLAY LOAM	

¹Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) LRR F
☐ 1 cm Muck (A9) LRRF 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)
☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16)
(MLRA 72 73 of LRR H)

Indicators for Problematic Hydric Soils: ³

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
(LRR H outside of MLRA 72 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.☐ Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Sample point does not meet hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☐ Aquatic Fauna (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres along Living Roots (C3)
(where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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 Imag.(C9)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
Water Table Present? Yes _____ No X Depth (inches): _____
Saturation Present? Yes _____ No X Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sample point does not meet sufficient wetland hydrology indicators.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Hub City Energy Park City/County: Brown County Sampling Date: 5/7/2026
 Applicant/Owner: Northwestern Energy State: SD Sampling Point: 07w
 Investigators: Alex Brazeal Section, Township, Range S 25 T 123N R 64W
 Landform (hillslope, terrace, etc.): Linear depression Local Relief (concave, convex, none): Concave Slope(%) 1
 Subregion (LRR): Sub-Region (LRR) Lat: 45.43478394 Long: -98.48301697 Datum: NAD83
 Soil Map Unit Name: G431A - Bearden silt loam, 0 to 2 percent slopes NWI Classification: PEM1Cx
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If No, explain in Remarks)
 Are Vegetation , Soil , Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	

Remarks:
 Sample point taken in vegetated buffer adjacent to fallow agricultural field. Prior three month period was drier than normal.

VEGETATION— Use scientific names of plants.		<u>Absolute</u> <u>% Cover</u>	<u>Dominant</u> <u>Species</u>	<u>Indicator</u> <u>Status</u>	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																																
<u>Tree Stratum</u>						Prevalence Index Worksheet: <table> <tr> <td>Total % Cover of:</td> <td></td> <td>Multiply by:</td> <td></td> </tr> <tr> <td>OBL species</td> <td><u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> </tr> <tr> <td>FACW species</td> <td><u>70</u></td> <td>x 2 =</td> <td><u>140</u></td> </tr> <tr> <td>FAC species</td> <td><u>0</u></td> <td>x 3 =</td> <td><u>0</u></td> </tr> <tr> <td>FACU species</td> <td><u>0</u></td> <td>x 4 =</td> <td><u>0</u></td> </tr> <tr> <td>UPL species</td> <td><u>30</u></td> <td>x 5 =</td> <td><u>150</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>100</u> (A)</td> <td></td> <td><u>290</u> (B)</td> </tr> <tr> <td colspan="4">Prevalence Index = B/A = <u>2.90</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>70</u>	x 2 =	<u>140</u>	FAC species	<u>0</u>	x 3 =	<u>0</u>	FACU species	<u>0</u>	x 4 =	<u>0</u>	UPL species	<u>30</u>	x 5 =	<u>150</u>	Column Totals:	<u>100</u> (A)		<u>290</u> (B)	Prevalence Index = B/A = <u>2.90</u>		
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Column Totals:	<u>100</u> (A)		<u>290</u> (B)																																		
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<u>Vine Stratum</u>					Hydrophytic Vegetation Indicators: <u> </u> Rapid Test for Hydrophytic Vegetation <u> </u> Dominance Test > 50% <u>X</u> Prevalence Index ≤ 3.0 <u> </u> Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																

% Bare Ground in Herb Stratum 0

Remarks: (Include photo numbers here or on a separate sheet.)

Sample point meets hydrophytic vegetation indicator.

US Army Corps of Engineers



Great Plains – Version 2.0

SOIL

Sampling Point: 07w

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 to 6	10YR 3 / 1	100					CLAY LOAM	
6 to 12	10YR 2 / 1	80	10YR 5/6	40	C	M	CLAY	
6 to 12	10YR 5 / 1	12	10YR 4/6	40	C	M	CLAY	
12 to 20	10YR 6 / 1	98	10YR 5/6	2	C	M	CLAY LOAM	

¹Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) LRR F
- ☐ 1 cm Muck (A9) LRRF 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)
- ☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16) (MLRA 72 73 of LRR H)

Indicators for Problematic Hydric Soils: ³

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16) (LRR H outside of MLRA 72 73)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

☐ Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:
Sample point meets hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Fauna (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres along Living Roots (C3) (where not tilled)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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 Imag.(C9)
- ☒ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
Water Table Present? Yes _____ No X Depth (inches): _____
Saturation Present? Yes X No _____ Depth (inches): 10
(includes capillary fringe)

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Sample point meets sufficient wetland hydrology indicators.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Hub City Energy Park City/County: Brown County Sampling Date: 5/7/2026
 Applicant/Owner: Northwestern Energy State: SD Sampling Point: 08u
 Investigators: Alex Brazeal Section, Township, Range S 25 T 123N R 64W
 Landform (hillslope, terrace, etc.): Top of Slope Local Relief (concave, convex, none): Convex Slope(%) 2
 Subregion (LRR): Sub-Region (LRR) Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: G431A - Bearden silt loam, 0 to 2 percent slopes NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If No, explain in Remarks)
 Are Vegetation _____, Soil _____, Hydrology _____, significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, Hydrology _____, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>		
Wetland Hydrology Present?	Yes _____ No <u>X</u>		

Remarks:
 Sample point taken in upland break vegetated buffer adjacent to fallow agricultural field. Prior three month period was drier than normal.

VEGETATION— Use scientific names of plants.		<u>Absolute % Cover</u>	<u>Dominant Species</u>	<u>Indicator Status</u>	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																																
<u>Tree Stratum</u>						Prevalence Index Worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td></td> <td>Multiply by:</td> <td></td> </tr> <tr> <td>OBL species</td> <td><u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> </tr> <tr> <td>FACW species</td> <td><u>30</u></td> <td>x 2 =</td> <td><u>60</u></td> </tr> <tr> <td>FAC species</td> <td><u>0</u></td> <td>x 3 =</td> <td><u>0</u></td> </tr> <tr> <td>FACU species</td> <td><u>0</u></td> <td>x 4 =</td> <td><u>0</u></td> </tr> <tr> <td>UPL species</td> <td><u>70</u></td> <td>x 5 =</td> <td><u>350</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>100</u> (A)</td> <td></td> <td><u>410</u> (B)</td> </tr> <tr> <td colspan="2"></td> <td colspan="2"><i>Prevalence Index = B/A =</i> <u>4.10</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>30</u>	x 2 =	<u>60</u>	FAC species	<u>0</u>	x 3 =	<u>0</u>	FACU species	<u>0</u>	x 4 =	<u>0</u>	UPL species	<u>70</u>	x 5 =	<u>350</u>	Column Totals:	<u>100</u> (A)		<u>410</u> (B)			<i>Prevalence Index = B/A =</i> <u>4.10</u>
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<u>Shrub Stratum</u>																																					
<u>Herb Stratum</u> (Plot size: <u>5 Ft</u>)																																					
Bromus inermis <u>70</u> Y UPL Phalaris arundinacea <u>30</u> Y FACW <u>100</u> =Total Cover																																					
<u>Vine Stratum</u>					Hydrophytic Vegetation Indicators: _____ Rapid Test for Hydrophytic Vegetation _____ Dominance Test > 50% _____ Prevalence Index ≤ 3.0 _____ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																

% Bare Ground in Herb Stratum 0

Remarks: (Include photo numbers here or on a separate sheet.)

Sample point does not meet hydrophytic vegetation indicator.

US Army Corps of Engineers



Great Plains – Version 2.0

SOIL

Sampling Point: 08u

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)		%	Color (moist)	%	Type ¹		
0 to 8	10YR	3 / 1	100				CLAY LOAM	
8 to 16	10YR	2 / 1	100				SILT LOAM	
16 to 20	10YR	2 / 1	100				CLAY	

¹Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) LRR F
- ☐ 1 cm Muck (A9) LRRF 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)
- ☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16)
(MLRA 72 73 of LRR H)

Indicators for Problematic Hydric Soils: ³

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16)
(LRR H outside of MLRA 72 73)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

☐ Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Sample point does not meet hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Fauna (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
(where not tilled)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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 Imag.(C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
Water Table Present? Yes _____ No X Depth (inches): _____
Saturation Present? Yes _____ No X Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sample point does not meet sufficient wetland hydrology indicators.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Hub City Energy Park City/County: Brown County Sampling Date: 5/7/2026
 Applicant/Owner: Northwestern Energy State: SD Sampling Point: 09u
 Investigators: Alex Brazeal Section, Township, Range S 25 T 123N R 64W
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope(%) 1
 Subregion (LRR): Sub-Region (LRR) Lat: 45.43190765 Long: -98.49441528 Datum: NAD83
 Soil Map Unit Name: G472A - Aberdeen-Nahon silty clay loams, 0 to 2 percent slopes NWI Classification: PEM1A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If No, explain in Remarks)
 Are Vegetation X, Soil X, Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes No X
 Are Vegetation , Soil , Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland?	Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>		
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>		

Remarks:
 Sample point taken in the vicinity of NWI feature located in cultivated agricultural field. Prior three month period was drier than normal.

VEGETATION— Use scientific names of plants.		Absolute % Cover	Dominant Species	Indicator Status																	
<u>Tree Stratum</u>					Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
<u>Shrub Stratum</u>																					
<u>Herb Stratum</u> (Plot size: <u>5 Ft</u>) <u>Zea mays</u>		<u>5</u>	<u>Y</u>	<u>UPL</u>																	
		<u>5</u>	<u>5</u> = Total Cover																		
<u>Vine Stratum</u>					Prevalence Index Worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>5</u> (A)</td> <td><u>25</u> (B)</td> </tr> <tr> <td colspan="2"><i>Prevalence Index = B/A = <u>5.00</u></i></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>5</u> (A)	<u>25</u> (B)	<i>Prevalence Index = B/A = <u>5.00</u></i>	
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<i>Prevalence Index = B/A = <u>5.00</u></i>																					
Hydrophytic Vegetation Indicators: <u> </u> Rapid Test for Hydrophytic Vegetation <u> </u> Dominance Test > 50% <u> </u> Prevalence Index ≤ 3.0 <u> </u> Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																					
Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																					

% Bare Ground in Herb Stratum 95

Remarks: (Include photo numbers here or on a separate sheet.)
 Corn residue from previous year present. No signs of ruderal vegetation. Sample point does not meet hydrophytic vegetation indicator.

SOIL

Sampling Point: 09u

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)		Color (moist)	%	Type ¹	Loc ²		
0 to 6	10YR	3 / 2	100				SILT LOAM	
6 to 12	10YR	3 / 1	100				CLAY LOAM	
12 to 24	10YR	2 / 1	100				SILT LOAM	

¹Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) LRR F
- ☐ 1 cm Muck (A9) LRRF 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)
- ☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16)
(MLRA 72 73 of LRR H)

Indicators for Problematic Hydric Soils: ³

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16)
(LRR H outside of MLRA 72 73)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

☐ Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Sample point does not meet hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Fauna (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
(where not tilled)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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 Imag.(C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
Water Table Present? Yes _____ No X Depth (inches): _____
Saturation Present? Yes _____ No X Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sample point does not meet sufficient wetland hydrology indicators.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Hub City Energy Park City/County: Brown County Sampling Date: 5/7/2026
 Applicant/Owner: Northwestern Energy State: SD Sampling Point: 10u
 Investigators: Alex Brazeal Section, Township, Range S 25 T 123N R 64W
 Landform (hillslope, terrace, etc.): Top of Slope Local Relief (concave, convex, none): Convex Slope(%) 1
 Subregion (LRR): Sub-Region (LRR) Lat: 45.4304924 Long: -98.49189758 Datum: NAD83
 Soil Map Unit Name: G472A - Aberdeen-Nahon silty clay loams, 0 to 2 percent slopes NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If No, explain in Remarks)
 Are Vegetation , Soil , Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland?	Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>		
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>		

Remarks:
 Sample point located on field approach that lacks culvert. Prior three month period was drier than normal.

VEGETATION— Use scientific names of plants.		Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
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Bromus inermis		60	Y	UPL																	
Poa annua		30	Y	FACU																	
		90	=Total Cover																		
<u>Vine Stratum</u>					Hydrophytic Vegetation Indicators: <u> </u> Rapid Test for Hydrophytic Vegetation <u> </u> Dominance Test > 50% <u> </u> Prevalence Index ≤ 3.0 <u> </u> Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
% Bare Ground in Herb Stratum <u> </u>					Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																

Remarks: (Include photo numbers here or on a separate sheet.)

Sample point does not meet hydrophytic vegetation indicator.

US Army Corps of Engineers



Great Plains – Version 2.0

SOIL

Sampling Point: 10u

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 to 4	10YR 3 / 2	100					SILT LOAM	
4 to 12	10YR 2 / 1	100					CLAY LOAM	
12 to 20	10YR 3 / 1	100					SILTY CLAY	

¹Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) LRR F
☐ 1 cm Muck (A9) LRRF G, H
☐ Depleted Below Dark Surface (A11)
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☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16)
(MLRA 72 73 of LRR H)

Indicators for Problematic Hydric Soils: ³

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
(LRR H outside of MLRA 72 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

☐ Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Sample point does not meet hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☐ Aquatic Fauna (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres along Living Roots (C3)
(where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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 Imag.(C9)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
Water Table Present? Yes _____ No X Depth (inches): _____
Saturation Present? Yes _____ No X Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sample point does not meet sufficient wetland hydrology indicators.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Hub City Energy Park City/County: Brown County Sampling Date: 5/7/2026
 Applicant/Owner: Northwestern Energy State: SD Sampling Point: 11u
 Investigators: Alex Brazeal Section, Township, Range S 25 T 123N R 64W
 Landform (hillslope, terrace, etc.): Top of Slope Local Relief (concave, convex, none): Convex Slope(%) 1
 Subregion (LRR): Sub-Region (LRR) Lat: 45.43044662 Long: -98.48433685 Datum: NAD83
 Soil Map Unit Name: G851A - Nahon-Aberdeen-Exline silt loams, 0 to 2 percent slopes NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If No, explain in Remarks)
 Are Vegetation , Soil , Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland?	Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>		
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>		

Remarks:
 Sample point located on field approach that lacks culvert. Prior three month period was drier than normal.

VEGETATION— Use scientific names of plants.		Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)
<u>Tree Stratum</u>					
<u>Shrub Stratum</u>					
<u>Herb Stratum</u> (Plot size: <u>5 Ft</u>)					Hydrophytic Vegetation Indicators: <u> </u> Rapid Test for Hydrophytic Vegetation <u> </u> Dominance Test > 50% <u> </u> Prevalence Index ≤ 3.0 <u> </u> Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
Bromus inermis		60	Y	UPL	
Poa annua		30	Y	FACU	
		90	=Total Cover		
<u>Vine Stratum</u>					

% Bare Ground in Herb Stratum

Remarks: (Include photo numbers here or on a separate sheet.)

Sample point does not meet hydrophytic vegetation indicator.

US Army Corps of Engineers



Great Plains – Version 2.0

SOIL

Sampling Point: 11u

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 to 4	10YR 3 / 2	100					SILT LOAM	
4 to 12	10YR 2 / 1	100					CLAY LOAM	
12 to 20	10YR 3 / 1	100					SILTY CLAY	

¹Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) LRR F
☐ 1 cm Muck (A9) LRRF 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)
☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16)
(MLRA 72 73 of LRR H)

Indicators for Problematic Hydric Soils: ³

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
(LRR H outside of MLRA 72 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.☐ Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Sample point does not meet hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☐ Aquatic Fauna (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres along Living Roots (C3)
(where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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 Imag.(C9)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
Water Table Present? Yes _____ No X Depth (inches): _____
Saturation Present? Yes _____ No X Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sample point does not meet sufficient wetland hydrology indicators.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Hub City Energy Park City/County: Brown County Sampling Date: 5/7/2026
 Applicant/Owner: Northwestern Energy State: SD Sampling Point: 12u
 Investigators: Alex Brazeal Section, Township, Range S 25 T 123N R 64W
 Landform (hillslope, terrace, etc.): Top of Slope Local Relief (concave, convex, none): Convex Slope(%) 1
 Subregion (LRR): Sub-Region (LRR) Lat: 45.43046188 Long: -98.48297882 Datum: NAD83
 Soil Map Unit Name: G851A - Nahon-Aberdeen-Exline silt loams, 0 to 2 percent slopes NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If No, explain in Remarks)
 Are Vegetation , Soil , Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland?	Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>		
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>		

Remarks:
 Sample point located on field approach that lacks culvert. Prior three month period was drier than normal.

VEGETATION— Use scientific names of plants.		Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)
<u>Tree Stratum</u>					
<u>Shrub Stratum</u>					
<u>Herb Stratum</u> (Plot size: <u>5 Ft</u>)					Hydrophytic Vegetation Indicators: <u> </u> Rapid Test for Hydrophytic Vegetation <u> </u> Dominance Test > 50% <u> </u> Prevalence Index ≤ 3.0 <u> </u> Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
Bromus inermis		60	Y	UPL	
Poa annua		30	Y	FACU	
		90	=Total Cover		
<u>Vine Stratum</u>					

% Bare Ground in Herb Stratum

Remarks: (Include photo numbers here or on a separate sheet.)

Sample point does not meet hydrophytic vegetation indicator.

US Army Corps of Engineers



Great Plains – Version 2.0

SOIL

Sampling Point: 12u

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 to 4	10YR 3 / 2	100					SILT LOAM	
4 to 12	10YR 2 / 1	100					CLAY LOAM	
12 to 20	10YR 3 / 1	100					SILTY CLAY	

¹Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) LRR F
- ☐ 1 cm Muck (A9) LRRF 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)
- ☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16) (MLRA 72 73 of LRR H)

Indicators for Problematic Hydric Soils: ³

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16) (LRR H outside of MLRA 72 73)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

☐ Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Sample point does not meet hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
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- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres along Living Roots (C3) (where not tilled)
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- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
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- ☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imag.(C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

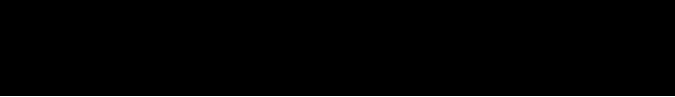
Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
Water Table Present? Yes _____ No X Depth (inches): _____
Saturation Present? Yes _____ No X Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Sample point does not meet sufficient wetland hydrology indicators.



Attachment C: Photographs



Photo 1: Facing east toward Sample Points 01w/02u.



Photo 2: Facing west towards Sample Points 03w/04u.



Photo 3: Facing northeast showing Sample Point 05w/06u.



Photo 4: Facing south toward Sample Point 07w/08u.



Photo 5: Facing north toward Wetland 3 within former railroad ditch.



Photo 6: Facing north toward Sample Point 09u and NWI feature.



Photo 7: Facing west toward Wetland 6b within north road ditch of 135th Street.



Photo 8: Facing west toward Wetland 4 from constructed field entrance.



Photo 9: Facing south showing cultivated field conditions.



Photo 10: Facing south showing vegetated upland buffer.



Photo 11: Facing north showing vegetated upland buffer.