

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 7/31/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP001
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
_____ = Total Cover			
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)			
1. <u>Salix exigua</u>	20%	Y	FACW
2. _____	_____	_____	_____
20% = Total Cover			
<u>Herb Stratum</u> (Plot size: <u>5</u>)			
1. <u>Persicaria pensylvanica</u>	45%	Y	FACW
2. <u>Phalaris arundinacea</u>	35%	Y	FACW
3. <u>Typha angustifolia</u>	25%	Y	OBL
4. <u>Spartina pectinata</u>	10%	N	FACW
5. <u>Asclepias speciosa</u>	7%	N	FAC
6. _____	_____	_____	_____
122% = Total Cover			
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
_____ = Total Cover			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>25%</u>	x 1 <u>25.0%</u>
FACW species <u>110%</u>	x 2 <u>220.0%</u>
FAC species <u>7%</u>	x 3 <u>21.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>142.0%</u>	(A) <u>266%</u> (B)
Prevalence Index = B/A = <u>1.87</u>	

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: DP001

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	
16-20	10G 3/1	60%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

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

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☒ No ☐	Depth (inches):	6
Water Table Present?	Yes ☒ No ☐	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	0

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 7/31/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP002
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: Upland Point				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <i>Zea mays</i> 85% Y UPL 2. _____ 85% = Total Cover <u>Woody Vine Stratum</u> (Plot size: _____) 1. _____ _____ = Total Cover	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) Prevalence Index Worksheet: <table> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0%</u></td> <td>x 1 <u>0.0%</u></td> </tr> <tr> <td>FACW species <u>0%</u></td> <td>x 2 <u>0.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>85%</u></td> <td>x 5 <u>425.0%</u></td> </tr> <tr> <td>Column Totals: <u>85.0%</u></td> <td>(A) <u>425%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>5.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>0%</u>	x 2 <u>0.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>85%</u>	x 5 <u>425.0%</u>	Column Totals: <u>85.0%</u>	(A) <u>425%</u> (B)	Prevalence Index = B/A = <u>5.00</u>	
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Column Totals: <u>85.0%</u>	(A) <u>425%</u> (B)																
Prevalence Index = B/A = <u>5.00</u>																	
Remarks: Upland cornfield adjacent to wetland.																	

SOIL

Sampling Point: DP002

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/2	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: Upland

Hydric Soil Present? Yes _____ No X

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes No X

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

Remarks: No hydrology

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 7/31/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP003
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) <table border="0"> <tr> <td>1. <u>Phalaris arundinacea</u></td> <td>60%</td> <td>Y</td> <td>FACW</td> </tr> <tr> <td>2. <u>Persicaria pensylvanica</u></td> <td>45%</td> <td>Y</td> <td>FACW</td> </tr> <tr> <td>3. <u>Asclepias speciosa</u></td> <td>8%</td> <td>N</td> <td>FAC</td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> </table> 113% = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		1. <u>Phalaris arundinacea</u>	60%	Y	FACW	2. <u>Persicaria pensylvanica</u>	45%	Y	FACW	3. <u>Asclepias speciosa</u>	8%	N	FAC	4. _____				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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>105%</u></td> <td>x 2 <u>210.0%</u></td> </tr> <tr> <td>FAC species <u>8%</u></td> <td>x 3 <u>24.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>113.0%</u></td> <td>(A) <u>234%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.07</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>105%</u>	x 2 <u>210.0%</u>	FAC species <u>8%</u>	x 3 <u>24.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>113.0%</u>	(A) <u>234%</u> (B)	Prevalence Index = B/A = <u>2.07</u>	
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Remarks:																																			

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
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☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	8

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 7/31/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP004
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: Upland			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<u>Bromus inermis</u>	85%	Y	FACU
2.	<u>Asclepias speciosa</u>	5%	N	FAC
3.	<u>Helianthus maximiliani</u>	5%	N	UPL
4.	_____			
		95%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>5%</u>	x 3 <u>15.0%</u>
FACU species <u>85%</u>	x 4 <u>340.0%</u>
UPL species <u>5%</u>	x 5 <u>25.0%</u>
Column Totals: <u>95.0%</u>	(A) <u>380%</u> (B)
Prevalence Index = B/A = <u>4.00</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: Upland

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/2	100%						

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No X

Water Table Present? Yes No X

Saturation Present? Yes No X

(includes capillary fringe)

Depth (inches): NA

Depth (inches): NA

Depth (inches): NA

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site:	Tatanka Ridge Wind Project	City/County:	Deuel County	Sampling Date:	7/31/2018
Applicant/Owner:	Buffalo Ridge III, LLC	State:	SD	Sampling Point:	DP005
Investigator(s):	E. Schwartz, P. Swartzinski	Section, Township, Range:			
Landform (hillslope, terrace, etc.):	depression	Local relief (concave, convex, none):	Convex		
Slope (%):	<5%	Lat:		Datum:	NAD83
Soil Map Unit Name:			NW1 classification:		

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM					

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant pecies?	Indicator Status
1. _____		_____	_____	_____
		_____	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	
Herb Stratum (Plot size: <u>5</u>)				
1.	<i>Phalaris arundinacea</i>	60%	Y	FACW
2.	<i>Eleocharis palustris</i>	15%	N	OBL
3.	<i>Typha angustifolia</i>	10%	N	OBL
4.	<i>Spartina pectinata</i>	10%	N	FACW
5.	<i>Asclepias speciosa</i>	5%	N	FAC
6.	_____	_____	_____	_____
		100%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>25%</u>	x 1 <u>25.0%</u>
FACW species <u>70%</u>	x 2 <u>140.0%</u>
FAC species <u>5%</u>	x 3 <u>15.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>100.0%</u>	(A) <u>180%</u> (B)
Prevalence Index = B/A = <u>1.80</u>	

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks: PEM

SOIL

Sampling Point: DP005

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	108%					Clay Loam	2 INCHES OM AT SURFACE

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ Depleted Matrix (F3)
_____ Depleted Below Dark Surface (A11)	_____ Redox Dark Surface (F6)
X _____ Thick Dark Surface (A12)	_____ Depleted Dark Surface (F7)
_____ Sandy Mucky Mineral (S1)	_____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes X No

HYDROLOGY

Wetland Hydrology Indicators

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

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u>X</u>	No	<u> </u>	Depth (inches):	<u> 1 </u>
Water Table Present?	Yes	<u>X</u>	No	<u> </u>	Depth (inches):	<u> 0 </u>
Saturation Present? (includes capillary fringe)	Yes	<u>X</u>	No	<u> </u>	Depth (inches):	<u> 0 </u>

Wetland Hydrology Present? Yes X No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site:	Tatanka Ridge Wind Project	City/County:	Deuel County	Sampling Date:	7/31/2018
Applicant/Owner:	Buffalo Ridge III, LLC	State:	SD	Sampling Point:	DP006
Investigator(s):	E. Schwartz, P. Swartzinski	Section, Township, Range:			
Landform (hillslope, terrace, etc.):	depression	Local relief (concave, convex, none):	Linear Slope		
Slope (%):	<5%	Lat:		Datum:	NAD83
Soil Map Unit Name:			NW1 classification:		

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: Upland				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant pecies?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<u>Bromus inermis</u>	30%	Y	FACU
2.	<u>Poa pratensis</u>	10%	Y	FAC
3.	<u>Helianthus maximiliani</u>	10%	Y	UPL
4.	<u>Hordeum jubatum</u>	5%	N	FAC
5.	<u>Calamagrostis canadensis</u>	5%	N	OBL
6.	_____			
		60%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>5%</u>	x 1 <u>5.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>15%</u>	x 3 <u>45.0%</u>
FACU species <u>30%</u>	x 4 <u>120.0%</u>
UPL species <u>10%</u>	x 5 <u>50.0%</u>
Column Totals: <u>60.0%</u>	(A) <u>220%</u> (B)
Prevalence Index = B/A = <u>3.67</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes _____ No X

Remarks: Upland

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/2	100%					Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators

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

Secondary Indicators (2 or more required)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No X

Water Table Present? Yes No X

Saturation Present? Yes No X

Depth (inches): NA

Depth (inches): NA

Depth (inches): NA

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 7/31/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP007
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <u>Phalaris arundinacea</u> 70% Y FACW 2. <u>Persicaria pensylvanica</u> 5% N FACW 3. _____ _____ 75% = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>75%</u></td> <td>x 2 <u>150.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>75.0%</u></td> <td>(A) <u>150%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>75%</u>	x 2 <u>150.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>75.0%</u>	(A) <u>150%</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>0%</u>	x 1 <u>0.0%</u>																		
FACW species <u>75%</u>	x 2 <u>150.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>0%</u>	x 4 <u>0.0%</u>																		
UPL species <u>0%</u>	x 5 <u>0.0%</u>																		
Column Totals: <u>75.0%</u>	(A) <u>150%</u> (B)																		
Prevalence Index = B/A = <u>2.00</u>																			
Remarks: PEM																			

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	2 in OM AT SURFACE

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: NONE

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	0

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 7/31/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP008
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: Long: Datum: NAD83
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: Upland Point				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant species?	Indicator Status	
1. _____	_____	_____	_____	_____
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	_____
				_____ = Total Cover
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Bromus inermis</u>	55%	Y		FACU
2. <u>Phleum pratense</u>	15%	N		FACU
3. <u>Poa pratensis</u>	10%	N		FAC
4. <u>Asclepias speciosa</u>	3%	N		FAC
5. _____	_____	_____	_____	_____
				_____ 83% = Total Cover
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	_____
				_____ = Total Cover

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)	

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>0%</u>	x 1	<u>0.0%</u>
FACW species	<u>0%</u>	x 2	<u>0.0%</u>
FAC species	<u>13%</u>	x 3	<u>39.0%</u>
FACU species	<u>70%</u>	x 4	<u>280.0%</u>
UPL species	<u>0%</u>	x 5	<u>0.0%</u>
Column Totals:	<u>83.0%</u>	(A)	<u>319%</u> (B)
Prevalence Index = B/A =		<u>3.84</u>	

Hydrophytic Vegetation Indicators:	
<u>N</u> 1 - Rapid Test for Hydrophytic Vegetation	
<u>N</u> 2 - Dominance Test if >50%	
<u>N</u> 3 - Prevalence Index is ≤ 3.0	
<u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)	
<u>N</u> Problematic Hydrophytic Vegetation (Explain)	
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Hydrophytic Vegetation Present?	
	Yes _____ No <u>X</u>

Remarks: Upland Vegetation

SOIL

Sampling Point: DP008

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicator)								
Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 3/2	100%					Clay Loam	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains								Location: PL=Pore Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils		
☐ Histosol (A1)			☐ Sandy Gleyed Matrix (S4)			☐ Coast Prairie Redoc (A16)		
☐ Histic Epipedon (A2)			☐ Sandy Redox (S5)			☐ Dark Surface (S7)		
☐ Black Histic (A3)			☐ Stripped Matrix (S6)			☐ Iron-Manganese Masses (F12)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Mucky Mineral (F1)			☐ Very Shallow Dark Surface (TF12)		
☐ Stratified Layers (A5)			☐ Loamy Gleyed Matrix (F2)			☐ Other (Explain in Remarks)		
☐ 2 cm Muck (A10)			☐ Depleted Matrix (F3)			Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
☐ Depleted Below Dark Surface (A11)			☐ Redox Dark Surface (F6)					
☐ Thick Dark Surface (A12)			☐ Depleted Dark Surface (F7)					
☐ Sandy Mucky Mineral (S1)			☐ Redox Depressions (F8)					
Restrictive Layer (if present):								
Type: <u>None</u>						Hydric Soil Present? Yes ☐ No ☒		
Depth (inches): <u>NA</u>								
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators											
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)									
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)									
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)									
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)									
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)									
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)									
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)									
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)									
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)									
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)										
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)										
Field Observations: Surface Water Present? Yes ☐ No ☒ Water Table Present? Yes ☐ No ☒ Saturation Present? Yes ☐ No ☒ (includes capillary fringe) Depth (inches): NA Depth (inches): NA Depth (inches): NA Wetland Hydrology Present? Yes ☐ No ☒ <tr> <td colspan="4">Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:</td> </tr> <tr> <td colspan="4">Remarks: No Hydrology</td> </tr>				Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:				Remarks: No Hydrology			
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:											
Remarks: No Hydrology											

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site:	Tatanka Ridge Wind Project		City/County:	Deuel County		Sampling Date:	7/31/2018	
Applicant/Owner:	Buffalo Ridge III, LLC		State:	SD		Sampling Point:	DP011	
Investigator(s):	E. Schwartz, P. Swartzinski		Section, Township, Range:					
Landform (hillslope, terrace, etc.):	depression		Local relief (concave, convex, none):	Convex				
Slope (%):	<5%	Lat:		Long:		Datum:	NAD83	
Soil Map Unit Name:			NWI classification:					

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM					

VEGETATION – Use scientific names of plants

Tree Stratum	(Plot size: 30)	Absolute % Cover	Dominant species?	Indicator Status
1. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: 15)				
1. _____				
_____ = Total Cover				
Herb Stratum (Plot size: 5)				
1.	<i>Spartina pectinata</i>	65%	Y	FACW
2.	<i>Phalaris arundinacea</i>	40%	Y	FACW
3.	<i>Schoenoplectus acutus</i>	20%	N	OBL
4.	<i>Typha angustifolia</i>	5%	N	OBL
5.	_____	_____	_____	_____
130% = Total Cover				
Woody Vine Stratum (Plot size: 15)				
1. _____				
_____ = Total Cover				

Dominance Test Worksheet:			
Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)	
Total Number of Dominant Species Across All Strata:	2	(B)	
Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0%	(A/B)	

Prevalence Index Worksheet:			
Total % Cover of:	Multiply by:		
OBL species	25%	x 1	25.0%
FACW species	105%	x 2	210.0%
FAC species	0%	x 3	0.0%
FACU species	0%	x 4	0.0%
UPL species	0%	x 5	0.0%
Column Totals:	130.0%	(A)	235% (B)
Prevalence Index = B/A =		1.81	

Hydrophytic Vegetation Indicators:	
Y	1 - Rapid Test for Hydrophytic Vegetation
Y	2 - Dominance Test if >50%
Y	3 - Prevalence Index is ≤ 3.0
Y	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
N	Problematic Hydrophytic Vegetation (Explain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Hydrophytic Vegetation Present?	
Yes	X
No	_____

SOIL

Sampling Point: DP011

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-6	10YR 2/2	100%					Clay Loam	2 in OM
6-16	10YR 2/1	100%					Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

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

Secondary Indicators (2 or more required)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	6

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 7/31/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP012
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: Upland			

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Herb Stratum (Plot size: <u>5</u>)			
1. <u>Poa pratensis</u>	35%	Y	FAC
2. <u>Phleum pratense</u>	35%	Y	FACU
3. <u>Bromus inermis</u>	30%	Y	FACU
4. <u>Solidago canadensis</u>	10%	N	FACU
5. _____	_____	_____	_____
		_____ 110% = Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	

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>3</u>	(B)	
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>33.3%</u>	(A/B)	

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>0%</u>	x 1	<u>0.0%</u>
FACW species	<u>0%</u>	x 2	<u>0.0%</u>
FAC species	<u>35%</u>	x 3	<u>105.0%</u>
FACU species	<u>75%</u>	x 4	<u>300.0%</u>
UPL species	<u>0%</u>	x 5	<u>0.0%</u>
Column Totals:	<u>110.0%</u>	(A)	<u>405%</u> (B)
Prevalence Index = B/A =		<u>3.68</u>	

Hydrophytic Vegetation Indicators:
<u>N</u> 1 - Rapid Test for Hydrophytic Vegetation
<u>N</u> 2 - Dominance Test if >50%
<u>N</u> 3 - Prevalence Index is ≤ 3.0
<u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
<u>N</u> Problematic Hydrophytic Vegetation (Explain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?	Yes	No	X
	_____	_____	_____

SOIL

Sampling Point: DP012

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/2	100%					Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: Upland

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators

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

Secondary Indicators (2 or more required)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No X

Water Table Present? Yes No X

Saturation Present? Yes No X

(includes capillary fringe)

Depth (inches): NA

Depth (inches): NA

Depth (inches): NA

Wetland Hydrology Present? Yes No X

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

Remarks: No Hydrology

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 7/31/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP013
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

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: PEM				

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant Species?	Indicator Status	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)	
1. _____ _____ = Total Cover					Prevalence Index Worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>85%</u> x 1 <u>85.0%</u> FACW species <u>15%</u> x 2 <u>30.0%</u> FAC species <u>10%</u> x 3 <u>30.0%</u> FACU species <u>0%</u> x 4 <u>0.0%</u> UPL species <u>0%</u> x 5 <u>0.0%</u> Column Totals: <u>110.0%</u> (A) <u>145%</u> (B) Prevalence Index = B/A = <u>1.32</u>	
Sapling/Shrub Stratum (Plot size: <u>15</u>)						
1. _____ _____ = Total Cover						
Herb Stratum (Plot size: <u>5</u>)						
1.	<i>Schoenoplectus acutus</i>	45%	Y	OBL		
2.	<i>Schoenoplectus tabernaemontani</i>	25%	Y	OBL		
3.	<i>Juncus balticus</i>	15%	N	OBL		
4.	<i>Phalaris arundinacea</i>	15%	N	FACW		
5.	<i>Poa pratensis</i>	10%	N	FAC		
6.	_____					
		110%	= Total Cover			
Woody Vine Stratum (Plot size: <u>15</u>)					Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
1. _____ _____ = Total Cover					Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
Remarks: PEM						

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1						Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	6

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 7/31/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP014
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: Upland			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant pecies?	Indicator Status
1. _____		_____	_____	_____
		_____	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	
Herb Stratum (Plot size: <u>5</u>)				
1.	<i>Bromus inermis</i>	35%	Y	FACU
2.	<i>Poa pratensis</i>	35%	Y	FAC
3.	<i>Phleum pratense</i>	25%	Y	FACU
4.	<i>Pascopyrum smithii</i>	25%	Y	FACU
5.	_____	_____	_____	_____
		120%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>35%</u>	x 3 <u>105.0%</u>
FACU species <u>85%</u>	x 4 <u>340.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>120.0%</u>	(A) <u>445%</u> (B)
Prevalence Index = B/A = <u>3.71</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes No X

Remarks: Upland

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 3/2	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: Upland

Hydric Soil Present? Yes ☐ No ☒**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	NA

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/1/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP015
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: Road ditch mapped as NWI PEM					

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant pecies?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<i>Persicaria pensylvanica</i>	85%	Y	FACW
2.	<i>Bromus inermis</i>	15%	N	FACU
3.	<i>Phalaris arundinacea</i>	15%	N	FACW
4.	<i>Asclepias speciosa</i>	3%	N	FAC
5.	_____			
		118%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>100%</u>	x 2 <u>200.0%</u>
FAC species <u>3%</u>	x 3 <u>9.0%</u>
FACU species <u>15%</u>	x 4 <u>60.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>118.0%</u>	(A) <u>269%</u> (B)
Prevalence Index = B/A = <u>2.28</u>	

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks: PEM

SOIL

Sampling Point: DP015

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-6	10YR 3/2	100%					Clay Loam	
6-16	10YR 4/2	90%	10YR 4/6	10%	C	M	Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: NONE

Depth (inches): NA

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	NA

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/1/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP016
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: Upland			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____		_____	_____	_____
		_____	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	
Herb Stratum (Plot size: <u>5</u>)				
1.	<i>Bromus inermis</i>	75%	Y	FACU
2.	<i>Phleum pratense</i>	20%	N	FACU
3.	<i>Andropogon gerardii</i>	15%	N	FAC
4.	_____	_____	_____	_____
		110%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>15%</u>	x 3 <u>45.0%</u>
FACU species <u>95%</u>	x 4 <u>380.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>110.0%</u>	(A) <u>425%</u> (B)
Prevalence Index = B/A = <u>3.86</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes No X

Remarks: Upland

SOIL

Sampling Point: DP016

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-4	10YR 4/3	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes _____ No X

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/1/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP017
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM WITHIN ROW					

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <i>Phalaris arundinacea</i> 90% Y FACW 2. <i>Schoenoplectus acutus</i> 15% N OBL 3. _____ _____ = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index Worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>15%</u></td> <td>x 1 <u>15.0%</u></td> </tr> <tr> <td>FACW species <u>90%</u></td> <td>x 2 <u>180.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>105.0%</u></td> <td>(A) <u>195%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.86</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>15%</u>	x 1 <u>15.0%</u>	FACW species <u>90%</u>	x 2 <u>180.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>105.0%</u>	(A) <u>195%</u> (B)	Prevalence Index = B/A = <u>1.86</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>15%</u>	x 1 <u>15.0%</u>																		
FACW species <u>90%</u>	x 2 <u>180.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>0%</u>	x 4 <u>0.0%</u>																		
UPL species <u>0%</u>	x 5 <u>0.0%</u>																		
Column Totals: <u>105.0%</u>	(A) <u>195%</u> (B)																		
Prevalence Index = B/A = <u>1.86</u>																			
Remarks: PEM																			

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	90%	10YR 4/6	10%	C	M	Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: 3 IN ONE LAYER

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	0

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/1/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP018
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, ____, _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: Upland			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <u>Bromus inermis</u> 80% Y FACU 2. <u>Phleum pratense</u> 25% Y FACU 3. _____ _____ 105% = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>0%</u></td> <td>x 2 <u>0.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>105%</u></td> <td>x 4 <u>420.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>105.0%</u></td> <td>(A) <u>420%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>0%</u>	x 2 <u>0.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>105%</u>	x 4 <u>420.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>105.0%</u>	(A) <u>420%</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>0%</u>	x 1 <u>0.0%</u>																		
FACW species <u>0%</u>	x 2 <u>0.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>105%</u>	x 4 <u>420.0%</u>																		
UPL species <u>0%</u>	x 5 <u>0.0%</u>																		
Column Totals: <u>105.0%</u>	(A) <u>420%</u> (B)																		
Prevalence Index = B/A = <u>4.00</u>																			
Remarks: Upland																			

SOIL

Sampling Point: DP018

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-4	10YR 4/4	100%					Clay Loam	
4-16	10YR 3/2	100%					Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Hydric Soil Present? Yes No X

Remarks: Upland

HYDROLOGY

Wetland Hydrology Indicators

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

Secondary Indicators (2 or more required)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

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

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

Remarks:

US Army Corps of Engineers

Arid West – Version 2.0

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/1/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP019
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
		_____ = Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5</u>)			
1. <u>Phalaris arundinacea</u>	90%	Y	FACW
2. <u>Urtica dioica</u>	15%	N	FACW
3. <u>Helianthus annuus</u>	8%	N	FACU
4. _____	_____	_____	_____
		113%	= Total Cover
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	

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>1</u>	(B)	
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100.0%</u>	(A/B)	

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>0%</u>	x 1	<u>0.0%</u>
FACW species	<u>105%</u>	x 2	<u>210.0%</u>
FAC species	<u>0%</u>	x 3	<u>0.0%</u>
FACU species	<u>8%</u>	x 4	<u>32.0%</u>
UPL species	<u>0%</u>	x 5	<u>0.0%</u>
Column Totals:	<u>113.0%</u>	(A)	<u>242%</u> (B)
Prevalence Index = B/A =		<u>2.14</u>	

Hydrophytic Vegetation Indicators:	
<u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation	
<u>Y</u> 2 - Dominance Test if >50%	
<u>Y</u> 3 - Prevalence Index is ≤ 3.0	
<u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)	
<u>N</u> Problematic Hydrophytic Vegetation (Explain)	
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Hydrophytic Vegetation Present?	
	Yes <u>X</u> No _____

Remarks: PEM

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: NONE

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	NA

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/1/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP020
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, ____, _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: Upland			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____				
		_____ = Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5</u>)				
1.	<u>Phleum pratense</u>	60%	Y	FACU
2.	<u>Bromus inermis</u>	45%	Y	FACU
3.	_____			
		105%	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Remarks: Upland				

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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Yes	<u> </u>	No	<u> X </u>																																

SOIL

Sampling Point: DP020

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicator)								
Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 4/2	100%					Loam	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains								Location: PL=Pore Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils		
☐ Histosol (A1)			☐ Sandy Gleyed Matrix (S4)			☐ Coast Prairie Redoc (A16)		
☐ Histic Epipedon (A2)			☐ Sandy Redox (S5)			☐ Dark Surface (S7)		
☐ Black Histic (A3)			☐ Stripped Matrix (S6)			☐ Iron-Manganese Masses (F12)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Mucky Mineral (F1)			☐ Very Shallow Dark Surface (TF12)		
☐ Stratified Layers (A5)			☐ Loamy Gleyed Matrix (F2)			☐ Other (Explain in Remarks)		
☐ 2 cm Muck (A10)			☐ Depleted Matrix (F3)			Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
☐ Depleted Below Dark Surface (A11)			☐ Redox Dark Surface (F6)					
☐ Thick Dark Surface (A12)			☐ Depleted Dark Surface (F7)					
☐ Sandy Mucky Mineral (S1)			☐ Redox Depressions (F8)					
Restrictive Layer (if present):								
Type: <u>None</u>						Hydric Soil Present? Yes ☐ No ☒ X		
Depth (inches): <u>NA</u>								
Remarks: <u>Upland</u>								

HYDROLOGY

Wetland Hydrology Indicators				
Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2 or more required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)		
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)		
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)		
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)		
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)		
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)		
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)		
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)		
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)			
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)			
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): NA Water Table Present? Yes ☐ No ☒ Depth (inches): NA Saturation Present? Yes ☐ No ☒ Depth (inches): NA (includes capillary fringe)			Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:				
Remarks:				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/1/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP021
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) <table border="0"> <tr> <td>1. <i>Phalaris arundinacea</i></td> <td>95%</td> <td>Y</td> <td>FACW</td> </tr> <tr> <td>2. <i>Typha angustifolia</i></td> <td>7%</td> <td>N</td> <td>OBL</td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>102%</td> <td colspan="2">= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		1. <i>Phalaris arundinacea</i>	95%	Y	FACW	2. <i>Typha angustifolia</i>	7%	N	OBL	3. _____					102%	= Total Cover		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>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index Worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>7%</u></td> <td>x 1 <u>7.0%</u></td> </tr> <tr> <td>FACW species <u>95%</u></td> <td>x 2 <u>190.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>102.0%</u></td> <td>(A) <u>197%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.93</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>7%</u>	x 1 <u>7.0%</u>	FACW species <u>95%</u>	x 2 <u>190.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>102.0%</u>	(A) <u>197%</u> (B)	Prevalence Index = B/A = <u>1.93</u>	
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Remarks: PEM																																			

SOIL

Sampling Point: DP021

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1						Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	3

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/1/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP022
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, _____, _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
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Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
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Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

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: Upland				

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) <table border="0"> <tr> <td>1. <i>Phleum pratense</i></td> <td>55%</td> <td>Y</td> <td>FACU</td> </tr> <tr> <td>2. <i>Bromus inermis</i></td> <td>35%</td> <td>Y</td> <td>FACU</td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>90%</td> <td></td> <td>= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover	1. <i>Phleum pratense</i>	55%	Y	FACU	2. <i>Bromus inermis</i>	35%	Y	FACU	3. _____					90%		= Total Cover	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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>0%</u></td> <td>x 2 <u>0.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>90%</u></td> <td>x 4 <u>360.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>90.0%</u> (A)</td> <td><u>360%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>0%</u>	x 2 <u>0.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>90%</u>	x 4 <u>360.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>90.0%</u> (A)	<u>360%</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
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Remarks: Upland																																	

SOIL

Sampling Point: DP022

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicator)								
Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 3/1	100%					Clay Loam	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains								Location: PL=Pore Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils		
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☐ Histic Epipedon (A2)			☐ Sandy Redox (S5)			☐ Dark Surface (S7)		
☐ Black Histic (A3)			☐ Stripped Matrix (S6)			☐ Iron-Manganese Masses (F12)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Mucky Mineral (F1)			☐ Very Shallow Dark Surface (TF12)		
☐ Stratified Layers (A5)			☐ Loamy Gleyed Matrix (F2)			☐ Other (Explain in Remarks)		
☐ 2 cm Muck (A10)			☐ Depleted Matrix (F3)			Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
☐ Depleted Below Dark Surface (A11)			☐ Redox Dark Surface (F6)					
☐ Thick Dark Surface (A12)			☐ Depleted Dark Surface (F7)					
☐ Sandy Mucky Mineral (S1)			☐ Redox Depressions (F8)					
Restrictive Layer (if present):								
Type: <u>None</u>						Hydric Soil Present? Yes ☐ No ☒		
Depth (inches): <u>NA</u>								
Remarks: <u>Upland</u>								

HYDROLOGY

Wetland Hydrology Indicators																				
Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2 or more required)																	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)																		
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☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)																			
Field Observations: <table> <tr> <td>Surface Water Present?</td> <td>Yes ☐</td> <td>No ☒</td> <td>Depth (inches):</td> <td> NA </td> <td rowspan="3"> Wetland Hydrology Present? Yes ☐ No ☒ </td> </tr> <tr> <td>Water Table Present?</td> <td>Yes ☐</td> <td>No ☒</td> <td>Depth (inches):</td> <td> NA </td> </tr> <tr> <td>Saturation Present? (includes capillary fringe)</td> <td>Yes ☐</td> <td>No ☒</td> <td>Depth (inches):</td> <td> NA </td> </tr> </table>					Surface Water Present?	Yes ☐	No ☒	Depth (inches):	NA	Wetland Hydrology Present? Yes ☐ No ☒	Water Table Present?	Yes ☐	No ☒	Depth (inches):	NA	Saturation Present? (includes capillary fringe)	Yes ☐	No ☒	Depth (inches):	NA
Surface Water Present?	Yes ☐	No ☒	Depth (inches):	NA	Wetland Hydrology Present? Yes ☐ No ☒															
Water Table Present?	Yes ☐	No ☒	Depth (inches):	NA																
Saturation Present? (includes capillary fringe)	Yes ☐	No ☒	Depth (inches):	NA																
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:																				
Remarks:																				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/1/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP023
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM					

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <u>Phalaris arundinacea</u> 95% Y FACW 2. <u>Typha angustifolia</u> 25% Y OBL 3. _____ _____ = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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) Prevalence Index Worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>25%</u></td> <td>x 1 <u>25.0%</u></td> </tr> <tr> <td>FACW species <u>95%</u></td> <td>x 2 <u>190.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>120.0%</u></td> <td>(A) <u>215%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.79</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>25%</u>	x 1 <u>25.0%</u>	FACW species <u>95%</u>	x 2 <u>190.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>120.0%</u>	(A) <u>215%</u> (B)	Prevalence Index = B/A = <u>1.79</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>25%</u>	x 1 <u>25.0%</u>																		
FACW species <u>95%</u>	x 2 <u>190.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>0%</u>	x 4 <u>0.0%</u>																		
UPL species <u>0%</u>	x 5 <u>0.0%</u>																		
Column Totals: <u>120.0%</u>	(A) <u>215%</u> (B)																		
Prevalence Index = B/A = <u>1.79</u>																			
Remarks: PEM																			

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	3

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/1/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP024
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, ____, _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: Upland			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <u>Bromus inermis</u> 55% Y FACU 2. <u>Phleum pratense</u> 25% Y FACU 3. _____ _____ 80% = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>0%</u></td> <td>x 2 <u>0.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>80%</u></td> <td>x 4 <u>320.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>80.0%</u> (A)</td> <td><u>320%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>0%</u>	x 2 <u>0.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>80%</u>	x 4 <u>320.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>80.0%</u> (A)	<u>320%</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>0%</u>	x 1 <u>0.0%</u>																		
FACW species <u>0%</u>	x 2 <u>0.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>80%</u>	x 4 <u>320.0%</u>																		
UPL species <u>0%</u>	x 5 <u>0.0%</u>																		
Column Totals: <u>80.0%</u> (A)	<u>320%</u> (B)																		
Prevalence Index = B/A = <u>4.00</u>																			
Remarks: Upland																			

SOIL

Sampling Point: DP024

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 4/2	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type:	None
Depth (inches):	NA
Remarks:	Upland

Hydric Soil Present? Yes _____ No X

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes No X

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

Remarks:

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/1/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP025
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

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: PEM					

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: 15)				
1. _____				
				_____ = Total Cover
Herb Stratum (Plot size: 5)				
1. <i>Spartina pectinata</i>	40%	Y		FACW
2. <i>Poa pratensis</i>	25%	Y		FAC
3. <i>Echinochloa crus-galli</i>	15%	N		FACW
4. <i>Agrostis stolonifera</i>	5%	N		FACW
5. _____				
				85% = Total Cover
Woody Vine Stratum (Plot size: 15)				
1. _____				
				_____ = Total Cover

Dominance Test Worksheet:			
Number of Dominant Species That Are OBL, FACW, or FAC:	2		(A)
Total Number of Dominant Species Across All Strata:	2		(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0%		(A/B)

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	0%	x 1	0.0%
FACW species	60%	x 2	120.0%
FAC species	25%	x 3	75.0%
FACU species	0%	x 4	0.0%
UPL species	0%	x 5	0.0%
Column Totals:	85.0%	(A)	195% (B)
Prevalence Index = B/A =		2.29	

Hydrophytic Vegetation Indicators:	
N	1 - Rapid Test for Hydrophytic Vegetation
Y	2 - Dominance Test if >50%
Y	3 - Prevalence Index is ≤ 3.0
N	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
N	Problematic Hydrophytic Vegetation (Explain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Hydrophytic Vegetation Present?	
	Yes ☒ No ☐

SOIL

Sampling Point: DP025

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ Depleted Matrix (F3)
_____ Depleted Below Dark Surface (A11)	_____ Redox Dark Surface (F6)
X _____ Thick Dark Surface (A12)	_____ Depleted Dark Surface (F7)
_____ Sandy Mucky Mineral (S1)	_____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes X No

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes X No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/1/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP026
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: Upland			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant species?	Indicator Status
1. _____	_____	_____	_____
_____ = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
_____ = Total Cover			
Herb Stratum (Plot size: <u>5</u>)			
1. <i>Bromus inermis</i>	55%	Y	FACU
2. <i>Phleum pratense</i>	35%	Y	FACU
3. _____	_____	_____	_____
_____ 90% = Total Cover			
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
_____ = Total Cover			

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)	

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>0%</u>	x 1	<u>0.0%</u>
FACW species	<u>0%</u>	x 2	<u>0.0%</u>
FAC species	<u>0%</u>	x 3	<u>0.0%</u>
FACU species	<u>90%</u>	x 4	<u>360.0%</u>
UPL species	<u>0%</u>	x 5	<u>0.0%</u>
Column Totals:	<u>90.0%</u>	(A)	<u>360%</u> (B)
Prevalence Index = B/A =		<u>4.00</u>	

Hydrophytic Vegetation Indicators:	
<u>N</u> 1 - Rapid Test for Hydrophytic Vegetation	
<u>N</u> 2 - Dominance Test if >50%	
<u>N</u> 3 - Prevalence Index is ≤ 3.0	
<u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)	
<u>N</u> Problematic Hydrophytic Vegetation (Explain)	
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Hydrophytic Vegetation Present?	
Yes	<u>X</u>

SOIL

Sampling Point: DP026

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicator)								
Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 3/2	100%					Clay Loam	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains								Location: PL=Pore Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils		
☐ Histosol (A1)			☐ Sandy Gleyed Matrix (S4)			☐ Coast Prairie Redoc (A16)		
☐ Histic Epipedon (A2)			☐ Sandy Redox (S5)			☐ Dark Surface (S7)		
☐ Black Histic (A3)			☐ Stripped Matrix (S6)			☐ Iron-Manganese Masses (F12)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Mucky Mineral (F1)			☐ Very Shallow Dark Surface (TF12)		
☐ Stratified Layers (A5)			☐ Loamy Gleyed Matrix (F2)			☐ Other (Explain in Remarks)		
☐ 2 cm Muck (A10)			☐ Depleted Matrix (F3)			Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
☐ Depleted Below Dark Surface (A11)			☐ Redox Dark Surface (F6)					
☐ Thick Dark Surface (A12)			☐ Depleted Dark Surface (F7)					
☐ Sandy Mucky Mineral (S1)			☐ Redox Depressions (F8)					
Restrictive Layer (if present):								
Type: <u>None</u>						Hydric Soil Present? Yes ☐ No ☒ X		
Depth (inches): <u>NA</u>								
Remarks: <u>Upland</u>								

HYDROLOGY

Wetland Hydrology Indicators				
Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2 or more required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)		
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)		
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)		
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)		
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)		
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)		
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)		
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)		
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)			
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)			
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): <u>NA</u> Water Table Present? Yes ☐ No ☒ Depth (inches): <u>NA</u> Saturation Present? Yes ☐ No ☒ Depth (inches): <u>NA</u> (includes capillary fringe)			Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:				
Remarks: Upland				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/2/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP029
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM. DRAINAGE FLOWS FROM NORTH INTO DITCH CROSSES ROAD				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <u>Typha angustifolia</u> 85% Y OBL 2. <u>Phalaris arundinacea</u> 35% Y FACW 3. _____ _____ = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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) Prevalence Index Worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>85%</u></td> <td>x 1 <u>85.0%</u></td> </tr> <tr> <td>FACW species <u>35%</u></td> <td>x 2 <u>70.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>120.0%</u> (A)</td> <td><u>155%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.29</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>85%</u>	x 1 <u>85.0%</u>	FACW species <u>35%</u>	x 2 <u>70.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>120.0%</u> (A)	<u>155%</u> (B)	Prevalence Index = B/A = <u>1.29</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>85%</u>	x 1 <u>85.0%</u>																		
FACW species <u>35%</u>	x 2 <u>70.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>0%</u>	x 4 <u>0.0%</u>																		
UPL species <u>0%</u>	x 5 <u>0.0%</u>																		
Column Totals: <u>120.0%</u> (A)	<u>155%</u> (B)																		
Prevalence Index = B/A = <u>1.29</u>																			
Remarks: PEM																			

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☒ No ☐	Depth (inches):	3
Water Table Present?	Yes ☒ No ☐	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	0

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: PEM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/2/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP030
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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 <u> X </u>	No _____	
Wetland Hydrology Present?	Yes _____	No <u> X </u>	
Remarks: Upland			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<u>Bromus inermis</u>	70%	Y	FACU
2.	<u>Phleum pratense</u>	25%	Y	FACU
3.	<u>Poa pratensis</u>	15%	N	FAC
4.	_____			
		110%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>15%</u>	x 3 <u>45.0%</u>
FACU species <u>95%</u>	x 4 <u>380.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>110.0%</u>	(A) <u>425%</u> (B)
Prevalence Index = B/A = <u>3.86</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: Upland

SOIL

Sampling Point: DP030

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 3/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____	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)	_____	Loamy Gleyed Matrix (F2)
_____	2 cm Muck (A10)	_____	Depleted Matrix (F3)
_____	Depleted Below Dark Surface (A11)	_____	Redox Dark Surface (F6)
X	Thick Dark Surface (A12)	_____	Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes X No

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/2/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP031
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<u>Echinochloa crus-galli</u>	35%	Y	FACW
2.	<u>Carex aquatilis</u>	35%	Y	OBL
3.	<u>Hordeum jubatum</u>	10%	N	FAC
4.	_____			
		80%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>35%</u>	x 1 <u>35.0%</u>
FACW species <u>35%</u>	x 2 <u>70.0%</u>
FAC species <u>10%</u>	x 3 <u>30.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>80.0%</u>	(A) <u>135%</u> (B)
Prevalence Index = B/A = <u>1.69</u>	

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks: PEM

SOIL

Sampling Point: DP031

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____	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)	_____	Loamy Gleyed Matrix (F2)
_____	2 cm Muck (A10)	_____	Depleted Matrix (F3)
_____	Depleted Below Dark Surface (A11)	_____	Redox Dark Surface (F6)
X	Thick Dark Surface (A12)	_____	Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes X No

HYDROLOGY

Wetland Hydrology Indicators

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

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☒ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u>X</u>	No	<u> </u>	Depth (inches):	<u> 1 </u>
Water Table Present?	Yes	<u>X</u>	No	<u> </u>	Depth (inches):	<u> 0 </u>
Saturation Present? (includes capillary fringe)	Yes	<u>X</u>	No	<u> </u>	Depth (inches):	<u> 0 </u>

Wetland Hydrology Present? Yes X No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/2/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP032
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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 <u> X </u>	No _____	
Wetland Hydrology Present?	Yes _____	No <u> X </u>	
Remarks: UPLAND			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <i>Glycine max</i> 60% Y UPL 2. _____ 60% = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>0%</u></td> <td>x 2 <u>0.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>60%</u></td> <td>x 5 <u>300.0%</u></td> </tr> <tr> <td>Column Totals: <u>60.0%</u> (A)</td> <td><u>300%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>5.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>0%</u>	x 2 <u>0.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>60%</u>	x 5 <u>300.0%</u>	Column Totals: <u>60.0%</u> (A)	<u>300%</u> (B)	Prevalence Index = B/A = <u>5.00</u>	
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Prevalence Index = B/A = <u>5.00</u>																			
Remarks: UPLAND																			

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: Upland

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	NA

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Upland no hydrology

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/2/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP033
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) <table border="0"> <tr> <td>1. <u>Eleocharis palustris</u></td> <td>55%</td> <td>Y</td> <td>OBL</td> </tr> <tr> <td>2. <u>Schoenoplectus tabernaemontani</u></td> <td>50%</td> <td>Y</td> <td>OBL</td> </tr> <tr> <td>3. <u>Persicaria pensylvanica</u></td> <td>15%</td> <td>N</td> <td>FACW</td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>120%</td> <td colspan="2">= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: <u>1t</u>) 1. _____ _____ = Total Cover		1. <u>Eleocharis palustris</u>	55%	Y	OBL	2. <u>Schoenoplectus tabernaemontani</u>	50%	Y	OBL	3. <u>Persicaria pensylvanica</u>	15%	N	FACW	4. _____					120%	= Total Cover		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) Prevalence Index Worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>105%</u></td> <td>x 1 <u>105.0%</u></td> </tr> <tr> <td>FACW species <u>15%</u></td> <td>x 2 <u>30.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>120.0%</u> (A)</td> <td><u>135%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.13</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Total % Cover of:	Multiply by:	OBL species <u>105%</u>	x 1 <u>105.0%</u>	FACW species <u>15%</u>	x 2 <u>30.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>120.0%</u> (A)	<u>135%</u> (B)	Prevalence Index = B/A = <u>1.13</u>	
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Remarks: PEM																																						

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	5

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/2/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP034
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, _____, _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

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

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <i>Medicago sativa</i> 85% Y FACU 2. _____ 85% = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover	Absolute DominantS Indicator % Cover pecies? 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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>0%</u></td> <td>x 2 <u>0.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>85%</u></td> <td>x 4 <u>340.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>85.0%</u> (A)</td> <td><u>340%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>0%</u>	x 2 <u>0.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>85%</u>	x 4 <u>340.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>85.0%</u> (A)	<u>340%</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
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Prevalence Index = B/A = <u>4.00</u>																		
Remarks: UPLAND																		

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
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☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	NA

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Upland alfalfa field no hydrology

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/2/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP035
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM WITH SCATTED WILLOWS					

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<i>Echinochloa crus-galli</i>	90%	Y	FACW
2.	<i>Phalaris arundinacea</i>	45%	Y	FACW
3.	_____			
		135%	= Total Cover	
Woody Vine Stratum (Plot size: <u>14</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>135%</u>	x 2 <u>270.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>135.0%</u>	(A) <u>270%</u> (B)
Prevalence Index = B/A = <u>2.00</u>	

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks: PEM WITH SCATTERED COTTONWOOD AND WILLOWS

SOIL

Sampling Point: DP035

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____	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)	_____	Loamy Gleyed Matrix (F2)
_____	2 cm Muck (A10)	_____	Depleted Matrix (F3)
_____	Depleted Below Dark Surface (A11)	_____	Redox Dark Surface (F6)
X	Thick Dark Surface (A12)	_____	Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes X No

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes X No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/2/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP036
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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 <u> X </u>	No _____	
Wetland Hydrology Present?	Yes _____	No <u> X </u>	
Remarks: Upland soybean field			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <i>Glycine max</i> 85% Y UPL 2. _____ 85% = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>0%</u></td> <td>x 2 <u>0.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>85%</u></td> <td>x 5 <u>425.0%</u></td> </tr> <tr> <td>Column Totals: <u>85.0%</u> (A)</td> <td><u>425%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>5.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>0%</u>	x 2 <u>0.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>85%</u>	x 5 <u>425.0%</u>	Column Totals: <u>85.0%</u> (A)	<u>425%</u> (B)	Prevalence Index = B/A = <u>5.00</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>0%</u>	x 1 <u>0.0%</u>																		
FACW species <u>0%</u>	x 2 <u>0.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>0%</u>	x 4 <u>0.0%</u>																		
UPL species <u>85%</u>	x 5 <u>425.0%</u>																		
Column Totals: <u>85.0%</u> (A)	<u>425%</u> (B)																		
Prevalence Index = B/A = <u>5.00</u>																			
Remarks: Upland																			

SOIL

Sampling Point: DP036

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____	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)	_____	Loamy Gleyed Matrix (F2)
_____	2 cm Muck (A10)	_____	Depleted Matrix (F3)
_____	Depleted Below Dark Surface (A11)	_____	Redox Dark Surface (F6)
X	Thick Dark Surface (A12)	_____	Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes X No

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes No X

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

Remarks: Upland no hydrology

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/2/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP037
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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 <u> X </u>	No _____	
Wetland Hydrology Present?	Yes <u> X </u>	No _____	
Remarks: PEM			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <i>Glycine max</i> 80% Y UPL 2. _____ _____ 80% = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover	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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>0%</u></td> <td>x 2 <u>0.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>80%</u></td> <td>x 5 <u>400.0%</u></td> </tr> <tr> <td>Column Totals: <u>80.0%</u></td> <td>(A) <u>400%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>5.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>0%</u>	x 2 <u>0.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>80%</u>	x 5 <u>400.0%</u>	Column Totals: <u>80.0%</u>	(A) <u>400%</u> (B)	Prevalence Index = B/A = <u>5.00</u>	
Total % Cover of:	Multiply by:																
OBL species <u>0%</u>	x 1 <u>0.0%</u>																
FACW species <u>0%</u>	x 2 <u>0.0%</u>																
FAC species <u>0%</u>	x 3 <u>0.0%</u>																
FACU species <u>0%</u>	x 4 <u>0.0%</u>																
UPL species <u>80%</u>	x 5 <u>400.0%</u>																
Column Totals: <u>80.0%</u>	(A) <u>400%</u> (B)																
Prevalence Index = B/A = <u>5.00</u>																	
Remarks: PEM no vegetation due to farmed land soybean field																	

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Histosol (A1)

Histic Epipedon (A2)

Black Histic (A3)

Hydrogen Sulfide (A4)

Stratified Layers (A5)

2 cm Muck (A10)

Depleted Below Dark Surface (A11)

X

Thick Dark Surface (A12)

Sandy Mucky Mineral (S1)

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)

Indicators for Problematic Hydric Soils

Coast Prairie Redoc (A16)

Dark Surface (S7)

Iron-Manganese Masses (F12)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present?

Yes

X

No

HYDROLOGY

Wetland Hydrology Indicators

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

Surface Water (A1)

High Water Table (A2)

Saturation (A3)

Water Marks (B1)

Sediment Deposits (B2)

Drift Deposits (B3)

Algal Mat or Crust (B4)

Iron Deposits (B5)

X

Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

Water-Stained Leaves (B9)

Aquatic Fauna (B13)

True Aquatic Plants (B14)

Hydrogen Sulfide Odor (C1)

Oxidized Rhizospheres on Living Roots (C3)

Presence of Reduced Iron (C4)

Recent Iron Reduction in Tilled Soils (C6)

Thin Muck Surface (C7)

Gauge or Well Data (D9)

Other (Explain in Remarks)

Secondary Indicators (2 or more required)

Surface Soil Cracks (B6)

Drainage Pattern (B10)

Dry-Season Water Table (C2)

Crayfish Burrows (C8)

Saturation Visible on Aerial Imagery (C9)

X

Stunted or Stressed Plants (D1)

X

Geomorphic Position (D2)

FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?

Yes

No

X

Depth (inches):

NA

Water Table Present?

Yes

No

X

Depth (inches):

NA

Saturation Present?

Yes

No

X

Depth (inches):

NA

(includes capillary fringe)

Wetland Hydrology Present?

Yes

X

No

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

Remarks: Soybean field

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/2/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP038
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, ____, _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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 <u> X </u>	No _____	
Wetland Hydrology Present?	Yes _____	No <u> X </u>	
Remarks: Upland			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <i>Glycine max</i> 85% Y UPL 2. _____ 85% = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>0%</u></td> <td>x 2 <u>0.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>85%</u></td> <td>x 5 <u>425.0%</u></td> </tr> <tr> <td>Column Totals: <u>85.0%</u></td> <td>(A) <u>425%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>5.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>0%</u>	x 2 <u>0.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>85%</u>	x 5 <u>425.0%</u>	Column Totals: <u>85.0%</u>	(A) <u>425%</u> (B)	Prevalence Index = B/A = <u>5.00</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>0%</u>	x 1 <u>0.0%</u>																		
FACW species <u>0%</u>	x 2 <u>0.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>0%</u>	x 4 <u>0.0%</u>																		
UPL species <u>85%</u>	x 5 <u>425.0%</u>																		
Column Totals: <u>85.0%</u>	(A) <u>425%</u> (B)																		
Prevalence Index = B/A = <u>5.00</u>																			
Remarks: Upland																			

SOIL

Sampling Point: DP038

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicator)								
Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains								Location: PL=Pore Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils		
☐ Histosol (A1)			☐ Sandy Gleyed Matrix (S4)			☐ Coast Prairie Redox (A16)		
☐ Histic Epipedon (A2)			☐ Sandy Redox (S5)			☐ Dark Surface (S7)		
☐ Black Histic (A3)			☐ Stripped Matrix (S6)			☐ Iron-Manganese Masses (F12)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Mucky Mineral (F1)			☐ Very Shallow Dark Surface (TF12)		
☐ Stratified Layers (A5)			☐ Loamy Gleyed Matrix (F2)			☐ Other (Explain in Remarks)		
☐ 2 cm Muck (A10)			☐ Depleted Matrix (F3)					
☐ Depleted Below Dark Surface (A11)			☐ Redox Dark Surface (F6)					
☒ Thick Dark Surface (A12)			☐ Depleted Dark Surface (F7)			Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
☐ Sandy Mucky Mineral (S1)			☐ Redox Depressions (F8)					
Restrictive Layer (if present):								
Type: <u>None</u>						Hydric Soil Present? Yes ☒ No ☐		
Depth (inches): <u>NA</u>								
Remarks: <u>Upland</u>								

HYDROLOGY

Wetland Hydrology Indicators				
Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2 or more required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)		
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)		
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)		
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)		
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)		
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)		
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)		
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)		
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)			
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)			
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): NA Water Table Present? Yes ☐ No ☒ Depth (inches): NA Saturation Present? Yes ☐ No ☒ Depth (inches): NA (includes capillary fringe)			Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:				
Remarks: Upland				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/2/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP039
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) <table border="0"> <tr> <td>1. <u>Eleocharis palustris</u></td> <td>65%</td> <td>Y</td> <td>OBL</td> </tr> <tr> <td>2. <u>Carex aquatilis</u></td> <td>25%</td> <td>Y</td> <td>OBL</td> </tr> <tr> <td>3. <u>Phalaris arundinacea</u></td> <td>25%</td> <td>Y</td> <td>FACW</td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>115%</td> <td colspan="2">= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		1. <u>Eleocharis palustris</u>	65%	Y	OBL	2. <u>Carex aquatilis</u>	25%	Y	OBL	3. <u>Phalaris arundinacea</u>	25%	Y	FACW	4. _____					115%	= Total Cover		Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index Worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>90%</u></td> <td>x 1 <u>90.0%</u></td> </tr> <tr> <td>FACW species <u>25%</u></td> <td>x 2 <u>50.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>115.0%</u> (A)</td> <td><u>140%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.22</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>90%</u>	x 1 <u>90.0%</u>	FACW species <u>25%</u>	x 2 <u>50.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>115.0%</u> (A)	<u>140%</u> (B)	Prevalence Index = B/A = <u>1.22</u>	
1. <u>Eleocharis palustris</u>	65%	Y	OBL																																				
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Prevalence Index = B/A = <u>1.22</u>																																							
Remarks: PEM																																							

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☒ No ☐	Depth (inches):	<u>6</u>
Water Table Present?	Yes ☒ No ☐	Depth (inches):	<u>0</u>
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	<u>0</u>

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/2/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP040
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND					

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant pecies?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<i>Bromus inermis</i>	65%	Y	FACU
2.	<i>Phleum pratense</i>	30%	Y	FACU
3.	_____			
		95%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>95%</u>	x 4 <u>380.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>95.0%</u>	(A) <u>380%</u> (B)
Prevalence Index = B/A = <u>4.00</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes _____ No X

Remarks: Upland

SOIL

Sampling Point: DP040

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicator)								
Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 4/3	100%					Loam	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains								Location: PL=Pore Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils		
☐ Histosol (A1)			☐ Sandy Gleyed Matrix (S4)			☐ Coast Prairie Redoc (A16)		
☐ Histic Epipedon (A2)			☐ Sandy Redox (S5)			☐ Dark Surface (S7)		
☐ Black Histic (A3)			☐ Stripped Matrix (S6)			☐ Iron-Manganese Masses (F12)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Mucky Mineral (F1)			☐ Very Shallow Dark Surface (TF12)		
☐ Stratified Layers (A5)			☐ Loamy Gleyed Matrix (F2)			☐ Other (Explain in Remarks)		
☐ 2 cm Muck (A10)			☐ Depleted Matrix (F3)			Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
☐ Depleted Below Dark Surface (A11)			☐ Redox Dark Surface (F6)					
☐ Thick Dark Surface (A12)			☐ Depleted Dark Surface (F7)					
☐ Sandy Mucky Mineral (S1)			☐ Redox Depressions (F8)					
Restrictive Layer (if present):								
Type: <u>None</u>						Hydric Soil Present? Yes ☐ No ☒		
Depth (inches): <u>NA</u>								
Remarks: <u>Upland</u>								

HYDROLOGY

Wetland Hydrology Indicators				
Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2 or more required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)		
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)		
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)		
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)		
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)		
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)		
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)		
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)		
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)			
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)			
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): <u>NA</u> Water Table Present? Yes ☐ No ☒ Depth (inches): <u>NA</u> Saturation Present? Yes ☐ No ☒ Depth (inches): <u>NA</u> (includes capillary fringe)			Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:				
Remarks: Upland. No hydrology				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
 Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP041
 Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range:
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
 Slope (%): <5% Lat: Long: Datum: NAD83
 Soil Map Unit Name: NWI classification:

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

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

Hydrophytic Vegetation Present? 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>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: PEM ALONG DRAINAGE IN COW PASTURE	

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u>Salix amygdaloides</u></td> <td style="text-align: center;">15%</td> <td style="text-align: center;">Y</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>2. <u> </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;">15% = Total Cover</td> <td colspan="2"></td> </tr> </tbody> </table> <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 60%;">1. <u> </u></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td colspan="2" style="text-align: right;">= Total Cover</td> <td colspan="2"></td> </tr> </tbody> </table> <u>Herb Stratum</u> (Plot size: <u>5</u>) <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 60%;">1. <u>Phalaris arundinacea</u></td> <td style="width: 15%; text-align: center;">60%</td> <td style="width: 15%; text-align: center;">Y</td> <td style="width: 10%; text-align: center;">FACW</td> </tr> <tr> <td>2. <u>Persicaria pensylvanica</u></td> <td style="text-align: center;">20%</td> <td style="text-align: center;">Y</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>3. <u> </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;">80% = Total Cover</td> <td colspan="2"></td> </tr> </tbody> </table> <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 60%;">1. <u> </u></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td colspan="2" style="text-align: right;">= Total Cover</td> <td colspan="2"></td> </tr> </tbody> </table>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Salix amygdaloides</u>	15%	Y	FACW	2. <u> </u>				15% = Total Cover				1. <u> </u>				= Total Cover				1. <u>Phalaris arundinacea</u>	60%	Y	FACW	2. <u>Persicaria pensylvanica</u>	20%	Y	FACW	3. <u> </u>				80% = Total Cover				1. <u> </u>				= Total Cover				Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index Worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;">0%</td> <td>x 1</td> <td style="text-align: center;">0.0%</td> <td></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">95%</td> <td>x 2</td> <td style="text-align: center;">190.0%</td> <td></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">0%</td> <td>x 3</td> <td style="text-align: center;">0.0%</td> <td></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">0%</td> <td>x 4</td> <td style="text-align: center;">0.0%</td> <td></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0%</td> <td>x 5</td> <td style="text-align: center;">0.0%</td> <td></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;">95.0%</td> <td>(A)</td> <td style="text-align: center;">190%</td> <td>(B)</td> </tr> <tr> <td colspan="3">Prevalence Index = B/A =</td> <td style="text-align: center;">2.00</td> <td></td> </tr> </tbody> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Total % Cover of:		Multiply by:			OBL species	0%	x 1	0.0%		FACW species	95%	x 2	190.0%		FAC species	0%	x 3	0.0%		FACU species	0%	x 4	0.0%		UPL species	0%	x 5	0.0%		Column Totals:	95.0%	(A)	190%	(B)	Prevalence Index = B/A =			2.00	
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Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicator)

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	NA

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: Drainage flows south

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP042
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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 <u> X </u>	No _____	
Wetland Hydrology Present?	Yes _____	No <u> X </u>	
Remarks: Upland			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____		_____	_____	_____
		_____	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	
Herb Stratum (Plot size: <u>5</u>)				
1.	<i>Bromus inermis</i>	60%	Y	FACU
2.	<i>Phleum pratense</i>	20%	Y	FACU
3.	<i>Phalaris arundinacea</i>	15%	N	FACW
4.	_____	_____	_____	_____
		95%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>15%</u>	x 2 <u>30.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>80%</u>	x 4 <u>320.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>95.0%</u>	(A) <u>350%</u> (B)
Prevalence Index = B/A = <u>3.68</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes _____ No X

Remarks: Upland

SOIL

Sampling Point: DP042

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 3/2	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ Depleted Matrix (F3)
_____ Depleted Below Dark Surface (A11)	_____ Redox Dark Surface (F6)
X _____ Thick Dark Surface (A12)	_____ Depleted Dark Surface (F7)
_____ Sandy Mucky Mineral (S1)	_____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: Upland

Hydric Soil Present? Yes X No

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP043
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant species?	Indicator Status
1. _____	_____	_____	_____
_____ = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
_____ = Total Cover			
Herb Stratum (Plot size: <u>5</u>)			
1. <u>Typha angustifolia</u>	55%	Y	OBL
2. <u>Phalaris arundinacea</u>	45%	Y	FACW
3. <u>Spartina pectinata</u>	35%	Y	FACW
4. <u>Urtica dioica</u>	5%	N	FACW
5. _____	_____	_____	_____
_____ 140% = Total Cover			
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
_____ = Total Cover			

Dominance Test Worksheet:			
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>3</u>	(A)	
Total Number of Dominant Species Across All Strata:	<u>3</u>	(B)	
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100.0%</u>	(A/B)	

Prevalence Index Worksheet:			
Total % Cover of:	Multiply by:		
OBL species <u>55%</u>	x 1	<u>55.0%</u>	
FACW species <u>85%</u>	x 2	<u>170.0%</u>	
FAC species <u>0%</u>	x 3	<u>0.0%</u>	
FACU species <u>0%</u>	x 4	<u>0.0%</u>	
UPL species <u>0%</u>	x 5	<u>0.0%</u>	
Column Totals: <u>140.0%</u>	(A)	<u>225%</u>	(B)
Prevalence Index = B/A =		<u>1.61</u>	

Hydrophytic Vegetation Indicators:	
<u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation	
<u>Y</u> 2 - Dominance Test if >50%	
<u>Y</u> 3 - Prevalence Index is ≤ 3.0	
<u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)	
<u>N</u> Problematic Hydrophytic Vegetation (Explain)	
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____
--	-------------------------------------

Remarks: PEM

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐

HYDROLOGY

Wetland Hydrology Indicators

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

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☒ No ☐	Depth (inches):	1
Water Table Present?	Yes ☒ No ☐	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	0

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP044
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, ____, _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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 <u> X </u>	No _____			
Wetland Hydrology Present?	Yes _____	No <u> X </u>			
Remarks: Upland					

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant pecies?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<i>Bromus inermis</i>	45%	Y	FACU
2.	<i>Phalaris arundinacea</i>	30%	Y	FACW
3.	<i>Phleum pratense</i>	30%	Y	FACU
4.	<i>Solidago gigantea</i>	5%	N	FACW
5.	_____			
		110%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>35%</u>	x 2 <u>70.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>75%</u>	x 4 <u>300.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>110.0%</u>	(A) <u>370%</u> (B)
Prevalence Index = B/A = <u>3.36</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: Upland on access road

SOIL

Sampling Point: DP044

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ Depleted Matrix (F3)
_____ Depleted Below Dark Surface (A11)	_____ Redox Dark Surface (F6)
X _____ Thick Dark Surface (A12)	_____ Depleted Dark Surface (F7)
_____ Sandy Mucky Mineral (S1)	_____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes X No

HYDROLOGY

Wetland Hydrology Indicators

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

___ Surface Water (A1)	___ Water-Stained Leaves (B9)
___ High Water Table (A2)	___ Aquatic Fauna (B13)
___ Saturation (A3)	___ True Aquatic Plants (B14)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)
___ Inundation Visible on Aerial Imagery (B7)	___ Gauge or Well Data (D9)
___ Sparsely Vegetated Concave Surface (B8)	___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes No X

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

Remarks:	No hydrology
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WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP045
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM ROADSIDE DITCH				

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant species?	Indicator Status
Tree Stratum (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Herb Stratum (Plot size: <u>5</u>)			
1. <u>Typha angustifolia</u>	<u>75%</u>	<u>Y</u>	<u>OBL</u>
2. <u>Phalaris arundinacea</u>	<u>35%</u>	<u>Y</u>	<u>FACW</u>
3. <u>Persicaria pensylvanica</u>	<u>25%</u>	<u>N</u>	<u>FACW</u>
4. _____	_____	_____	_____
		<u>135%</u> = Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	

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)	

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>75%</u>	x 1	<u>75.0%</u>
FACW species	<u>60%</u>	x 2	<u>120.0%</u>
FAC species	<u>0%</u>	x 3	<u>0.0%</u>
FACU species	<u>0%</u>	x 4	<u>0.0%</u>
UPL species	<u>0%</u>	x 5	<u>0.0%</u>
Column Totals:	<u>135.0%</u>	(A)	<u>195%</u> (B)
Prevalence Index = B/A =		<u>1.44</u>	

Hydrophytic Vegetation Indicators:
<u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation
<u>Y</u> 2 - Dominance Test if >50%
<u>Y</u> 3 - Prevalence Index is ≤ 3.0
<u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
<u>N</u> Problematic Hydrophytic Vegetation (Explain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?
Yes <u>X</u> No _____

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	6

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP046
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, _____, _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

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

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator	Status
1. _____	_____	_____	_____	_____
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	_____
_____ = Total Cover				
Herb Stratum (Plot size: <u>5</u>)				
1. <i>Bromus inermis</i>	65%	Y		FACU
2. <i>Phleum pratense</i>	45%	Y		FACU
3. <i>Persicaria pensylvanica</i>	10%	N		FACW
4. _____	_____	_____	_____	_____
120% = Total Cover				
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	_____
_____ = Total Cover				

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)	

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>0%</u>	x 1	<u>0.0%</u>
FACW species	<u>10%</u>	x 2	<u>20.0%</u>
FAC species	<u>0%</u>	x 3	<u>0.0%</u>
FACU species	<u>110%</u>	x 4	<u>440.0%</u>
UPL species	<u>0%</u>	x 5	<u>0.0%</u>
Column Totals:	<u>120.0%</u>	(A)	<u>460%</u> (B)
Prevalence Index = B/A =		<u>3.83</u>	

Hydrophytic Vegetation Indicators:	
<u>N</u> 1 - Rapid Test for Hydrophytic Vegetation	
<u>N</u> 2 - Dominance Test if >50%	
<u>N</u> 3 - Prevalence Index is ≤ 3.0	
<u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)	
<u>N</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>

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	NA

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: NO HYDROLOGY

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP047
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant pecies?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<i>Poa pratensis</i>	30%	Y	FAC
2.	<i>Spartina pectinata</i>	25%	Y	FACW
3.	<i>Phalaris arundinacea</i>	25%	Y	FACW
4.	<i>Schoenoplectus acutus</i>	25%	Y	OBL
5.	_____			
		105%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>25%</u>	x 1 <u>25.0%</u>
FACW species <u>50%</u>	x 2 <u>100.0%</u>
FAC species <u>30%</u>	x 3 <u>90.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>105.0%</u>	(A) <u>215%</u> (B)
Prevalence Index = B/A = <u>2.05</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks: PEM

SOIL

Sampling Point: DP047

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ Depleted Matrix (F3)
_____ Depleted Below Dark Surface (A11)	_____ Redox Dark Surface (F6)
X _____ Thick Dark Surface (A12)	_____ Depleted Dark Surface (F7)
_____ Sandy Mucky Mineral (S1)	_____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes X No

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes X No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP048
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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 <u> X </u>	No _____	
Wetland Hydrology Present?	Yes _____	No <u> X </u>	
Remarks: Upland			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	_____
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	_____
				_____ = Total Cover
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Phleum pratense</u>	75%	Y		FACU
2. <u>Poa pratensis</u>	35%	Y		FAC
3. <u>Agrostis stolonifera</u>	5%	N		FACW
4. _____	_____	_____	_____	_____
				115% = Total Cover
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	_____
				_____ = Total Cover

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)	

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>0%</u>	x 1	<u>0.0%</u>
FACW species	<u>5%</u>	x 2	<u>10.0%</u>
FAC species	<u>35%</u>	x 3	<u>105.0%</u>
FACU species	<u>75%</u>	x 4	<u>300.0%</u>
UPL species	<u>0%</u>	x 5	<u>0.0%</u>
Column Totals:	<u>115.0%</u>	(A)	<u>415%</u> (B)
Prevalence Index = B/A =			<u>3.61</u>

Hydrophytic Vegetation Indicators:	
<u>N</u> 1 - Rapid Test for Hydrophytic Vegetation	
<u>N</u> 2 - Dominance Test if >50%	
<u>N</u> 3 - Prevalence Index is ≤ 3.0	
<u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)	
<u>N</u> Problematic Hydrophytic Vegetation (Explain)	
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Hydrophytic Vegetation Present?	
Yes	<u>X</u>

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	NA

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No hydrology

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP049
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) <table border="1"> <tr> <td>1. <i>Carex nebrascensis</i></td> <td>65%</td> <td>Y</td> <td>OBL</td> </tr> <tr> <td>2. <i>Spartina pectinata</i></td> <td>35%</td> <td>Y</td> <td>FACW</td> </tr> <tr> <td>3. <i>Panicum virgatum</i></td> <td>15%</td> <td>N</td> <td>FAC</td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>115%</td> <td colspan="2">= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		1. <i>Carex nebrascensis</i>	65%	Y	OBL	2. <i>Spartina pectinata</i>	35%	Y	FACW	3. <i>Panicum virgatum</i>	15%	N	FAC	4. _____					115%	= Total Cover		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) Prevalence Index Worksheet: <table border="1"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>65%</u></td> <td>x 1 <u>65.0%</u></td> </tr> <tr> <td>FACW species <u>35%</u></td> <td>x 2 <u>70.0%</u></td> </tr> <tr> <td>FAC species <u>15%</u></td> <td>x 3 <u>45.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>115.0%</u></td> <td>(A) <u>180%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.57</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Total % Cover of:	Multiply by:	OBL species <u>65%</u>	x 1 <u>65.0%</u>	FACW species <u>35%</u>	x 2 <u>70.0%</u>	FAC species <u>15%</u>	x 3 <u>45.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>115.0%</u>	(A) <u>180%</u> (B)	Prevalence Index = B/A = <u>1.57</u>	
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Prevalence Index = B/A = <u>1.57</u>																																						
Remarks: PEM																																						

SOIL

Sampling Point: DP049

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ Depleted Matrix (F3)
_____ Depleted Below Dark Surface (A11)	_____ Redox Dark Surface (F6)
X _____ Thick Dark Surface (A12)	_____ Depleted Dark Surface (F7)
_____ Sandy Mucky Mineral (S1)	_____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes X No

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
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☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes X No

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

Remarks: PEM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP050
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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 <u> X </u>	No _____		
Wetland Hydrology Present?	Yes _____	No <u> X </u>		
Remarks: UPLAND				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>515</u>) <table border="0"> <tr> <td>1. <u>Phleum pratense</u></td> <td>85%</td> <td>Y</td> <td>FACU</td> </tr> <tr> <td>2. <u>Poa pratensis</u></td> <td>20%</td> <td>N</td> <td>FAC</td> </tr> <tr> <td>3. <u>Panicum virgatum</u></td> <td>15%</td> <td>N</td> <td>FAC</td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>120%</td> <td colspan="2">= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: _____) 1. _____ _____ = Total Cover		1. <u>Phleum pratense</u>	85%	Y	FACU	2. <u>Poa pratensis</u>	20%	N	FAC	3. <u>Panicum virgatum</u>	15%	N	FAC	4. _____					120%	= Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>0%</u></td> <td>x 2 <u>0.0%</u></td> </tr> <tr> <td>FAC species <u>35%</u></td> <td>x 3 <u>105.0%</u></td> </tr> <tr> <td>FACU species <u>85%</u></td> <td>x 4 <u>340.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>120.0%</u></td> <td>(A) <u>445%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.71</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>0%</u>	x 2 <u>0.0%</u>	FAC species <u>35%</u>	x 3 <u>105.0%</u>	FACU species <u>85%</u>	x 4 <u>340.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>120.0%</u>	(A) <u>445%</u> (B)	Prevalence Index = B/A = <u>3.71</u>	
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Remarks: UPLAND																																							

SOIL

Sampling Point: DP050

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicator)								
Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains								Location: PL=Pore Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils		
☐ Histosol (A1)			☐ Sandy Gleyed Matrix (S4)			☐ Coast Prairie Redoc (A16)		
☐ Histic Epipedon (A2)			☐ Sandy Redox (S5)			☐ Dark Surface (S7)		
☐ Black Histic (A3)			☐ Stripped Matrix (S6)			☐ Iron-Manganese Masses (F12)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Mucky Mineral (F1)			☐ Very Shallow Dark Surface (TF12)		
☐ Stratified Layers (A5)			☐ Loamy Gleyed Matrix (F2)			☐ Other (Explain in Remarks)		
☐ 2 cm Muck (A10)			☐ Depleted Matrix (F3)					
☐ Depleted Below Dark Surface (A11)			☐ Redox Dark Surface (F6)					
☒ Thick Dark Surface (A12)			☐ Depleted Dark Surface (F7)			Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
☐ Sandy Mucky Mineral (S1)			☐ Redox Depressions (F8)					
Restrictive Layer (if present):								
Type: <u>None</u>						Hydric Soil Present? Yes ☒ No ☐		
Depth (inches): <u>NA</u>								
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators				
Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2 or more required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)		
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)		
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)		
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)		
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)		
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)		
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)		
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)		
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)			
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)			
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): NA Water Table Present? Yes ☐ No ☒ Depth (inches): NA Saturation Present? Yes ☐ No ☒ Depth (inches): NA (includes capillary fringe)			Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:				
Remarks: NO HYDROLOGY				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP051
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: ,,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM adjacent Cobb Creek			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) <table border="0"> <tr> <td>1. <u>Spartina pectinata</u></td> <td>35%</td> <td>Y</td> <td>FACW</td> </tr> <tr> <td>2. <u>Phleum pratense</u></td> <td>20%</td> <td>Y</td> <td>FACU</td> </tr> <tr> <td>3. <u>Poa pratensis</u></td> <td>20%</td> <td>Y</td> <td>FAC</td> </tr> <tr> <td>4. <u>Carex nebrascensis</u></td> <td>15%</td> <td>N</td> <td>OBL</td> </tr> <tr> <td>5. <u>Schoenoplectus acutus</u></td> <td>15%</td> <td>N</td> <td>OBL</td> </tr> <tr> <td>6. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>105%</td> <td colspan="2">= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		1. <u>Spartina pectinata</u>	35%	Y	FACW	2. <u>Phleum pratense</u>	20%	Y	FACU	3. <u>Poa pratensis</u>	20%	Y	FAC	4. <u>Carex nebrascensis</u>	15%	N	OBL	5. <u>Schoenoplectus acutus</u>	15%	N	OBL	6. _____					105%	= Total Cover		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>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B) Prevalence Index Worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>30%</u></td> <td>x 1 <u>30.0%</u></td> </tr> <tr> <td>FACW species <u>35%</u></td> <td>x 2 <u>70.0%</u></td> </tr> <tr> <td>FAC species <u>20%</u></td> <td>x 3 <u>60.0%</u></td> </tr> <tr> <td>FACU species <u>20%</u></td> <td>x 4 <u>80.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>105.0%</u></td> <td>(A) <u>240%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.29</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>30%</u>	x 1 <u>30.0%</u>	FACW species <u>35%</u>	x 2 <u>70.0%</u>	FAC species <u>20%</u>	x 3 <u>60.0%</u>	FACU species <u>20%</u>	x 4 <u>80.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>105.0%</u>	(A) <u>240%</u> (B)	Prevalence Index = B/A = <u>2.29</u>	
1. <u>Spartina pectinata</u>	35%	Y	FACW																																												
2. <u>Phleum pratense</u>	20%	Y	FACU																																												
3. <u>Poa pratensis</u>	20%	Y	FAC																																												
4. <u>Carex nebrascensis</u>	15%	N	OBL																																												
5. <u>Schoenoplectus acutus</u>	15%	N	OBL																																												
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Prevalence Index = B/A = <u>2.29</u>																																															
Remarks: PEM																																															

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	NA

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: PEM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
 Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP052
 Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: , ,
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
 Slope (%): <5% Lat: Long: Datum: NAD83
 Soil Map Unit Name: NWI classification:

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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>X</u>	No <u></u>			
Wetland Hydrology Present?	Yes <u></u>	No <u>X</u>			
Remarks: UPLAND					

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u></u>			
= Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. <u></u>			
= Total Cover			
Herb Stratum (Plot size: <u>5</u>)			
1. <i>Phleum pratense</i>	75%	Y	FACU
2. <i>Poa pratensis</i>	18%	N	FAC
3. <i>Axyris amaranthoides</i>	5%	N	UPL
4. <i>Asclepias speciosa</i>	5%	N	FAC
5. <u></u>			
103%		= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1. <u></u>			
= Total Cover			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>23%</u>	x 3 <u>69.0%</u>
FACU species <u>75%</u>	x 4 <u>300.0%</u>
UPL species <u>5%</u>	x 5 <u>25.0%</u>
Column Totals: <u>103.0%</u>	(A) <u>394%</u> (B)
Prevalence Index = B/A = <u>3.83</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes No X

Remarks: UPLAND

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 3/2	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: UPLAND

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	NA

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: NO HYDROLOGY

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP053
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM along Cobb Creek				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____		_____	_____	_____
		_____	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	
Herb Stratum (Plot size: <u>5</u>)				
1.	<i>Spartina pectinata</i>	35%	Y	FACW
2.	<i>Phalaris arundinacea</i>	25%	Y	FACW
3.	<i>Schoenoplectus acutus</i>	20%	N	OBL
4.	<i>Schoenoplectus tabernaemontani</i>	20%	N	OBL
5.	<i>Carex aquatilis</i>	15%	N	OBL
6.	_____	_____	_____	_____
		115%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>55%</u>	x 1 <u>55.0%</u>
FACW species <u>60%</u>	x 2 <u>120.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>115.0%</u>	(A) <u>175%</u> (B)
Prevalence Index = B/A = <u>1.52</u>	

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks: PEM

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☒ No ☐	Depth (inches):	<u>1</u>
Water Table Present?	Yes ☒ No ☐	Depth (inches):	<u>0</u>
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	<u>0</u>

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP054
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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 <u> X </u>	No _____	
Wetland Hydrology Present?	Yes <u> X </u>	No _____	
Remarks: Upland			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) <table border="0"> <tr> <td>1. <u>Phleum pratense</u></td> <td>70%</td> <td>Y</td> <td>FACU</td> </tr> <tr> <td>2. <u>Spartina pectinata</u></td> <td>20%</td> <td>N</td> <td>FACW</td> </tr> <tr> <td>3. <u>Poa pratensis</u></td> <td>15%</td> <td>N</td> <td>FAC</td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>105%</td> <td colspan="2">= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		1. <u>Phleum pratense</u>	70%	Y	FACU	2. <u>Spartina pectinata</u>	20%	N	FACW	3. <u>Poa pratensis</u>	15%	N	FAC	4. _____					105%	= Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>20%</u></td> <td>x 2 <u>40.0%</u></td> </tr> <tr> <td>FAC species <u>15%</u></td> <td>x 3 <u>45.0%</u></td> </tr> <tr> <td>FACU species <u>70%</u></td> <td>x 4 <u>280.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>105.0%</u></td> <td>(A) <u>365%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.48</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>20%</u>	x 2 <u>40.0%</u>	FAC species <u>15%</u>	x 3 <u>45.0%</u>	FACU species <u>70%</u>	x 4 <u>280.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>105.0%</u>	(A) <u>365%</u> (B)	Prevalence Index = B/A = <u>3.48</u>	
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Prevalence Index = B/A = <u>3.48</u>																																							
Remarks: UPLAND																																							

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: UPLAND

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	NA

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: No hydrology

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP055
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: ,,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: Long: Datum: NAD83
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <u>Spartina pectinata</u> 90% Y FACW 2. <u>Phalaris arundinacea</u> 10% N FACW 3. _____ _____ 100% = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>100%</u></td> <td>x 2 <u>200.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>100.0%</u></td> <td>(A) <u>200%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>100%</u>	x 2 <u>200.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>100.0%</u>	(A) <u>200%</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
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Column Totals: <u>100.0%</u>	(A) <u>200%</u> (B)																		
Prevalence Index = B/A = <u>2.00</u>																			
Remarks: PEM																			

SOIL

Sampling Point: DP055

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicator)								
Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains								Location: PL=Pore Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils		
☐ Histosol (A1)			☐ Sandy Gleyed Matrix (S4)			☐ Coast Prairie Redox (A16)		
☐ Histic Epipedon (A2)			☐ Sandy Redox (S5)			☐ Dark Surface (S7)		
☐ Black Histic (A3)			☐ Stripped Matrix (S6)			☐ Iron-Manganese Masses (F12)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Mucky Mineral (F1)			☐ Very Shallow Dark Surface (TF12)		
☐ Stratified Layers (A5)			☐ Loamy Gleyed Matrix (F2)			☐ Other (Explain in Remarks)		
☐ 2 cm Muck (A10)			☐ Depleted Matrix (F3)					
☐ Depleted Below Dark Surface (A11)			☐ Redox Dark Surface (F6)					
☒ Thick Dark Surface (A12)			☐ Depleted Dark Surface (F7)			Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
☐ Sandy Mucky Mineral (S1)			☐ Redox Depressions (F8)					
Restrictive Layer (if present):								
Type: <u>None</u>						Hydric Soil Present? Yes ☒ No ☐		
Depth (inches): <u>NA</u>								
Remarks: PEM								

HYDROLOGY

Wetland Hydrology Indicators				
Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2 or more required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)		
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)		
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)		
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)		
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)		
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)		
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)		
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ FAC-Neutral Test (D5)		
☒ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)			
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)			
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): NA Water Table Present? Yes ☐ No ☒ Depth (inches): NA Saturation Present? Yes ☐ No ☒ Depth (inches): NA (includes capillary fringe)			Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:				
Remarks: PEM				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP056
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status																
1. _____		_____	_____	_____																
		_____	= Total Cover																	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																				
1. _____		_____	_____	_____																
		_____	= Total Cover																	
<u>Herb Stratum</u> (Plot size: <u>5</u>)																				
1. <i>Bromus inermis</i>		95%	Y	FACU																
2. _____		_____	_____	_____																
		95%	= Total Cover																	
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)																				
1. _____		_____	_____	_____																
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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)																				
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Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																				
Remarks: UPLAND																				

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 3/4	100%						

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: UPLAND POWERLINE BERM

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
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☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No X

Water Table Present? Yes No X

Saturation Present? Yes No X

(includes capillary fringe)

Depth (inches): NA

Depth (inches): NA

Depth (inches): NA

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP057
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<u>Spartina pectinata</u>	70%	Y	FACW
2.	<u>Phalaris arundinacea</u>	30%	Y	FACW
3.	<u>Typha angustifolia</u>	15%	N	OBL
4.	_____			
		115%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>15%</u>	x 1 <u>15.0%</u>
FACW species <u>100%</u>	x 2 <u>200.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>115.0%</u>	(A) <u>215%</u> (B)
Prevalence Index = B/A = <u>1.87</u>	

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks: PEM

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☒ No ☐	Depth (inches):	10
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	0

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP058
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: Upland			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>)		Absolute % Cover	Dominant pecies?	Indicator Status																
1. _____																				
		_____ = Total Cover																		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																				
1. _____																				
		_____ = Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5</u>)																				
1. <i>Bromus inermis</i>		95%	Y	FACU																
2. _____																				
		_____ 95% = Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)																				
1. _____																				
		_____ = Total Cover																		
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)																				
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>0.0%</u></td> </tr> <tr> <td>FACW species <u>0%</u></td> <td>x 2 <u>0.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>95%</u></td> <td>x 4 <u>380.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>95.0%</u></td> <td>(A) <u>380%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table>					Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>0%</u>	x 2 <u>0.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>95%</u>	x 4 <u>380.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>95.0%</u>	(A) <u>380%</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0%</u>	x 1 <u>0.0%</u>																			
FACW species <u>0%</u>	x 2 <u>0.0%</u>																			
FAC species <u>0%</u>	x 3 <u>0.0%</u>																			
FACU species <u>95%</u>	x 4 <u>380.0%</u>																			
UPL species <u>0%</u>	x 5 <u>0.0%</u>																			
Column Totals: <u>95.0%</u>	(A) <u>380%</u> (B)																			
Prevalence Index = B/A = <u>4.00</u>																				
Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																				
Remarks: Upland																				

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 3/4	100%						

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Histosol (A1)

Histic Epipedon (A2)

Black Histic (A3)

Hydrogen Sulfide (A4)

Stratified Layers (A5)

2 cm Muck (A10)

Depleted Below Dark Surface (A11)

Thick Dark Surface (A12)

Sandy Mucky Mineral (S1)

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)

Indicators for Problematic Hydric Soils

Coast Prairie Redoc (A16)

Dark Surface (S7)

Iron-Manganese Masses (F12)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present?

Yes

No

X

HYDROLOGY

Wetland Hydrology Indicators

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

Surface Water (A1)

High Water Table (A2)

Saturation (A3)

Water Marks (B1)

Sediment Deposits (B2)

Drift Deposits (B3)

Algal Mat or Crust (B4)

Iron Deposits (B5)

Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

Water-Stained Leaves (B9)

Aquatic Fauna (B13)

True Aquatic Plants (B14)

Hydrogen Sulfide Odor (C1)

Oxidized Rhizospheres on Living Roots (C3)

Presence of Reduced Iron (C4)

Recent Iron Reduction in Tilled Soils (C6)

Thin Muck Surface (C7)

Gauge or Well Data (D9)

Other (Explain in Remarks)

Secondary Indicators (2 or more required)

Surface Soil Cracks (B6)

Drainage Pattern (B10)

Dry-Season Water Table (C2)

Crayfish Burrows (C8)

Saturation Visible on Aerial Imagery (C9)

Stunted or Stressed Plants (D1)

Geomorphic Position (D2)

FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?

Yes

No

X

Water Table Present?

Yes

No

X

Saturation Present?

Yes

No

X

(includes capillary fringe)

Depth (inches): NA

Depth (inches): NA

Depth (inches): NA

Wetland Hydrology Present?

Yes

No

X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP059
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PSS				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____		_____	_____	_____
		_____	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. <u>Salix exigua</u>		95%	Y	FACW
2. _____		_____	_____	_____
		95%	= Total Cover	
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Phalaris arundinacea</u>		45%	Y	FACW
2. <u>Urtica dioica</u>		15%	Y	FACW
3. _____		_____	_____	_____
		60%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>155%</u>	x 2 <u>310.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>155.0%</u>	(A) <u>310%</u> (B)
Prevalence Index = B/A = <u>2.00</u>	

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks: PSS

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Histosol (A1)

Histic Epipedon (A2)

Black Histic (A3)

Hydrogen Sulfide (A4)

Stratified Layers (A5)

2 cm Muck (A10)

Depleted Below Dark Surface (A11)

X

Thick Dark Surface (A12)

Sandy Mucky Mineral (S1)

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)

Indicators for Problematic Hydric Soils

Coast Prairie Redoc (A16)

Dark Surface (S7)

Iron-Manganese Masses (F12)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PSS

Hydric Soil Present?

Yes

X

No

HYDROLOGY

Wetland Hydrology Indicators

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

Surface Water (A1)

High Water Table (A2)

Saturation (A3)

Water Marks (B1)

Sediment Deposits (B2)

Drift Deposits (B3)

Algal Mat or Crust (B4)

Iron Deposits (B5)

X

Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

Water-Stained Leaves (B9)

Aquatic Fauna (B13)

True Aquatic Plants (B14)

Hydrogen Sulfide Odor (C1)

Oxidized Rhizospheres on Living Roots (C3)

Presence of Reduced Iron (C4)

Recent Iron Reduction in Tilled Soils (C6)

Thin Muck Surface (C7)

Gauge or Well Data (D9)

Other (Explain in Remarks)

Secondary Indicators (2 or more required)

Surface Soil Cracks (B6)

Drainage Pattern (B10)

Dry-Season Water Table (C2)

Crayfish Burrows (C8)

Saturation Visible on Aerial Imagery (C9)

Stunted or Stressed Plants (D1)

X

Geomorphic Position (D2)

X

FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?

Yes

No

X

Depth (inches):

NA

Water Table Present?

Yes

No

X

Depth (inches):

NA

Saturation Present?

Yes

No

X

Depth (inches):

NA

(includes capillary fringe)

Wetland Hydrology Present?

Yes

X

No

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

Remarks: PSS

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/3/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP060
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: Long: Datum: NAD83
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: Upland			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <i>Bromus inermis</i> 95% Y FACU 2. _____ _____ 95% = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover	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) Prevalence Index Worksheet: <table> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0%</u></td> <td>x 1 <u>0.0%</u></td> </tr> <tr> <td>FACW species <u>0%</u></td> <td>x 2 <u>0.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>95%</u></td> <td>x 4 <u>380.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>95.0%</u></td> <td>(A) <u>380%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>0%</u>	x 2 <u>0.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>95%</u>	x 4 <u>380.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>95.0%</u>	(A) <u>380%</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
Total % Cover of:	Multiply by:																
OBL species <u>0%</u>	x 1 <u>0.0%</u>																
FACW species <u>0%</u>	x 2 <u>0.0%</u>																
FAC species <u>0%</u>	x 3 <u>0.0%</u>																
FACU species <u>95%</u>	x 4 <u>380.0%</u>																
UPL species <u>0%</u>	x 5 <u>0.0%</u>																
Column Totals: <u>95.0%</u>	(A) <u>380%</u> (B)																
Prevalence Index = B/A = <u>4.00</u>																	
Remarks: Upland																	

SOIL

Sampling Point: DP060

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 3/4	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches):

Remarks: Upland

Hydric Soil Present? Yes _____ No X

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/4/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP061
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<u>Spartina pectinata</u>	45%	Y	FACW
2.	<u>Phalaris arundinacea</u>	30%	Y	FACW
3.	<u>Schoenoplectus acutus</u>	15%	N	OBL
4.	_____			
		90%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>15%</u>	x 1 <u>15.0%</u>
FACW species <u>75%</u>	x 2 <u>150.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>90.0%</u>	(A) <u>165%</u> (B)
Prevalence Index = B/A = <u>1.83</u>	

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks: PEM

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	3

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 8/4/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP062
Investigator(s): E. Schwartz, P. Swartzinski Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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 <u> X </u>	No _____	
Wetland Hydrology Present?	Yes _____	No <u> X </u>	
Remarks: Upland			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <u>Bromus inermis</u> 65% Y FACU 2. <u>Phleum pratense</u> 25% Y FACU 3. _____ _____ 90% = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>0%</u></td> <td>x 2 <u>0.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>90%</u></td> <td>x 4 <u>360.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>90.0%</u></td> <td>(A) <u>360%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>0%</u>	x 2 <u>0.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>90%</u>	x 4 <u>360.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>90.0%</u>	(A) <u>360%</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>0%</u>	x 1 <u>0.0%</u>																		
FACW species <u>0%</u>	x 2 <u>0.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>90%</u>	x 4 <u>360.0%</u>																		
UPL species <u>0%</u>	x 5 <u>0.0%</u>																		
Column Totals: <u>90.0%</u>	(A) <u>360%</u> (B)																		
Prevalence Index = B/A = <u>4.00</u>																			
Remarks: UPLAND																			

SOIL

Sampling Point: DP062

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-16	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ Depleted Matrix (F3)
_____ Depleted Below Dark Surface (A11)	_____ Redox Dark Surface (F6)
X _____ Thick Dark Surface (A12)	_____ Depleted Dark Surface (F7)
_____ Sandy Mucky Mineral (S1)	_____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: UPLAND

Hydric Soil Present? Yes X No

HYDROLOGY

Wetland Hydrology Indicators

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

___ Surface Water (A1)	___ Water-Stained Leaves (B9)
___ High Water Table (A2)	___ Aquatic Fauna (B13)
___ Saturation (A3)	___ True Aquatic Plants (B14)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)
___ Inundation Visible on Aerial Imagery (B7)	___ Gauge or Well Data (D9)
___ Sparsely Vegetated Concave Surface (B8)	___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/5/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP101
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: NWI WETLAND ABUTTING PERENNIAL STREAM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant pecies?	Indicator Status
1. _____	_____	_____	_____
_____ = Total Cover			
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
_____ = Total Cover			
<u>Herb Stratum</u> (Plot size: <u>5</u>)			
1. <u>Spartina gracilis</u>	35%	Y	FACW
2. <u>Phalaris arundinacea</u>	35%	Y	FACW
3. <u>Carex aquatilis</u>	15%	N	OBL
4. <u>Schoenoplectus acutus</u>	5%	N	OBL
5. <u>Rumex crispus</u>	5%	N	FAC
6. _____	_____	_____	_____
_____ 95% = Total Cover			
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
_____ = Total Cover			

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)	

Prevalence Index Worksheet:			
Total % Cover of:	Multiply by:		
OBL species <u>20%</u>	x 1	<u>20.0%</u>	
FACW species <u>70%</u>	x 2	<u>140.0%</u>	
FAC species <u>5%</u>	x 3	<u>15.0%</u>	
FACU species <u>0%</u>	x 4	<u>0.0%</u>	
UPL species <u>0%</u>	x 5	<u>0.0%</u>	
Column Totals: <u>95.0%</u>	(A)	<u>175%</u>	(B)
Prevalence Index = B/A =		<u>1.84</u>	

Hydrophytic Vegetation Indicators:	
<u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation	
<u>Y</u> 2 - Dominance Test if >50%	
<u>Y</u> 3 - Prevalence Index is ≤ 3.0	
<u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)	
<u>N</u> Problematic Hydrophytic Vegetation (Explain)	
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Hydrophytic Vegetation Present?	
	Yes <u>X</u> No _____

Remarks: PEM ABUTTING STREAM AND STOCK POND

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☒ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches):

Remarks: Hydric soil present

Hydric Soil Present? Yes ☒ No**HYDROLOGY****Wetland Hydrology Indicators**

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

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☒ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☒ No	Depth (inches):	3
Water Table Present?	Yes ☒ No	Depth (inches):	5
Saturation Present? (includes capillary fringe)	Yes ☒ No	Depth (inches):	0

Wetland Hydrology Present? Yes ☒ No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/5/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP102
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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 <u> X </u>	No _____			
Wetland Hydrology Present?	Yes _____	No <u> X </u>			
Remarks: Upland point					

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant pecies?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<u>Bromus inermis</u>	45%	Y	FACU
2.	<u>Pascopyrum smithii</u>	15%	Y	FACU
3.	<u>Helianthus maximiliani</u>	10%	N	UPL
4.	<u>Spartina gracilis</u>	5%	N	FACW
5.	_____			
		75%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>5%</u>	x 2 <u>10.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>60%</u>	x 4 <u>240.0%</u>
UPL species <u>10%</u>	x 5 <u>50.0%</u>
Column Totals: <u>75.0%</u>	(A) <u>300%</u> (B)
Prevalence Index = B/A = <u>4.00</u>	

Hydrophytic Vegetation Indicators:
N 1 - Rapid Test for Hydrophytic Vegetation
N 2 - Dominance Test if >50%
N 3 - Prevalence Index is ≤ 3.0
N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)
N Problematic Hydrophytic Vegetation (Explain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes No X

Remarks: Upland

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: Upland

Hydric Soil Present? Yes ☒ No ☐

HYDROLOGY

Wetland Hydrology Indicators

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

Secondary Indicators (2 or more required)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches): NA
Water Table Present?	Yes ☐ No ☒	Depth (inches): NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches): NA

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No HYDROLOGY PRESENT

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/5/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP103
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM WETLAND					

VEGETATION – Use scientific names of plants

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
(Plot size: 30)			
1. _____	_____	_____	_____
	_____ = Total Cover		
Sapling/Shrub Stratum			
(Plot size: 15)			
1. _____	_____	_____	_____
	_____ = Total Cover		
Herb Stratum			
(Plot size: 5)			
1. <i>Phalaris arundinacea</i>	55%	Y	FACW
2. <i>Spartina gracilis</i>	30%	Y	FACW
3. <i>Helianthus maximiliani</i>	20%	N	UPL
4. <i>Bromus inermis</i>	10%	N	FACU
5. <i>Typha angustifolia</i>	8%	N	OBL
6. <i>Carex aquatilis</i>	7%	N	OBL
7. _____	_____	_____	_____
	130% = Total Cover		
Woody Vine Stratum			
(Plot size: 15)			
1. _____	_____	_____	_____
	_____ = Total Cover		

Dominance Test Worksheet:			
Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)	
Total Number of Dominant Species Across All Strata:	2	(B)	
Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0%	(A/B)	

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	15%	x 1	15.0%
FACW species	85%	x 2	170.0%
FAC species	0%	x 3	0.0%
FACU species	10%	x 4	40.0%
UPL species	20%	x 5	100.0%
Column Totals:	130.0%	(A)	325% (B)
Prevalence Index = B/A =		2.50	

Hydrophytic Vegetation Indicators:	
Y	1 - Rapid Test for Hydrophytic Vegetation
Y	2 - Dominance Test if >50%
Y	3 - Prevalence Index is ≤ 3.0
Y	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
N	Problematic Hydrophytic Vegetation (Explain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Hydrophytic Vegetation Present?	
Yes	X No

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☒ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☒ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☒ No ☐	Depth (inches):	<u>2</u>
Water Table Present?	Yes ☒ No ☐	Depth (inches):	<u>18</u>
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	<u>0</u>

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/5/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP104
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): meandering channel Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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 <u> X </u>	No _____	
Wetland Hydrology Present?	Yes _____	No <u> X </u>	
Remarks: Upland			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant pecies?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<u>Bromus inermis</u>	85%	Y	FACU
2.	<u>Helianthus maximiliani</u>	15%	N	UPL
3.	<u>Solidago canadensis</u>	10%	N	FACU
4.	<u>Eutrochium maculatum</u>	5%	N	OBL
5.	_____			
		115%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>5%</u>	x 1 <u>5.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>95%</u>	x 4 <u>380.0%</u>
UPL species <u>15%</u>	x 5 <u>75.0%</u>
Column Totals: <u>115.0%</u>	(A) <u>460%</u> (B)
Prevalence Index = B/A = <u>4.00</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes No X

Remarks: Upland

SOIL

Sampling Point: DP104

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes X No

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/5/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP105
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<i>Phalaris arundinacea</i>	55%	Y	FACW
2.	<i>Typha angustifolia</i>	35%	Y	OBL
3.	<i>Spartina gracilis</i>	20%	N	FACW
4.	<i>Helianthus maximiliani</i>	10%	N	UPL
5.	<i>Urtica dioica</i>	7%	N	FACW
6.	_____			
		127%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>35%</u>	x 1 <u>35.0%</u>
FACW species <u>82%</u>	x 2 <u>164.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>10%</u>	x 5 <u>50.0%</u>
Column Totals: <u>127.0%</u>	(A) <u>249%</u> (B)
Prevalence Index = B/A = <u>1.96</u>	

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks: PEM

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☒ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☒ No ☐	Depth (inches): <u>2</u>
Water Table Present?	Yes ☒ No ☐	Depth (inches): <u>12</u>
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches): <u>3</u>

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: <u>Tatanka Ridge Wind Project</u>	City/County: <u>Deuel County</u>	Sampling Date: <u>10/5/2018</u>
Applicant/Owner: <u>Buffalo Ridge III, LLC</u>	State: <u>SD</u>	Sampling Point: <u>DP106</u>
Investigator(s): <u>Paul SWARTZINSKI</u>	Section, Township, Range: <u> , , </u>	
Landform (hillslope, terrace, etc.): <u>channel</u>	Local relief (concave, convex, none): <u> </u>	Linear Slope <u> </u>
Slope (%): <u><5%</u>	Lat: <u> </u>	Long: <u> </u>
Soil Map Unit Name: <u> </u>		Datum: <u>NAD83</u>
Soil Map Unit Name: <u> </u>		NWI classification: <u> </u>

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____		_____	_____	_____
		_____	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5</u>)				
1. <u>Bromus inermis</u>		65%	Y	FACU
2. <u>Phalaris arundinacea</u>		30%	Y	FACW
3. _____		_____	_____	_____
		95%	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	

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>0%</u>	x 1 <u>0.0%</u>
FACW species <u>30%</u>	x 2 <u>60.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>65%</u>	x 4 <u>260.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>95.0%</u>	(A) <u>320%</u> (B)
Prevalence Index = B/A = <u>3.37</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes _____ No X

Remarks: UPLAND

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/2	100%					Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: UPLAND

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No X

Water Table Present? Yes No X

Saturation Present? Yes No X

(includes capillary fringe)

Depth (inches): NA

Depth (inches): NA

Depth (inches): NA

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/5/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP107
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM WITHIN DITCH					

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
		= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		= Total Cover	
Herb Stratum (Plot size: <u>5</u>)			
1. <u>Phalaris arundinacea</u>	45%	Y	FACW
2. <u>Spartina gracilis</u>	40%	Y	FACW
3. <u>Helianthus maximiliani</u>	5%	N	UPL
4. _____	_____	_____	_____
		90%	= Total Cover
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		= Total Cover	

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)	

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>0%</u>	x 1	<u>0.0%</u>
FACW species	<u>85%</u>	x 2	<u>170.0%</u>
FAC species	<u>0%</u>	x 3	<u>0.0%</u>
FACU species	<u>0%</u>	x 4	<u>0.0%</u>
UPL species	<u>5%</u>	x 5	<u>25.0%</u>
Column Totals:	<u>90.0%</u>	(A)	<u>195%</u> (B)
Prevalence Index = B/A =		<u>2.17</u>	

Hydrophytic Vegetation Indicators:
<u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation
<u>Y</u> 2 - Dominance Test if >50%
<u>Y</u> 3 - Prevalence Index is ≤ 3.0
<u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
<u>N</u> Problematic Hydrophytic Vegetation (Explain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?
Yes <u>X</u> No _____

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Sandy Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☒ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☒ No ☐	Depth (inches):	<u>2</u>
Water Table Present?	Yes ☒ No ☐	Depth (inches):	<u>3</u>
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	<u>0</u>

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site:	Tatanka Ridge Wind Project		City/County:	Deuel County		Sampling Date:	10/5/2018	
Applicant/Owner:	Buffalo Ridge III, LLC		State:	SD		Sampling Point:	DP108	
Investigator(s):	Paul SWARTZINSKI		Section, Township, Range:					
Landform (hillslope, terrace, etc.):	channel		Local relief (concave, convex, none):	Linear Slope				
Slope (%):	<5%	Lat:		Long:		Datum:	NAD83	
Soil Map Unit Name:			NW1 classification:					

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Herb Stratum (Plot size: <u>5</u>)			
1. <i>Bromus inermis</i>	85%	Y	FACU
2. <i>Phalaris arundinacea</i>	20%	N	FACW
3. _____	_____	_____	_____
		_____ = Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>20%</u>	x 2 <u>40.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>85%</u>	x 4 <u>340.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>105.0%</u>	(A) <u>380%</u> (B)
Prevalence Index = B/A = <u>3.62</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes _____ No X

SOIL

Sampling Point: DP108

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/1						Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes No **X**

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/5/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP109
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM					

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Herb Stratum (Plot size: <u>5</u>)			
1. <u>Phalaris arundinacea</u>	65%	Y	FACW
2. <u>Spartina gracilis</u>	35%	Y	FACW
3. <u>Typha angustifolia</u>	30%	Y	OBL
4. _____	_____	_____	_____
		130% = Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>30%</u>	x 1 <u>30.0%</u>
FACW species <u>100%</u>	x 2 <u>200.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>130.0%</u> (A)	<u>230%</u> (B)

Prevalence Index = B/A = 1.77

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☒ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☒ No ☐	Depth (inches):	8
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	2

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/5/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP110
Investigator(s): Paul SWARTZINSKI Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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> </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: UPLAND			

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Herb Stratum (Plot size: <u>5</u>)			
1. <u>Phalaris arundinacea</u>	55%	Y	FACW
2. <u>Spartina pectinata</u>	30%	Y	FACW
3. <u>Typha angustifolia</u>	20%	N	OBL
4. _____	_____	_____	_____
		105% = Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	

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)	

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>20%</u>	x 1	<u>20.0%</u>
FACW species	<u>85%</u>	x 2	<u>170.0%</u>
FAC species	<u>0%</u>	x 3	<u>0.0%</u>
FACU species	<u>0%</u>	x 4	<u>0.0%</u>
UPL species	<u>0%</u>	x 5	<u>0.0%</u>
Column Totals:	<u>105.0%</u>	(A)	<u>190%</u> (B)
Prevalence Index = B/A =		<u>1.81</u>	

Hydrophytic Vegetation Indicators:
<u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation
<u>Y</u> 2 - Dominance Test if >50%
<u>Y</u> 3 - Prevalence Index is ≤ 3.0
<u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
<u>N</u> Problematic Hydrophytic Vegetation (Explain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?
Yes <u>X</u> No _____

SOIL

Sampling Point: DP110

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/1	100%					Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: UPLAND

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators

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

Secondary Indicators (2 or more required)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

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

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP111
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM ROAD DITCH				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. <u>Salix exigua</u>		15%	Y	FACW
2. _____				
		15%	= Total Cover	
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Phalaris arundinacea</u>		55%	Y	FACW
2. <u>Spartina pectinata</u>		30%	Y	FACW
3. <u>Typha angustifolia</u>		10%	N	OBL
4. _____				
		95%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>10%</u>	x 1 <u>10.0%</u>
FACW species <u>100%</u>	x 2 <u>200.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>110.0%</u>	(A) <u>210%</u> (B)
Prevalence Index = B/A = <u>1.91</u>	

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks: PEM

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/1	100%					Sandy Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	6

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP112
Investigator(s): Paul SWARTZINSKI Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: Long: Datum: NAD83
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND				

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Herb Stratum (Plot size: <u>5</u>)			
1. <i>Bromus inermis</i>	80%	Y	FACU
2. <i>Phalaris arundinacea</i>	15%	N	FACW
3. _____	_____	_____	_____
		95% = Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
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)
Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>0%</u>	x 1	<u>0.0%</u>
FACW species	<u>15%</u>	x 2	<u>30.0%</u>
FAC species	<u>0%</u>	x 3	<u>0.0%</u>
FACU species	<u>80%</u>	x 4	<u>320.0%</u>
UPL species	<u>0%</u>	x 5	<u>0.0%</u>
Column Totals:	<u>95.0%</u>	(A)	<u>350%</u> (B)
Prevalence Index = B/A =		<u>3.68</u>	
Hydrophytic Vegetation Indicators:			
<u>N</u> 1 - Rapid Test for Hydrophytic Vegetation			
<u>N</u> 2 - Dominance Test if >50%			
<u>N</u> 3 - Prevalence Index is ≤ 3.0			
<u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)			
<u>N</u> Problematic Hydrophytic Vegetation (Explain)			
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
Hydrophytic Vegetation Present?			
Yes _____		No <u>X</u>	
Remarks: UPLAND			

SOIL

Sampling Point: DP112

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 4/2	100%					Sandy Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes _____ No X

HYDROLOGY

Wetland Hydrology Indicators

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

___ Surface Water (A1)	___ Water-Stained Leaves (B9)
___ High Water Table (A2)	___ Aquatic Fauna (B13)
___ Saturation (A3)	___ True Aquatic Plants (B14)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)
___ Inundation Visible on Aerial Imagery (B7)	___ Gauge or Well Data (D9)
___ Sparsely Vegetated Concave Surface (B8)	___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP113
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) <table border="0"> <tr> <td>1. <u>Phalaris arundinacea</u></td> <td>75%</td> <td>Y</td> <td>FACW</td> </tr> <tr> <td>2. <u>Spartina pectinata</u></td> <td>25%</td> <td>Y</td> <td>FACW</td> </tr> <tr> <td>3. <u>Asclepias speciosa</u></td> <td>5%</td> <td>N</td> <td>FAC</td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>105%</td> <td colspan="2">= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		1. <u>Phalaris arundinacea</u>	75%	Y	FACW	2. <u>Spartina pectinata</u>	25%	Y	FACW	3. <u>Asclepias speciosa</u>	5%	N	FAC	4. _____					105%	= Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>100%</u></td> <td>x 2 <u>200.0%</u></td> </tr> <tr> <td>FAC species <u>5%</u></td> <td>x 3 <u>15.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>105.0%</u></td> <td>(A) <u>215%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.05</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>100%</u>	x 2 <u>200.0%</u>	FAC species <u>5%</u>	x 3 <u>15.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>105.0%</u>	(A) <u>215%</u> (B)	Prevalence Index = B/A = <u>2.05</u>	
1. <u>Phalaris arundinacea</u>	75%	Y	FACW																																				
2. <u>Spartina pectinata</u>	25%	Y	FACW																																				
3. <u>Asclepias speciosa</u>	5%	N	FAC																																				
4. _____																																							
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Prevalence Index = B/A = <u>2.05</u>																																							
Remarks: PEM																																							

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/1	100%					Sandy Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	6

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP114
Investigator(s): Paul SWARTZINSKI Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____		_____	_____	_____
		_____	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5</u>)				
1. <i>Bromus inermis</i>		95%	Y	FACU
2. _____		_____	_____	_____
		95%	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>95%</u>	x 4 <u>380.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>95.0%</u>	(A) <u>380%</u> (B)
Prevalence Index = B/A = <u>4.00</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes _____ No X

Remarks: UPLAND

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 4/2	100%					Sandy Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: YES ROAD BASE PRESENT

Depth (inches): 12

Remarks:

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators

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

Secondary Indicators (2 or more required)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

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

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

Saturation Present? Yes No X Depth (inches): NA (includes capillary fringe)

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP115
Investigator(s): Paul SWARTZINSKI Section, Township, Range: ,,
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: Long: Datum: NAD83
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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:					

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
		= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		= Total Cover	
Herb Stratum (Plot size: <u>5</u>)			
1. <u>Phalaris arundinacea</u>	75%	Y	FACW
2. <u>Spartina pectinata</u>	35%	Y	FACW
3. <u>Typha angustifolia</u>	5%	N	OBL
4. _____	_____	_____	_____
		115% = Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		= Total Cover	

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)	

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>5%</u>	x 1	<u>5.0%</u>
FACW species	<u>110%</u>	x 2	<u>220.0%</u>
FAC species	<u>0%</u>	x 3	<u>0.0%</u>
FACU species	<u>0%</u>	x 4	<u>0.0%</u>
UPL species	<u>0%</u>	x 5	<u>0.0%</u>
Column Totals:	<u>115.0%</u>	(A)	<u>225%</u> (B)
Prevalence Index = B/A =		<u>1.96</u>	

Hydrophytic Vegetation Indicators:
<u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation
<u>Y</u> 2 - Dominance Test if >50%
<u>Y</u> 3 - Prevalence Index is ≤ 3.0
<u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
<u>N</u> Problematic Hydrophytic Vegetation (Explain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?
Yes <u>X</u> No _____

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	10

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site:	Tatanka Ridge Wind Project	City/County:	Deuel County	Sampling Date:	10/6/2018
Applicant/Owner:	Buffalo Ridge III, LLC	State:	SD	Sampling Point:	DP116
Investigator(s):	Paul SWARTZINSKI	Section, Township, Range:			
Landform (hillslope, terrace, etc.):	channel	Local relief (concave, convex, none):	Linear Slope		
Slope (%):	<5%	Lat:		Datum:	NAD83
Soil Map Unit Name:			NW1 classification:		

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>)		Absolute % Cover	Dominant pecies?	Indicator Status
1. _____				
		_____ = Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5</u>)				
1. <i>Bromus inermis</i>		95%	Y	FACU
2. _____				
		_____ 95% = Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>95%</u>	x 4 <u>380.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>95.0%</u>	(A) <u>380%</u> (B)
Prevalence Index = B/A = <u>4.00</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes _____ No X

Remarks: UPLAND

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/2	100%					Sandy Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: YES ROAD BASE

Depth (inches): 12

Remarks: UPLAND

Hydric Soil Present? Yes ☐ No ☒**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	NA

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP117
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____, __, _____
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<u>Phalaris arundinacea</u>	65%	Y	FACW
2.	<u>Spartina pectinata</u>	25%	Y	FACW
3.	<u>Typha angustifolia</u>	15%	N	OBL
4.	_____			
		105%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>15%</u>	x 1 <u>15.0%</u>
FACW species <u>90%</u>	x 2 <u>180.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>105.0%</u>	(A) <u>195%</u> (B)
Prevalence Index = B/A = <u>1.86</u>	

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks: PEM

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	6

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP118
Investigator(s): Paul SWARTZINSKI Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: Long: Datum: NAD83
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status																
1. _____																				
		_____ = Total Cover																		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																				
1. _____																				
		_____ = Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5</u>)																				
1.	<u>Bromus inermis</u>	85%	Y	FACU																
2.	<u>Phalaris arundinacea</u>	20%	N	FACW																
3.	_____																			
		105%	= Total Cover																	
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)																				
1. _____																				
		_____ = Total Cover																		
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)																				
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>0.0%</u></td> </tr> <tr> <td>FACW species <u>20%</u></td> <td>x 2 <u>40.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>85%</u></td> <td>x 4 <u>340.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>105.0%</u></td> <td>(A) <u>380%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.62</u></td> </tr> </table>					Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>20%</u>	x 2 <u>40.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>85%</u>	x 4 <u>340.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>105.0%</u>	(A) <u>380%</u> (B)	Prevalence Index = B/A = <u>3.62</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0%</u>	x 1 <u>0.0%</u>																			
FACW species <u>20%</u>	x 2 <u>40.0%</u>																			
FAC species <u>0%</u>	x 3 <u>0.0%</u>																			
FACU species <u>85%</u>	x 4 <u>340.0%</u>																			
UPL species <u>0%</u>	x 5 <u>0.0%</u>																			
Column Totals: <u>105.0%</u>	(A) <u>380%</u> (B)																			
Prevalence Index = B/A = <u>3.62</u>																				
Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																				
<table border="0"> <tr> <td> Hydrophytic Vegetation Present? </td> <td> Yes _____ No <u>X</u> </td> </tr> </table>					Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>														
Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>																			
Remarks: UPLAND																				

SOIL

Sampling Point: DP118

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/2	100%					Sandy Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: UPLAND

Hydric Soil Present? Yes _____ No X

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP119
Investigator(s): Paul SWARTZINSKI Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: Long: Datum: NAD83
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM					

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant species?	Indicator Status
Tree Stratum (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Herb Stratum (Plot size: <u>5</u>)			
1. <u>Phalaris arundinacea</u>	75%	Y	FACW
2. <u>Spartina pectinata</u>	25%	Y	FACW
3. <u>Typha angustifolia</u>	15%	N	OBL
4. _____	_____	_____	_____
		115% = Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	

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)	

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>15%</u>	x 1	<u>15.0%</u>
FACW species	<u>100%</u>	x 2	<u>200.0%</u>
FAC species	<u>0%</u>	x 3	<u>0.0%</u>
FACU species	<u>0%</u>	x 4	<u>0.0%</u>
UPL species	<u>0%</u>	x 5	<u>0.0%</u>
Column Totals:	<u>115.0%</u>	(A)	<u>215%</u> (B)
Prevalence Index = B/A =		<u>1.87</u>	

Hydrophytic Vegetation Indicators:
<u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation
<u>Y</u> 2 - Dominance Test if >50%
<u>Y</u> 3 - Prevalence Index is ≤ 3.0
<u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
<u>N</u> Problematic Hydrophytic Vegetation (Explain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?
Yes <u>X</u> No _____

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	8

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: <u>Tatanka Ridge Wind Project</u>	City/County: <u>Deuel County</u>	Sampling Date: <u>10/6/2018</u>
Applicant/Owner: <u>Buffalo Ridge III, LLC</u>	State: <u>SD</u>	Sampling Point: <u>DP120</u>
Investigator(s): <u>Paul SWARTZINSKI</u>	Section, Township, Range: <u> , , </u>	
Landform (hillslope, terrace, etc.): <u>channel</u>	Local relief (concave, convex, none): <u> </u>	Linear Slope <u> </u>
Slope (%): <u><5%</u>	Lat: <u> </u>	Long: <u> </u>
Soil Map Unit Name: <u> </u>		Datum: <u>NAD83</u>
Soil Map Unit Name: <u> </u>		NWI classification: <u> </u>

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____		_____	_____	_____
		_____	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5</u>)				
1. <u>Bromus inermis</u>		85%	Y	FACU
2. <u>Phalaris arundinacea</u>		10%	N	FACW
3. _____		_____	_____	_____
		95%	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>10%</u>	x 2 <u>20.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>85%</u>	x 4 <u>340.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>95.0%</u>	(A) <u>360%</u> (B)
Prevalence Index = B/A = <u>3.79</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: UPLAND

SOIL

Sampling Point: DP120

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/2	100%					Sandy Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes _____ No X

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP121
Investigator(s): Paul SWARTZINSKI Section, Township, Range: ,,
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: Long: Datum: NAD83
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <i>Phalaris arundinacea</i> 85% Y FACW 2. <i>Spartina pectinata</i> 25% Y FACW 3. _____ _____ = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>110%</u></td> <td>x 2 <u>220.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>110.0%</u></td> <td>(A) <u>220%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>110%</u>	x 2 <u>220.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>110.0%</u>	(A) <u>220%</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>0%</u>	x 1 <u>0.0%</u>																		
FACW species <u>110%</u>	x 2 <u>220.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>0%</u>	x 4 <u>0.0%</u>																		
UPL species <u>0%</u>	x 5 <u>0.0%</u>																		
Column Totals: <u>110.0%</u>	(A) <u>220%</u> (B)																		
Prevalence Index = B/A = <u>2.00</u>																			
Remarks: PEM																			

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	12

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP122
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant pecies?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<u>Bromus inermis</u>	75%	Y	FACU
2.	<u>Phalaris arundinacea</u>	25%	Y	FACW
3.	_____			
		100% = Total Cover		
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

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>0%</u>	x 1 <u>0.0%</u>
FACW species <u>25%</u>	x 2 <u>50.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>75%</u>	x 4 <u>300.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>100.0%</u>	(A) <u>350%</u> (B)
Prevalence Index = B/A = <u>3.50</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes _____ No X

Remarks: UPLAND

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 4/2	100%					Sandy Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No X

Water Table Present? Yes No X

Saturation Present? Yes No X

(includes capillary fringe)

Depth (inches): NA

Depth (inches): NA

Depth (inches): NA

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP123
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM ROAD DITCH				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <i>Phalaris arundinacea</i> 85% Y FACW 2. <i>Spartina pectinata</i> 25% Y FACW 3. _____ _____ 110% = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>110%</u></td> <td>x 2 <u>220.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>110.0%</u></td> <td>(A) <u>220%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>110%</u>	x 2 <u>220.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>110.0%</u>	(A) <u>220%</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>0%</u>	x 1 <u>0.0%</u>																		
FACW species <u>110%</u>	x 2 <u>220.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>0%</u>	x 4 <u>0.0%</u>																		
UPL species <u>0%</u>	x 5 <u>0.0%</u>																		
Column Totals: <u>110.0%</u>	(A) <u>220%</u> (B)																		
Prevalence Index = B/A = <u>2.00</u>																			
Remarks: PEM																			

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	10

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP124
Investigator(s): Paul SWARTZINSKI Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <u>Bromus inermis</u> 85% Y FACU 2. <u>Phalaris arundinacea</u> 15% N FACW 3. _____ _____ = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>15%</u></td> <td>x 2 <u>30.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>85%</u></td> <td>x 4 <u>340.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>100.0%</u> (A)</td> <td><u>370%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.70</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>15%</u>	x 2 <u>30.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>85%</u>	x 4 <u>340.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>100.0%</u> (A)	<u>370%</u> (B)	Prevalence Index = B/A = <u>3.70</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>0%</u>	x 1 <u>0.0%</u>																		
FACW species <u>15%</u>	x 2 <u>30.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>85%</u>	x 4 <u>340.0%</u>																		
UPL species <u>0%</u>	x 5 <u>0.0%</u>																		
Column Totals: <u>100.0%</u> (A)	<u>370%</u> (B)																		
Prevalence Index = B/A = <u>3.70</u>																			
Remarks: UPLAND																			

SOIL

Sampling Point: DP124

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/2	100%					Sandy Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: UPLAND

Hydric Soil Present? Yes _____ No X

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP125
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <u>Phalaris arundinacea</u> 55% Y FACW 2. <u>Spartina pectinata</u> 45% Y FACW 3. _____ _____ 100% = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>100%</u></td> <td>x 2 <u>200.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>100.0%</u></td> <td>(A) <u>200%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>100%</u>	x 2 <u>200.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>100.0%</u>	(A) <u>200%</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>0%</u>	x 1 <u>0.0%</u>																		
FACW species <u>100%</u>	x 2 <u>200.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>0%</u>	x 4 <u>0.0%</u>																		
UPL species <u>0%</u>	x 5 <u>0.0%</u>																		
Column Totals: <u>100.0%</u>	(A) <u>200%</u> (B)																		
Prevalence Index = B/A = <u>2.00</u>																			
Remarks: PEM																			

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	8

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP126
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant pecies?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<i>Bromus inermis</i>	85%	Y	FACU
2.	<i>Phalaris arundinacea</i>	15%	N	FACW
3.	_____			
		100%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Remarks: UPLAND				

Dominance Test Worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>15%</u>	x 2 <u>30.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>85%</u>	x 4 <u>340.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>100.0%</u> (A)	<u>370%</u> (B)
Prevalence Index = B/A = <u>3.70</u>	

Hydrophytic Vegetation Indicators:
N 1 - Rapid Test for Hydrophytic Vegetation
N 2 - Dominance Test if >50%
N 3 - Prevalence Index is ≤ 3.0
N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)
N Problematic Hydrophytic Vegetation (Explain)
 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes	_____	No	_____
		X	

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/2	100%					Sandy Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No X

Water Table Present? Yes No X

Saturation Present? Yes No X

(includes capillary fringe)

Depth (inches): NA

Depth (inches): NA

Depth (inches): NA

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP127
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <u>Phalaris arundinacea</u> 75% Y FACW 2. <u>Spartina pectinata</u> 35% Y FACW 3. _____ _____ = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>110%</u></td> <td>x 2 <u>220.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>110.0%</u> (A)</td> <td><u>220%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>110%</u>	x 2 <u>220.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>110.0%</u> (A)	<u>220%</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>0%</u>	x 1 <u>0.0%</u>																		
FACW species <u>110%</u>	x 2 <u>220.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>0%</u>	x 4 <u>0.0%</u>																		
UPL species <u>0%</u>	x 5 <u>0.0%</u>																		
Column Totals: <u>110.0%</u> (A)	<u>220%</u> (B)																		
Prevalence Index = B/A = <u>2.00</u>																			
Remarks: PEM																			

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	NA

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/6/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP128
Investigator(s): Paul SWARTZINSKI Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <u>Bromus inermis</u> 85% Y FACU 2. <u>Phalaris arundinacea</u> 20% N FACW 3. _____ _____ = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>20%</u></td> <td>x 2 <u>40.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>85%</u></td> <td>x 4 <u>340.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>105.0%</u></td> <td>(A) <u>380%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.62</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>20%</u>	x 2 <u>40.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>85%</u>	x 4 <u>340.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>105.0%</u>	(A) <u>380%</u> (B)	Prevalence Index = B/A = <u>3.62</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>0%</u>	x 1 <u>0.0%</u>																		
FACW species <u>20%</u>	x 2 <u>40.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>85%</u>	x 4 <u>340.0%</u>																		
UPL species <u>0%</u>	x 5 <u>0.0%</u>																		
Column Totals: <u>105.0%</u>	(A) <u>380%</u> (B)																		
Prevalence Index = B/A = <u>3.62</u>																			
Remarks: UPLAND																			

SOIL

Sampling Point: DP128

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/3	100%					Sandy Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes _____ No X

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/7/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP131
Investigator(s): Paul SWARTZINSKI Section, Township, Range: ,,
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant species?	Indicator Status	
1. _____	_____	_____	_____	_____
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	_____
				_____ = Total Cover
Herb Stratum (Plot size: <u>5</u>)				
1. <i>Spartina pectinata</i>	85%	Y	FACW	
2. <i>Bromus inermis</i>	15%	N	FACU	
3. _____	_____	_____	_____	_____
				100% = Total Cover
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	_____
				_____ = Total Cover

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>1</u>		(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100.0%</u>		(A/B)

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>0%</u>	x 1	<u>0.0%</u>
FACW species	<u>85%</u>	x 2	<u>170.0%</u>
FAC species	<u>0%</u>	x 3	<u>0.0%</u>
FACU species	<u>15%</u>	x 4	<u>60.0%</u>
UPL species	<u>0%</u>	x 5	<u>0.0%</u>
Column Totals:	<u>100.0%</u>	(A)	<u>230%</u> (B)
Prevalence Index = B/A =			<u>2.30</u>

Hydrophytic Vegetation Indicators:	
<u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation	
<u>Y</u> 2 - Dominance Test if >50%	
<u>Y</u> 3 - Prevalence Index is ≤ 3.0	
<u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)	
<u>N</u> Problematic Hydrophytic Vegetation (Explain)	
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Hydrophytic Vegetation Present?	
	Yes <u>X</u> No _____

SOIL

Sampling Point: DP131

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-8	10YR 2/1	100%					Clay Loam	
8-20	10YR 2/1	95%	10YR 4/6	5%			Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ Depleted Matrix (F3)
X _____ Depleted Below Dark Surface (A11)	_____ Redox Dark Surface (F6)
_____ Thick Dark Surface (A12)	_____ Depleted Dark Surface (F7)
_____ Sandy Mucky Mineral (S1)	_____ Redox Depressions (F8)

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

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

Secondary Indicators (2 or more required)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes X No

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

Remarks: PEM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/7/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP132
Investigator(s): Paul SWARTZINSKI Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND				

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Herb Stratum (Plot size: <u>5</u>)			
1. <i>Bromus inermis</i>	80%	Y	FACU
2. <i>Spartina pectinata</i>	15%	N	FACW
3. _____	_____	_____	_____
		95% = Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>15%</u>	x 2 <u>30.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>80%</u>	x 4 <u>320.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>95.0%</u>	(A) <u>350%</u> (B)
Prevalence Index = B/A = <u>3.68</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes _____ No X

SOIL

Sampling Point: DP132

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/1	100%					Clay Loam	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains							Location: PL=Pore Lining, M=Matrix	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils		
☐ Histosol (A1)			☐ Sandy Gleyed Matrix (S4)			☐ Coast Prairie Redox (A16)		
☐ Histic Epipedon (A2)			☐ Sandy Redox (S5)			☐ Dark Surface (S7)		
☐ Black Histic (A3)			☐ Stripped Matrix (S6)			☐ Iron-Manganese Masses (F12)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Mucky Mineral (F1)			☐ Very Shallow Dark Surface (TF12)		
☐ Stratified Layers (A5)			☐ Loamy Gleyed Matrix (F2)			☐ Other (Explain in Remarks)		
☐ 2 cm Muck (A10)			☐ Depleted Matrix (F3)			Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
☐ Depleted Below Dark Surface (A11)			☐ Redox Dark Surface (F6)					
☐ Thick Dark Surface (A12)			☐ Depleted Dark Surface (F7)					
☐ Sandy Mucky Mineral (S1)			☐ Redox Depressions (F8)					
Restrictive Layer (if present):								
Type: <u>None</u>						Hydric Soil Present? Yes ☐ No ☒		
Depth (inches): <u>NA</u>								
Remarks: <u>UPLAND</u>								

HYDROLOGY

Wetland Hydrology Indicators

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

___ Surface Water (A1)	___ Water-Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Drainage Pattern (B10)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Dry-Season Water Table (C2)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Crayfish Burrows (C8)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Saturation Visible on Aerial Imagery (C9)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Stunted or Stressed Plants (D1)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Geomorphic Position (D2)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ FAC-Neutral Test (D5)
___ Inundation Visible on Aerial Imagery (B7)	___ Gauge or Well Data (D9)	
___ Sparsely Vegetated Concave Surface (B8)	___ Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	<u>NA</u>	Wetland Hydrology Present? Yes ☐ No ☒
Water Table Present?	Yes	☐	No	☒	Depth (inches):	<u>NA</u>	
Saturation Present?	Yes	☐	No	☒	Depth (inches):	<u>NA</u>	
(includes capillary fringe)							
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: <u>Tatanka Ridge Wind Project</u>	City/County: <u>Deuel County</u>	Sampling Date: <u>10/7/2018</u>
Applicant/Owner: <u>Buffalo Ridge III, LLC</u>	State: <u>SD</u>	Sampling Point: <u>DP133</u>
Investigator(s): <u>Paul SWARTZINSKI</u>	Section, Township, Range: <u> </u>	
Landform (hillslope, terrace, etc.): <u>channel</u>	Local relief (concave, convex, none): <u>Convex</u>	
Slope (%): <u><5%</u>	Lat: <u> </u>	Long: <u> </u>
Soil Map Unit Name: <u> </u>	Datum: <u>NAD83</u>	
Soil Map Unit Name: <u> </u>		NWI classification: <u> </u>

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant species?	Indicator Status
1. _____	_____	_____	_____
_____ = Total Cover			
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
_____ = Total Cover			
<u>Herb Stratum</u> (Plot size: <u>5</u>)			
1. <u>Spartina pectinata</u>	35%	Y	FACW
2. <u>Phalaris arundinacea</u>	35%	Y	FACW
3. <u>Schoenoplectus acutus</u>	25%	Y	OBL
4. <u>Carex aquatilis</u>	15%	N	OBL
5. _____	_____	_____	_____
_____ 110% = Total Cover			
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
_____ = Total Cover			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>40%</u>	x 1 <u>40.0%</u>
FACW species <u>70%</u>	x 2 <u>140.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>110.0%</u>	(A) <u>180%</u> (B)
Prevalence Index = B/A = <u>1.64</u>	

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

SOIL

Sampling Point: DP133

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-4	10YR 2/1	100%					Clay Loam	
4-20	10YR 2/1	75%	10YR 4/6	25%			Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

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

Secondary Indicators (2 or more required)

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes ☒ No ☐	Depth (inches): 3	Wetland Hydrology Present? Yes ☒ No ☐
Water Table Present?	Yes ☒ No ☐	Depth (inches): 0	
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches): 0	

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site:	Tatanka Ridge Wind Project	City/County:	Deuel County	Sampling Date:	10/7/2018
Applicant/Owner:	Buffalo Ridge III, LLC	State:	SD	Sampling Point:	DP134
Investigator(s):	Paul SWARTZINSKI	Section, Township, Range:	,,		
Landform (hillslope, terrace, etc.):	channel	Local relief (concave, convex, none):	Linear Slope		
Slope (%):	<5%	Lat:		Datum:	NAD83
Soil Map Unit Name:			NWI classification:		

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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> </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: UPLAND			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant species?	Indicator Status	
1. _____	_____	_____	_____	_____
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: 15)				
1. _____	_____	_____	_____	_____
				_____ = Total Cover
Herb Stratum (Plot size: 5)				
1. <i>Andropogon gerardii</i>	55%	Y	FAC	
2. <i>Sorghastrum nutans</i>	15%	N	FACU	
3. <i>Bromus inermis</i>	15%	N	FACU	
4. <i>Bouteloua curtipendula</i>	5%	N	UPL	
5. _____	_____	_____	_____	_____
				90% = Total Cover
Woody Vine Stratum (Plot size: 15)				
1. _____	_____	_____	_____	_____
				_____ = Total Cover

Dominance Test Worksheet:			
Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)	
Total Number of Dominant Species Across All Strata:	1	(B)	
Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0%	(A/B)	

Prevalence Index Worksheet:			
Total % Cover of:	Multiply by:		
OBL species 0%	x 1	0.0%	
FACW species 0%	x 2	0.0%	
FAC species 55%	x 3	165.0%	
FACU species 30%	x 4	120.0%	
UPL species 5%	x 5	25.0%	
Column Totals: 90.0%	(A)	310%	(B)
Prevalence Index = B/A =		3.44	

Hydrophytic Vegetation Indicators:	
N 1 - Rapid Test for Hydrophytic Vegetation	
Y 2 - Dominance Test if >50%	
N 3 - Prevalence Index is ≤ 3.0	
N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)	
N Problematic Hydrophytic Vegetation (Explain)	
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Hydrophytic Vegetation Present?	
	Yes X No

Remarks: UPLAND

SOIL

Sampling Point: DP134

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
20	10YR 3/2	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: NONE

Depth (inches): NA

Remarks:

Hydric Soil Present?	Yes	No	X
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HYDROLOGY

Wetland Hydrology Indicators

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

___ Surface Water (A1)	___ Water-Stained Leaves (B9)
___ High Water Table (A2)	___ Aquatic Fauna (B13)
___ Saturation (A3)	___ True Aquatic Plants (B14)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)
___ Inundation Visible on Aerial Imagery (B7)	___ Gauge or Well Data (D9)
___ Sparsely Vegetated Concave Surface (B8)	___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes No **X**

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/7/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP135
Investigator(s): Paul SWARTZINSKI Section, Township, Range: ,,
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant species?	Indicator Status
1. _____	_____	_____	_____
_____ = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
_____ = Total Cover			
Herb Stratum (Plot size: <u>5</u>)			
1. <i>Phalaris arundinacea</i>	85%	Y	FACW
2. <i>Spartina pectinata</i>	20%	N	FACW
3. _____	_____	_____	_____
_____ 105% = Total Cover			
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
_____ = Total Cover			

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>1</u>	(B)	
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100.0%</u>	(A/B)	

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>0%</u>	x 1	<u>0.0%</u>
FACW species	<u>105%</u>	x 2	<u>210.0%</u>
FAC species	<u>0%</u>	x 3	<u>0.0%</u>
FACU species	<u>0%</u>	x 4	<u>0.0%</u>
UPL species	<u>0%</u>	x 5	<u>0.0%</u>
Column Totals:	<u>105.0%</u>	(A)	<u>210%</u> (B)
Prevalence Index = B/A =			<u>2.00</u>

Hydrophytic Vegetation Indicators:	
<u>Y</u>	1 - Rapid Test for Hydrophytic Vegetation
<u>Y</u>	2 - Dominance Test if >50%
<u>Y</u>	3 - Prevalence Index is ≤ 3.0
<u>Y</u>	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
<u>N</u>	Problematic Hydrophytic Vegetation (Explain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Hydrophytic Vegetation Present?	
	Yes <u>X</u> No _____

SOIL

Sampling Point: DP135

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicator)								
Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Clay Loam	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains								Location: PL=Pore Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils		
☐ Histosol (A1)			☐ Sandy Gleyed Matrix (S4)			☐ Coast Prairie Redoc (A16)		
☐ Histic Epipedon (A2)			☐ Sandy Redox (S5)			☐ Dark Surface (S7)		
☐ Black Histic (A3)			☐ Stripped Matrix (S6)			☐ Iron-Manganese Masses (F12)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Mucky Mineral (F1)			☐ Very Shallow Dark Surface (TF12)		
☐ Stratified Layers (A5)			☐ Loamy Gleyed Matrix (F2)			☐ Other (Explain in Remarks)		
☐ 2 cm Muck (A10)			☐ Depleted Matrix (F3)			Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
☒ Depleted Below Dark Surface (A11)			☐ Redox Dark Surface (F6)					
☐ Thick Dark Surface (A12)			☐ Depleted Dark Surface (F7)					
☐ Sandy Mucky Mineral (S1)			☐ Redox Depressions (F8)					
Restrictive Layer (if present):								
Type: <u>None</u>						Hydric Soil Present? Yes <u>X</u> No <u> </u>		
Depth (inches): <u>NA</u>								
Remarks: PEM								

HYDROLOGY

Wetland Hydrology Indicators																			
Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2 or more required)																
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)																	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)																	
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)																	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)																	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)																	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)																	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)																	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ FAC-Neutral Test (D5)																	
☒ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)																		
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)																		
Field Observations: <table border="0"> <tr> <td>Surface Water Present?</td> <td>Yes ☐</td> <td>No ☒</td> <td>Depth (inches):</td> <td> NA </td> </tr> <tr> <td>Water Table Present?</td> <td>Yes ☐</td> <td>No ☒</td> <td>Depth (inches):</td> <td> NA </td> </tr> <tr> <td>Saturation Present?</td> <td>Yes ☐</td> <td>No ☒</td> <td>Depth (inches):</td> <td> NA </td> </tr> </table> Wetland Hydrology Present? Yes ☒ No ☐					Surface Water Present?	Yes ☐	No ☒	Depth (inches):	NA	Water Table Present?	Yes ☐	No ☒	Depth (inches):	NA	Saturation Present?	Yes ☐	No ☒	Depth (inches):	NA
Surface Water Present?	Yes ☐	No ☒	Depth (inches):	NA															
Water Table Present?	Yes ☐	No ☒	Depth (inches):	NA															
Saturation Present?	Yes ☐	No ☒	Depth (inches):	NA															
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:																			
Remarks:																			

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: <u>Tatanka Ridge Wind Project</u>	City/County: <u>Deuel County</u>	Sampling Date: <u>10/7/2018</u>
Applicant/Owner: <u>Buffalo Ridge III, LLC</u>	State: <u>SD</u>	Sampling Point: <u>DP136</u>
Investigator(s): <u>Paul SWARTZINSKI</u>	Section, Township, Range: <u> , , </u>	
Landform (hillslope, terrace, etc.): <u>channel</u>	Local relief (concave, convex, none): <u> </u>	Linear Slope <u> </u>
Slope (%): <u><5%</u>	Lat: <u> </u>	Long: <u> </u> Datum: <u>NAD83</u>
Soil Map Unit Name: <u> </u>	NWI classification: <u> </u>	

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Herb Stratum (Plot size: <u>5</u>)			
1. <i>Bromus inermis</i>	85%	Y	FACU
2. <i>Phalaris arundinacea</i>	15%	N	FACW
3. _____	_____	_____	_____
		100% = Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>15%</u>	x 2 <u>30.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>85%</u>	x 4 <u>340.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>100.0%</u>	(A) <u>370%</u> (B)
Prevalence Index = B/A = <u>3.70</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes _____ No X

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/1	100%					Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators

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

Secondary Indicators (2 or more required)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No X

Water Table Present? Yes No X

Saturation Present? Yes No X

(includes capillary fringe)

Depth (inches): NA

Depth (inches): NA

Depth (inches): NA

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/7/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP137
Investigator(s): Paul SWARTZINSKI Section, Township, Range: _____, __, _____
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) <table border="0"> <tr> <td>1. <u>Phalaris arundinacea</u></td> <td>80%</td> <td>Y</td> <td>FACW</td> </tr> <tr> <td>2. <u>Spartina pectinata</u></td> <td>15%</td> <td>N</td> <td>FACW</td> </tr> <tr> <td>3. <u>Bromus inermis</u></td> <td>10%</td> <td>N</td> <td>FACU</td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>105%</td> <td colspan="2">= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		1. <u>Phalaris arundinacea</u>	80%	Y	FACW	2. <u>Spartina pectinata</u>	15%	N	FACW	3. <u>Bromus inermis</u>	10%	N	FACU	4. _____					105%	= Total Cover		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>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>95%</u></td> <td>x 2 <u>190.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>10%</u></td> <td>x 4 <u>40.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>105.0%</u> (A)</td> <td><u>230%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.19</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>95%</u>	x 2 <u>190.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>10%</u>	x 4 <u>40.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>105.0%</u> (A)	<u>230%</u> (B)	Prevalence Index = B/A = <u>2.19</u>	
1. <u>Phalaris arundinacea</u>	80%	Y	FACW																																				
2. <u>Spartina pectinata</u>	15%	N	FACW																																				
3. <u>Bromus inermis</u>	10%	N	FACU																																				
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Column Totals: <u>105.0%</u> (A)	<u>230%</u> (B)																																						
Prevalence Index = B/A = <u>2.19</u>																																							
Remarks: PEM																																							

SOIL

Sampling Point: DP137

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-6	10YR 2/1	100%					Clay Loam	
6-20	10YR 2/1	90%	10YR 4/6	10%	C	M	Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ Depleted Matrix (F3)
X _____ Depleted Below Dark Surface (A11)	_____ Redox Dark Surface (F6)
_____ Thick Dark Surface (A12)	_____ Depleted Dark Surface (F7)
_____ Sandy Mucky Mineral (S1)	_____ Redox Depressions (F8)

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Hydric Soil Present? Yes X No

Remarks: PEM

HYDROLOGY

Wetland Hydrology Indicators

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

Secondary Indicators (2 or more required)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>

Wetland Hydrology Present? Yes X No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/7/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP138
Investigator(s): Paul SWARTZINSKI Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>)		Absolute % Cover	Dominant Species?	Indicator Status
1. _____		_____	_____	_____
		_____	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5</u>)				
1. <i>Bromus inermis</i>		50%	Y	FACU
2. _____		_____	_____	_____
		50%	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>50%</u>	x 4 <u>200.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>50.0%</u>	(A) <u>200%</u> (B)
Prevalence Index = B/A = <u>4.00</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: UPLAND adjacent to harvested Soybean

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
20	10YR 3/1						Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Histosol (A1)

Histic Epipedon (A2)

Black Histic (A3)

Hydrogen Sulfide (A4)

Stratified Layers (A5)

2 cm Muck (A10)

Depleted Below Dark Surface (A11)

Thick Dark Surface (A12)

Sandy Mucky Mineral (S1)

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)

Indicators for Problematic Hydric Soils

Coast Prairie Redoc (A16)

Dark Surface (S7)

Iron-Manganese Masses (F12)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type:

Depth (inches):

Remarks:

Hydric Soil Present?

Yes

No

X

HYDROLOGY

Wetland Hydrology Indicators

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

Surface Water (A1)

High Water Table (A2)

Saturation (A3)

Water Marks (B1)

Sediment Deposits (B2)

Drift Deposits (B3)

Algal Mat or Crust (B4)

Iron Deposits (B5)

Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

Water-Stained Leaves (B9)

Aquatic Fauna (B13)

True Aquatic Plants (B14)

Hydrogen Sulfide Odor (C1)

Oxidized Rhizospheres on Living Roots (C3)

Presence of Reduced Iron (C4)

Recent Iron Reduction in Tilled Soils (C6)

Thin Muck Surface (C7)

Gauge or Well Data (D9)

Other (Explain in Remarks)

Secondary Indicators (2 or more required)

Surface Soil Cracks (B6)

Drainage Pattern (B10)

Dry-Season Water Table (C2)

Crayfish Burrows (C8)

Saturation Visible on Aerial Imagery (C9)

Stunted or Stressed Plants (D1)

Geomorphic Position (D2)

FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?

Yes

No

X

Water Table Present?

Yes

No

X

Saturation Present?

Yes

No

X

(includes capillary fringe)

Depth (inches):

NA

Depth (inches):

NA

Depth (inches):

NA

Wetland Hydrology Present?

Yes

No

X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/13/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP141
Investigator(s): P. Swartzinski; R. Walker Section, Township, Range: _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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 <u> X </u>	No _____			
Wetland Hydrology Present?	Yes _____	No <u> X </u>			
Remarks: PEM WITHIN SOYBEAN FIELD					

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant species?	Indicator Status
1. _____	_____	_____	_____
	_____	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
	_____	= Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5</u>)			
1. _____	_____	_____	_____
	_____	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
	_____	= Total Cover	
Remarks: SOYBEAN FIELD HARVESTED NO VEGETATION			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>#Type!</u>	(A) <u>#Type!</u> (B)
Prevalence Index = B/A = <u>#Type!</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes No X

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/1	100%					Clay Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils	
☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)	
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)	
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)	
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)	
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)	
☐ 2 cm Muck (A10)	☐ 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)		

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

Restrictive Layer (if present):		Hydric Soil Present? Yes ☐ No ☒
Type: None		
Depth (inches): NA		
Remarks: SOYBEAN FIELD		

HYDROLOGY

Wetland Hydrology Indicators		Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required; check all that apply)			
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)	
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present? Yes ☐ No ☒
Surface Water Present? Yes ☐ No ☒	Depth (inches): NA	
Water Table Present? Yes ☐ No ☒	Depth (inches): NA	
Saturation Present? Yes ☐ No ☒ (includes capillary fringe)	Depth (inches): NA	

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/13/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP142
Investigator(s): P. Swartzinski; R. Walker Section, Township, Range: _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) <table border="0"> <tr> <td>1. <u>Bromus inermis</u></td> <td>85%</td> <td>Y</td> <td>FACU</td> </tr> <tr> <td>2. <u>Phleum pratense</u></td> <td>20%</td> <td>N</td> <td>FACU</td> </tr> <tr> <td>3. <u>Phalaris arundinacea</u></td> <td>15%</td> <td>N</td> <td>FACW</td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>120%</td> <td colspan="2">= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		1. <u>Bromus inermis</u>	85%	Y	FACU	2. <u>Phleum pratense</u>	20%	N	FACU	3. <u>Phalaris arundinacea</u>	15%	N	FACW	4. _____					120%	= Total Cover		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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>15%</u></td> <td>x 2 <u>30.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>105%</u></td> <td>x 4 <u>420.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>120.0%</u></td> <td>(A) <u>450%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.75</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>15%</u>	x 2 <u>30.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>105%</u>	x 4 <u>420.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>120.0%</u>	(A) <u>450%</u> (B)	Prevalence Index = B/A = <u>3.75</u>	
1. <u>Bromus inermis</u>	85%	Y	FACU																																				
2. <u>Phleum pratense</u>	20%	N	FACU																																				
3. <u>Phalaris arundinacea</u>	15%	N	FACW																																				
4. _____																																							
	120%	= Total Cover																																					
Total % Cover of:	Multiply by:																																						
OBL species <u>0%</u>	x 1 <u>0.0%</u>																																						
FACW species <u>15%</u>	x 2 <u>30.0%</u>																																						
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Column Totals: <u>120.0%</u>	(A) <u>450%</u> (B)																																						
Prevalence Index = B/A = <u>3.75</u>																																							
Remarks: UPLAND																																							

SOIL

Sampling Point: DP142

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/2	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes _____ No X

HYDROLOGY

Wetland Hydrology Indicators

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

___ Surface Water (A1)	___ Water-Stained Leaves (B9)
___ High Water Table (A2)	___ Aquatic Fauna (B13)
___ Saturation (A3)	___ True Aquatic Plants (B14)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)
___ Inundation Visible on Aerial Imagery (B7)	___ Gauge or Well Data (D9)
___ Sparsely Vegetated Concave Surface (B8)	___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/13/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP143
Investigator(s): P. Swartzinski; R. Walker Section, Township, Range: _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM WITHIN DRAINAGE					

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<u>Phalaris arundinacea</u>	75%	Y	FACW
2.	<u>Spartina pectinata</u>	35%	Y	FACW
3.	<u>Carex nebrascensis</u>	8%	N	OBL
4.	_____			
		118%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>8%</u>	x 1 <u>8.0%</u>
FACW species <u>110%</u>	x 2 <u>220.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>118.0%</u>	(A) <u>228%</u> (B)
Prevalence Index = B/A = <u>1.93</u>	

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks: PEM

SOIL

Sampling Point: DP143

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-4	10YR 2/1	100%						
4-20	10YR 2/1	85%	10YR 4/6	15%	C	M	Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ Depleted Matrix (F3)
_____ X Depleted Below Dark Surface (A11)	_____ Redox Dark Surface (F6)
_____ Thick Dark Surface (A12)	_____ Depleted Dark Surface (F7)
_____ Sandy Mucky Mineral (S1)	_____ Redox Depressions (F8)

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

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

Secondary Indicators (2 or more required)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Water Table Present?	Yes	<u> </u>	No	<u> X </u>	Depth (inches):	<u> NA </u>
Saturation Present? (includes capillary fringe)	Yes	<u> X </u>	No	<u> </u>	Depth (inches):	<u> 6 </u>

Wetland Hydrology Present? Yes X No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/13/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP144
Investigator(s): P. Swartzinski; R. Walker Section, Township, Range: _____, __, ____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant species?	Indicator Status
Tree Stratum (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Herb Stratum (Plot size: <u>5</u>)			
1. <u>Bromus inermis</u>	75%	Y	FACU
2. <u>Phalaris arundinacea</u>	25%	Y	FACW
3. <u>Phleum pratense</u>	25%	Y	FACU
4. _____	_____	_____	_____
		125% = Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>25%</u>	x 2 <u>50.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>100%</u>	x 4 <u>400.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>125.0%</u>	(A) <u>450%</u> (B)
Prevalence Index = B/A = <u>3.60</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes _____ No X

SOIL

Sampling Point: DP144

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/1	100%						

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: NONE

Depth (inches): NA

Remarks: UPLAND

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators

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

Secondary Indicators (2 or more required)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

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

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/13/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP145
Investigator(s): P. Swartzinski; R. Walker Section, Township, Range: _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM WITHIN DRAINAGE			

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Herb Stratum (Plot size: <u>5</u>)			
1. <u>Phalaris arundinacea</u>	70%	Y	FACW
2. <u>Spartina pectinata</u>	35%	Y	FACW
3. <u>Phleum pratense</u>	10%	N	FACU
4. <u>Schoenoplectus acutus</u>	4%	N	OBL
5. _____	_____	_____	_____
		_____ 119% = Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	<u>4%</u>	x 1	<u>4.0%</u>
FACW species	<u>105%</u>	x 2	<u>210.0%</u>
FAC species	<u>0%</u>	x 3	<u>0.0%</u>
FACU species	<u>10%</u>	x 4	<u>40.0%</u>
UPL species	<u>0%</u>	x 5	<u>0.0%</u>
Column Totals:	<u>119.0%</u>	(A)	<u>254%</u> (B)
Prevalence Index = B/A =			<u>2.13</u>

Hydrophytic Vegetation Indicators:

Y 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

Y 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

SOIL

Sampling Point: DP145

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Clay Loam	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains							Location: PL=Pore Lining, M=Matrix	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils		
☐ Histosol (A1)			☐ Sandy Gleyed Matrix (S4)			☐ Coast Prairie Redox (A16)		
☐ Histic Epipedon (A2)			☐ Sandy Redox (S5)			☐ Dark Surface (S7)		
☐ Black Histic (A3)			☐ Stripped Matrix (S6)			☐ Iron-Manganese Masses (F12)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Mucky Mineral (F1)			☐ Very Shallow Dark Surface (TF12)		
☐ Stratified Layers (A5)			☐ Loamy Gleyed Matrix (F2)			☐ Other (Explain in Remarks)		
☐ 2 cm Muck (A10)			☐ Depleted Matrix (F3)			Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
☒ Depleted Below Dark Surface (A11)			☐ Redox Dark Surface (F6)					
☐ Thick Dark Surface (A12)			☐ Depleted Dark Surface (F7)					
☐ Sandy Mucky Mineral (S1)			☐ Redox Depressions (F8)					
Restrictive Layer (if present):								
Type: <u>None</u>						Hydric Soil Present? Yes ☒ No ☐		
Depth (inches): <u>NA</u>								
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes _____	No <u> X </u>	Depth (inches):	<u> NA </u>	Wetland Hydrology Present? Yes <u> X </u> No _____
Water Table Present?	Yes _____	No <u> X </u>	Depth (inches):	<u> NA </u>	
Saturation Present?	Yes <u> X </u>	No _____	Depth (inches):	<u> 5 </u>	
(includes capillary fringe)					
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/13/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP146
Investigator(s): P. Swartzinski; R. Walker Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: Long: Datum: NAD83
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant species?	Indicator Status
1. _____	_____	_____	_____
_____ = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
_____ = Total Cover			
Herb Stratum (Plot size: <u>5</u>)			
1. <u>Bromus inermis</u>	85%	Y	FACU
2. <u>Phleum pratense</u>	20%	N	FACU
3. <u>Helianthus maximiliani</u>	5%	N	UPL
4. _____	_____	_____	_____
110% = Total Cover			
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
_____ = Total Cover			

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)	

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>0%</u>	x 1	<u>0.0%</u>
FACW species	<u>0%</u>	x 2	<u>0.0%</u>
FAC species	<u>0%</u>	x 3	<u>0.0%</u>
FACU species	<u>105%</u>	x 4	<u>420.0%</u>
UPL species	<u>5%</u>	x 5	<u>25.0%</u>
Column Totals:	<u>110.0%</u>	(A)	<u>445%</u> (B)
Prevalence Index = B/A =		<u>4.05</u>	

Hydrophytic Vegetation Indicators:	
N 1 - Rapid Test for Hydrophytic Vegetation	
N 2 - Dominance Test if >50%	
N 3 - Prevalence Index is ≤ 3.0	
N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)	
N Problematic Hydrophytic Vegetation (Explain)	
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Hydrophytic Vegetation Present?	
Yes _____	No <u>X</u>

Remarks: UPLAND

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/2	100%					Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Histosol (A1)

Histic Epipedon (A2)

Black Histic (A3)

Hydrogen Sulfide (A4)

Stratified Layers (A5)

2 cm Muck (A10)

Depleted Below Dark Surface (A11)

Thick Dark Surface (A12)

Sandy Mucky Mineral (S1)

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)

Indicators for Problematic Hydric Soils

Coast Prairie Redoc (A16)

Dark Surface (S7)

Iron-Manganese Masses (F12)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: UPLAND

Hydric Soil Present?

Yes

No

X

HYDROLOGY

Wetland Hydrology Indicators

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

Surface Water (A1)

High Water Table (A2)

Saturation (A3)

Water Marks (B1)

Sediment Deposits (B2)

Drift Deposits (B3)

Algal Mat or Crust (B4)

Iron Deposits (B5)

Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

Water-Stained Leaves (B9)

Aquatic Fauna (B13)

True Aquatic Plants (B14)

Hydrogen Sulfide Odor (C1)

Oxidized Rhizospheres on Living Roots (C3)

Presence of Reduced Iron (C4)

Recent Iron Reduction in Tilled Soils (C6)

Thin Muck Surface (C7)

Gauge or Well Data (D9)

Other (Explain in Remarks)

Secondary Indicators (2 or more required)

Surface Soil Cracks (B6)

Drainage Pattern (B10)

Dry-Season Water Table (C2)

Crayfish Burrows (C8)

Saturation Visible on Aerial Imagery (C9)

Stunted or Stressed Plants (D1)

Geomorphic Position (D2)

FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?

Yes

No

X

Water Table Present?

Yes

No

X

Saturation Present?

Yes

No

X

(includes capillary fringe)

Depth (inches): NA

Depth (inches): NA

Depth (inches): NA

Wetland Hydrology Present?

Yes

No

X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/29/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP146
Investigator(s): Paul Swartzinski Section, Township, Range: _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30ft</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15ft</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5ft</u>) <table border="1"> <tr> <td>1. <i>Phalaris arundinacea</i></td> <td>55%</td> <td>Y</td> <td>FACW</td> </tr> <tr> <td>2. <i>Verbena hastata</i></td> <td>25%</td> <td>Y</td> <td>FACW</td> </tr> <tr> <td>3. <i>Rumex crispus</i></td> <td>15%</td> <td>N</td> <td>FAC</td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>95%</td> <td></td> <td>= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: <u>15ft</u>) 1. _____ _____ = Total Cover		1. <i>Phalaris arundinacea</i>	55%	Y	FACW	2. <i>Verbena hastata</i>	25%	Y	FACW	3. <i>Rumex crispus</i>	15%	N	FAC	4. _____					95%		= Total Cover	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) Prevalence Index Worksheet: <table border="1"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0%</u></td> <td>x 1 <u>0.0%</u></td> </tr> <tr> <td>FACW species <u>80%</u></td> <td>x 2 <u>160.0%</u></td> </tr> <tr> <td>FAC species <u>15%</u></td> <td>x 3 <u>45.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>95.0%</u></td> <td>(A) <u>205%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.16</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>80%</u>	x 2 <u>160.0%</u>	FAC species <u>15%</u>	x 3 <u>45.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>95.0%</u>	(A) <u>205%</u> (B)	Prevalence Index = B/A = <u>2.16</u>	
1. <i>Phalaris arundinacea</i>	55%	Y	FACW																																				
2. <i>Verbena hastata</i>	25%	Y	FACW																																				
3. <i>Rumex crispus</i>	15%	N	FAC																																				
4. _____																																							
	95%		= Total Cover																																				
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Column Totals: <u>95.0%</u>	(A) <u>205%</u> (B)																																						
Prevalence Index = B/A = <u>2.16</u>																																							
Remarks: PEM																																							

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☒ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	NA

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/29/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP147
Investigator(s): Paul Swartzinski Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30ft</u>)		Absolute % Cover	Dominant pecies?	Indicator Status
1. _____		_____	_____	_____
		_____	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15ft</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5ft</u>)				
1. <i>Zea mays</i>		15%	Y	UPL
2. _____		_____	_____	_____
		15%	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u>15ft</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>15%</u>	x 5 <u>75.0%</u>
Column Totals: <u>15.0%</u>	(A) <u>75%</u> (B)
Prevalence Index = B/A = <u>5.00</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes _____ No X

Remarks: UPLAND CORNFIELD

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☐ No ☒**HYDROLOGY****Wetland Hydrology Indicators**

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches):	NA
Water Table Present?	Yes ☐ No ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	NA

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/30/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP148
Investigator(s): PAUL SWARTZINSKI Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: Long: Datum: NAD83
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30ft</u>)		Absolute % Cover	Dominant Species?	Indicator Status
1. _____		_____	_____	_____
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15ft</u>)				
1. _____		_____	_____	_____
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5ft</u>)				
1.	<u>Phalaris arundinacea</u>	90%	Y	FACW
2.	<u>Spartina pectinata</u>	10%	N	FACW
3.	_____	_____	_____	_____
		100%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15ft</u>)				
1. _____		_____	_____	_____
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>100%</u>	x 2 <u>200.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>100.0%</u>	(A) <u>200%</u> (B)
Prevalence Index = B/A = <u>2.00</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks: PEM

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes ☒ No ☐

HYDROLOGY

Wetland Hydrology Indicators

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

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☒ No ☐	Depth (inches):	<u>1</u>
Water Table Present?	Yes ☒ No ☐	Depth (inches):	<u>9</u>
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches):	<u>0</u>

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/30/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP149
Investigator(s): Paul Swartzinski Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: Long: Datum: NAD83
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30ft</u>)		Absolute % Cover	Dominant Species?	Indicator Status
1. _____		_____	_____	_____
		_____ = Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15ft</u>)				
1. _____		_____	_____	_____
		_____ = Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5ft</u>)				
1. <u>Bromus inermis</u>		85%	Y	FACU
2. <u>Zea mays</u>		15%	N	UPL
3. _____		_____	_____	_____
		_____ 100% = Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>15ft</u>)				
1. _____		_____	_____	_____
		_____ = Total Cover		
Remarks: UPLAND				

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>85%</u>	x 4 <u>340.0%</u>
UPL species <u>15%</u>	x 5 <u>75.0%</u>
Column Totals: <u>100.0%</u>	(A) <u>415%</u> (B)
Prevalence Index = B/A = <u>4.15</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes _____ No X

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/1	100%					Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No X

Water Table Present? Yes No X

Saturation Present? Yes No X

(includes capillary fringe)

Depth (inches): NA

Depth (inches): NA

Depth (inches): NA

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/30/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP150
Investigator(s): Paul Swartzinsk8 Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM					

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30ft</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____		_____	_____	_____
		_____	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15ft</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	
Herb Stratum (Plot size: <u>5ft</u>)				
1.	<u>Phalaris arundinacea</u>	75%	Y	FACW
2.	<u>Spartina pectinata</u>	20%	N	FACW
3.	<u>Carex nebrascensis</u>	5%	N	OBL
4.	<u>Schoenoplectus acutus</u>	5%	N	OBL
5.	_____	_____	_____	_____
		105%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15ft</u>)				
1. _____		_____	_____	_____
		_____	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>10%</u>	x 1 <u>10.0%</u>
FACW species <u>95%</u>	x 2 <u>190.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>0%</u>	x 4 <u>0.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>105.0%</u>	(A) <u>200%</u> (B)
Prevalence Index = B/A = <u>1.90</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test if >50%

Y 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes X No _____

Remarks: PEM

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 2/1	100%					Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Histosol (A1)

Histic Epipedon (A2)

Black Histic (A3)

Hydrogen Sulfide (A4)

Stratified Layers (A5)

2 cm Muck (A10)

X

Depleted Below Dark Surface (A11)

Thick Dark Surface (A12)

Sandy Mucky Mineral (S1)

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)

Indicators for Problematic Hydric Soils

Coast Prairie Redoc (A16)

Dark Surface (S7)

Iron-Manganese Masses (F12)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks: PEM

Hydric Soil Present?

Yes

X

No

HYDROLOGY

Wetland Hydrology Indicators

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

Surface Water (A1)

High Water Table (A2)

Saturation (A3)

Water Marks (B1)

Sediment Deposits (B2)

Drift Deposits (B3)

X

Algal Mat or Crust (B4)

Iron Deposits (B5)

X

Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

Water-Stained Leaves (B9)

Aquatic Fauna (B13)

True Aquatic Plants (B14)

Hydrogen Sulfide Odor (C1)

Oxidized Rhizospheres on Living Roots (C3)

Presence of Reduced Iron (C4)

Recent Iron Reduction in Tilled Soils (C6)

Thin Muck Surface (C7)

Gauge or Well Data (D9)

Other (Explain in Remarks)

Secondary Indicators (2 or more required)

Surface Soil Cracks (B6)

Drainage Pattern (B10)

Dry-Season Water Table (C2)

Crayfish Burrows (C8)

Saturation Visible on Aerial Imagery (C9)

Stunted or Stressed Plants (D1)

X

Geomorphic Position (D2)

X

FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?

Yes

No

X

Depth (inches):

NA

Water Table Present?

Yes

No

X

Depth (inches):

NA

Saturation Present?

Yes

No

X

Depth (inches):

NA

(includes capillary fringe)

Wetland Hydrology Present?

Yes

X

No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/30/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP151
Investigator(s): Paul Swartzinski Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Linear Slope
Slope (%): <5% Lat: Long: Datum: NAD83
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: UPLAND DATA POINT FOR WET165			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30ft</u>)		Absolute % Cover	Dominant pecies?	Indicator Status
1. _____		_____	_____	_____
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15ft</u>)				
1. _____		_____	_____	_____
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5ft</u>)				
1.	<u>Bromus inermis</u>	90%	Y	FACU
2.	<u>Phalaris arundinacea</u>	10%	N	FACW
3.	_____	_____	_____	_____
		100%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15ft</u>)				
1. _____		_____	_____	_____
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>10%</u>	x 2 <u>20.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>90%</u>	x 4 <u>360.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>100.0%</u>	(A) <u>380%</u> (B)
Prevalence Index = B/A = <u>3.80</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: UPLAND

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/2	100%					Clay Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand GrainsLocation: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redoc (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☐ 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)	

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators

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

Secondary Indicators (2 or more required)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No X

Water Table Present? Yes No X

Saturation Present? Yes No X

(includes capillary fringe)

Depth (inches): NA

Depth (inches): NA

Depth (inches): NA

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/31/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP152
Investigator(s): Paul Swartzinski Section, Township, Range: _____
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Convex
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30ft</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15ft</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5ft</u>) 1. <u>Phalaris arundinacea</u> 90% Y FACW 2. <u>Spartina pectinata</u> 15% N FACW 3. _____ _____ 105% = Total Cover <u>Woody Vine Stratum</u> (Plot size: <u>15ft</u>) 1. _____ _____ = Total Cover		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>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																	
		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>0.0%</u></td> </tr> <tr> <td>FACW species <u>105%</u></td> <td>x 2 <u>210.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>105.0%</u></td> <td>(A) <u>210%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>105%</u>	x 2 <u>210.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>105.0%</u>	(A) <u>210%</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>0%</u>	x 1 <u>0.0%</u>																		
FACW species <u>105%</u>	x 2 <u>210.0%</u>																		
FAC species <u>0%</u>	x 3 <u>0.0%</u>																		
FACU species <u>0%</u>	x 4 <u>0.0%</u>																		
UPL species <u>0%</u>	x 5 <u>0.0%</u>																		
Column Totals: <u>105.0%</u>	(A) <u>210%</u> (B)																		
Prevalence Index = B/A = <u>2.00</u>																			
		Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																	
		Hydrophytic Vegetation Present? Yes <u>X</u> No _____																	
Remarks: PEM																			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicator)								
Depth (inches)	Matrix		Redox Features					
	Color:	%	Color:	%	Type:	Loc:	Texture:	Remarks:
0-4	10YR 2/1	100%					Clay Loam	
4-20	10YR 2/1	80%	10YR 4/6	20%	C	M	Clay Loam	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils		
☐ Histosol (A1)			☐ Sandy Gleyed Matrix (S4)			☐ Coast Prairie Redoc (A16)		
☐ Histic Epipedon (A2)			☐ Sandy Redox (S5)			☐ Dark Surface (S7)		
☐ Black Histic (A3)			☐ Stripped Matrix (S6)			☐ Iron-Manganese Masses (F12)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Mucky Mineral (F1)			☐ Very Shallow Dark Surface (TF12)		
☐ Stratified Layers (A5)			☐ Loamy Gleyed Matrix (F2)			☐ Other (Explain in Remarks)		
☐ 2 cm Muck (A10)			☐ 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)					
Restrictive Layer (if present): Type: <u>None</u> Depth (inches): <u>NA</u>						Hydric Soil Present? Yes ☐ X No ☐		
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators				Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)							
☐ Surface Water (A1)		☐ Water-Stained Leaves (B9)		☐ Surface Soil Cracks (B6)			
☐ High Water Table (A2)		☐ Aquatic Fauna (B13)		☐ Drainage Pattern (B10)			
☒ Saturation (A3)		☐ True Aquatic Plants (B14)		☐ Dry-Season Water Table (C2)			
☐ Water Marks (B1)		☐ Hydrogen Sulfide Odor (C1)		☐ Crayfish Burrows (C8)			
☐ Sediment Deposits (B2)		☐ Oxidized Rhizospheres on Living Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)			
☐ Drift Deposits (B3)		☐ Presence of Reduced Iron (C4)		☐ Stunted or Stressed Plants (D1)			
☐ Algal Mat or Crust (B4)		☐ Recent Iron Reduction in Tilled Soils (C6)		☒ Geomorphic Position (D2)			
☐ Iron Deposits (B5)		☐ Thin Muck Surface (C7)		☒ FAC-Neutral Test (D5)			
☐ Inundation Visible on Aerial Imagery (B7)		☐ Gauge or Well Data (D9)					
☐ Sparsely Vegetated Concave Surface (B8)		☐ Other (Explain in Remarks)					
Field Observations:							
Surface Water Present?		Yes ☐ No ☒	Depth (inches):	<u>NA</u>			
Water Table Present?		Yes ☐ No ☒	Depth (inches):	<u>NA</u>			
Saturation Present?		Yes ☐ No ☒	Depth (inches):	<u>4</u>			
(includes capillary fringe)							
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 10/31/2018
Applicant/Owner: Buffalo Ridge III, LLC State: SD Sampling Point: DP153
Investigator(s): Paul Swartzinski Section, Township, Range: , ,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none):
Slope (%): <5% Lat: Long: Datum: NAD83
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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:				

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
_____ = Total Cover			
Sapling/Shrub Stratum (Plot size: 15ft)			
1. _____	_____	_____	_____
_____ = Total Cover			
Herb Stratum (Plot size: 5ft)			
1. <i>Bromus inermis</i>	95%	Y	FACU
2. _____	_____	_____	_____
_____ 95% = Total Cover			
Woody Vine Stratum (Plot size: 15ft)			
1. _____	_____	_____	_____
_____ = Total Cover			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>95%</u>	x 4 <u>380.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>95.0%</u>	(A) <u>380%</u> (B)
Prevalence Index = B/A = <u>4.00</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes _____ No X

SOIL

Sampling Point: DP153

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-20	10YR 3/2	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ 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)	_____ Loamy Gleyed Matrix (F2)
_____ 2 cm Muck (A10)	_____ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redoc (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Remarks:

Hydric Soil Present? Yes _____ No X

HYDROLOGY

Wetland Hydrology Indicators

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

___ Surface Water (A1)	___ Water-Stained Leaves (B9)
___ High Water Table (A2)	___ Aquatic Fauna (B13)
___ Saturation (A3)	___ True Aquatic Plants (B14)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)
___ Inundation Visible on Aerial Imagery (B7)	___ Gauge or Well Data (D9)
___ Sparsely Vegetated Concave Surface (B8)	___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Pattern (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Wind Project City/County: Deuel County Sampling Date: 6/8/2019
Applicant/Owner: Avangrid State: SD Sampling Point: DP205
Investigator(s): Paul Swartzinski Section, Township, Range: ,,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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: PEM observed onsite					

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Herb Stratum (Plot size: <u>5</u>)			
1. <u>Calamagrostis canadensis</u>	85%	Y	OBL
2. <u>Poa pratensis</u>	25%	Y	FAC
3. <u>Phleum pratense</u>	10%	N	FACU
4. _____	_____	_____	_____
		120% = Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	

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)	

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species	<u>85%</u>	x 1	<u>85.0%</u>
FACW species	<u>0%</u>	x 2	<u>0.0%</u>
FAC species	<u>25%</u>	x 3	<u>75.0%</u>
FACU species	<u>10%</u>	x 4	<u>40.0%</u>
UPL species	<u>0%</u>	x 5	<u>0.0%</u>
Column Totals:	<u>120.0%</u>	(A)	<u>200%</u> (B)
Prevalence Index = B/A =		<u>1.67</u>	

Hydrophytic Vegetation Indicators:
<u>N</u> 1 - Rapid Test for Hydrophytic Vegetation
<u>Y</u> 2 - Dominance Test if >50%
<u>Y</u> 3 - Prevalence Index is ≤ 3.0
<u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
<u>N</u> Problematic Hydrophytic Vegetation (Explain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?
Yes <u>X</u> No _____

SOIL

Sampling Point: DP205

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-3	10YR 2/1	100%					Silty Clay Loam	
3-20	10YR 2/1	95%	10YR 4/3	5%	C	M	Silty Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: NoneDepth (inches): n/aHydric Soil Present? Yes ☒ No ☐

Remarks: PEM

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): n/aWater Table Present? Yes ☐ No ☒ Depth (inches): n/aSaturation Present? Yes ☒ No ☐ Depth (inches): 5
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge Wind Project City/County: Deuel County Sampling Date: 6/8/2019
Applicant/Owner: Avangrid Renewables State: SD Sampling Point: DP206
Investigator(s): Paul Swartzinski Section, Township, Range: ,,
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave
Slope (%): <5% Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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:			

VEGETATION – Use scientific names of plants

	Absolute % Cover	Dominant species?	Indicator Status
Tree Stratum (Plot size: <u>30</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Herb Stratum (Plot size: <u>5</u>)			
1. _____	_____	_____	_____
		_____ = Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1. <u>Phleum pratense</u>	<u>45%</u>	<u>Y</u>	<u>FACU</u>
2. <u>Bromus inermis</u>	<u>30%</u>	<u>Y</u>	<u>FACU</u>
3. <u>Poa pratensis</u>	<u>25%</u>	<u>Y</u>	<u>FAC</u>
4. <u>Calamagrostis canadensis</u>	<u>15%</u>	<u>N</u>	<u>OBL</u>
5. _____	_____	_____	_____
		<u>115%</u> = Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>15%</u>	x 1 <u>15.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>25%</u>	x 3 <u>75.0%</u>
FACU species <u>75%</u>	x 4 <u>300.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>115.0%</u> (A)	<u>390%</u> (B)
Prevalence Index = B/A = <u>3.39</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes _____ No X

SOIL

Sampling Point: DP206

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
8	10YR 3/2	100%					Clay Loam	
20	10YR 3/1	100%					Clay Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: none

Depth (inches): n/a

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): n/a

Water Table Present? Yes ☐ No ☒ Depth (inches): n/a

Saturation Present? Yes ☐ No ☒ Depth (inches): n/a
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge City/County: Deuel County Sampling Date: 5/29/2019
 Applicant/Owner: Avangrid Renewables State: SD Sampling Point: DP207
 Investigator(s): Powell Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Concave
 Slope (%): 5 Lat: Long: Datum: NAD83
 Soil Map Unit Name: NWI classification:
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

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

Hydrophytic Vegetation Present? 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>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks:	

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) Absolute % Cover Dominant Species? Indicator Status 1. <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">1. <u>Carex aquatilis</u></td> <td style="width: 15%; text-align: center;">85%</td> <td style="width: 15%; text-align: center;">Y</td> <td style="width: 40%; text-align: center;">OBL</td> </tr> <tr> <td>2. <u>Deschampsia caespitosa</u></td> <td style="text-align: center;">45%</td> <td style="text-align: center;">Y</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>3. <u>Pascopyrum smithii</u></td> <td style="text-align: center;">10%</td> <td style="text-align: center;">N</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>4. <u> </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;">140%</td> <td colspan="2" style="text-align: center;">= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> = Total Cover	1. <u>Carex aquatilis</u>	85%	Y	OBL	2. <u>Deschampsia caespitosa</u>	45%	Y	FACW	3. <u>Pascopyrum smithii</u>	10%	N	FACU	4. <u> </u>				140%		= Total Cover		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) Prevalence Index Worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u>85%</u></td> <td>x 1 <u>85.0%</u></td> </tr> <tr> <td>FACW species <u>45%</u></td> <td>x 2 <u>90.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>10%</u></td> <td>x 4 <u>40.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>140.0%</u> (A)</td> <td><u>215%</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.54</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Total % Cover of:	Multiply by:	OBL species <u>85%</u>	x 1 <u>85.0%</u>	FACW species <u>45%</u>	x 2 <u>90.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>10%</u>	x 4 <u>40.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>140.0%</u> (A)	<u>215%</u> (B)	Prevalence Index = B/A = <u>1.54</u>	
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Remarks: <u>PEM</u>																																					

SOIL

Sampling Point: DP207

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-8	10GY 3/1	70%					Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☒ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: None observed

Depth (inches): n/a

Remarks:

Hydric Soil Present? Yes ☒ No ☐

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
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Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 1

Water Table Present? Yes ☒ No ☐ Depth (inches): 0

Saturation Present? Yes ☒ No ☐ Depth (inches): 0

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: Surface water is present due to heavy rains

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge City/County: Deuel County Sampling Date: 5/29/2019
Applicant/Owner: Avangrid Renewables State: SD Sampling Point: DP208
Investigator(s): Powell Section, Township, Range: _____
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
Slope (%): 7 Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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:			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) <table border="1"> <tr> <td>1. <i>Poa pratensis</i></td> <td>75%</td> <td>Y</td> <td>FAC</td> </tr> <tr> <td>2. <i>Bromus inermis</i></td> <td>22%</td> <td>Y</td> <td>FACU</td> </tr> <tr> <td>3. <i>Solidago missouriensis</i></td> <td>3%</td> <td>N</td> <td>UPL</td> </tr> <tr> <td>4. <i>Pascopyrum smithii</i></td> <td>3%</td> <td>N</td> <td>FACU</td> </tr> <tr> <td>5. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>103%</td> <td></td> <td>= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		1. <i>Poa pratensis</i>	75%	Y	FAC	2. <i>Bromus inermis</i>	22%	Y	FACU	3. <i>Solidago missouriensis</i>	3%	N	UPL	4. <i>Pascopyrum smithii</i>	3%	N	FACU	5. _____					103%		= Total Cover	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) Prevalence Index Worksheet: <table border="1"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0%</u></td> <td>x 1 <u>0.0%</u></td> </tr> <tr> <td>FACW species <u>0%</u></td> <td>x 2 <u>0.0%</u></td> </tr> <tr> <td>FAC species <u>75%</u></td> <td>x 3 <u>225.0%</u></td> </tr> <tr> <td>FACU species <u>25%</u></td> <td>x 4 <u>100.0%</u></td> </tr> <tr> <td>UPL species <u>3%</u></td> <td>x 5 <u>15.0%</u></td> </tr> <tr> <td>Column Totals: <u>103.0%</u></td> <td>(A) <u>340%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.30</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>0%</u>	x 2 <u>0.0%</u>	FAC species <u>75%</u>	x 3 <u>225.0%</u>	FACU species <u>25%</u>	x 4 <u>100.0%</u>	UPL species <u>3%</u>	x 5 <u>15.0%</u>	Column Totals: <u>103.0%</u>	(A) <u>340%</u> (B)	Prevalence Index = B/A = <u>3.30</u>	
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Remarks:																																											

SOIL

Sampling Point: DP208

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-2	10YR 3/3	100%					Loam	
2-14	10YR 3/2	100%					Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: none

Depth (inches): n/a

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): n/a

Water Table Present? Yes ☐ No ☒ Depth (inches): n/a

Saturation Present? Yes ☐ No ☒ Depth (inches): n/a
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

SOIL

Sampling Point: DP209

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-12	5GY 3/1	60%					Loam	Gravelly

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☒ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: NoneDepth (inches): n/a

Remarks:

Hydric Soil Present? Yes ☒ No ☐

HYDROLOGY

Wetland Hydrology Indicators

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

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 6Water Table Present? Yes ☒ No ☐ Depth (inches): 7Saturation Present? Yes ☒ No ☐ Depth (inches): 10
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

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

High water at this time

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge City/County: Deuel County Sampling Date: 5/29/2019
Applicant/Owner: Avangrid Renewables State: SD Sampling Point: DP210
Investigator(s): Powell Section, Township, Range: ,,
Landform (hillslope, terrace, etc.): flood plain Local relief (concave, convex, none): concave
Slope (%): 2 Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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:			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30</u>)		Absolute % Cover	Dominant species?	Indicator Status
1. _____				
		_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1.	<u>Bromus inermis</u>	80%	Y	FACU
2.	<u>Solidago canadensis</u>	5%	N	FACU
3.	_____			
		85%	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)				
1. _____				
		_____ = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0%</u>	x 1 <u>0.0%</u>
FACW species <u>0%</u>	x 2 <u>0.0%</u>
FAC species <u>0%</u>	x 3 <u>0.0%</u>
FACU species <u>85%</u>	x 4 <u>340.0%</u>
UPL species <u>0%</u>	x 5 <u>0.0%</u>
Column Totals: <u>85.0%</u>	(A) <u>340%</u> (B)
Prevalence Index = B/A = <u>4.00</u>	

Hydrophytic Vegetation Indicators:

N 1 - Rapid Test for Hydrophytic Vegetation

N 2 - Dominance Test if >50%

N 3 - Prevalence Index is ≤ 3.0

N 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet)

N Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present?

Yes _____ No X

Remarks:

SOIL

Sampling Point: DP210

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-5	10YR 3/2	100%					Loam	
5-14	10YR 4/2	108%					Loam	Gravelly

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☐ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: none

Depth (inches): n/a

Hydric Soil Present? Yes ☐ No ☒

Remarks: No indicators present

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): n/Water Table Present? Yes ☐ No ☒ Depth (inches): n/aSaturation Present? Yes ☐ No ☒ Depth (inches): n/a
(includes capillary fringe)Wetland Hydrology Present? Yes ☐ No ☒

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

.

Remarks: No indicators observed

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: <u>Tatanka Ridge</u>	City/County: <u>Deuel County</u>	Sampling Date: <u>5/29/2019</u>
Applicant/Owner: <u>Avangrid Renewables</u>	State: <u>SD</u>	Sampling Point: <u>DP211</u>
Investigator(s): <u>Powell</u>	Section, Township, Range: <u> </u>	
Landform (hillslope, terrace, etc.): <u>drainageway</u>	Local relief (concave, convex, none): <u>Concave</u>	
Slope (%): <u>3</u>	Lat: <u> </u>	Long: <u> </u>
Soil Map Unit Name: <u> </u>	Datum: <u>NAD83</u>	
Soil Map Unit Name: <u> </u>		NWI classification: <u> </u>

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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:				

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) <table border="1"> <tr> <td>1. <i>Phalaris arundinacea</i></td> <td>75%</td> <td>Y</td> <td>FACW</td> </tr> <tr> <td>2. <i>Carex aquatilis</i></td> <td>20%</td> <td>N</td> <td>OBL</td> </tr> <tr> <td>3. <i>Deschampsia caespitosa</i></td> <td>12%</td> <td>N</td> <td>FACW</td> </tr> <tr> <td>4. <i>Carex laeviconica</i></td> <td>8%</td> <td>N</td> <td>OBL</td> </tr> <tr> <td>5. <i>Poa pratensis</i></td> <td>5%</td> <td>N</td> <td>FAC</td> </tr> <tr> <td>6. <i>Urtica dioica</i></td> <td>3%</td> <td>N</td> <td>FACW</td> </tr> <tr> <td>7. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2">123%</td> <td colspan="2">= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		1. <i>Phalaris arundinacea</i>	75%	Y	FACW	2. <i>Carex aquatilis</i>	20%	N	OBL	3. <i>Deschampsia caespitosa</i>	12%	N	FACW	4. <i>Carex laeviconica</i>	8%	N	OBL	5. <i>Poa pratensis</i>	5%	N	FAC	6. <i>Urtica dioica</i>	3%	N	FACW	7. _____				123%		= Total Cover		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>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index Worksheet: <table border="1"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>28%</u></td> <td>x 1 <u>28.0%</u></td> </tr> <tr> <td>FACW species <u>90%</u></td> <td>x 2 <u>180.0%</u></td> </tr> <tr> <td>FAC species <u>5%</u></td> <td>x 3 <u>15.0%</u></td> </tr> <tr> <td>FACU species <u>0%</u></td> <td>x 4 <u>0.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>123.0%</u></td> <td>(A) <u>223%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.81</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>Y</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Y</u> 2 - Dominance Test if >50% <u>Y</u> 3 - Prevalence Index is ≤ 3.0 <u>Y</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____		Total % Cover of:	Multiply by:	OBL species <u>28%</u>	x 1 <u>28.0%</u>	FACW species <u>90%</u>	x 2 <u>180.0%</u>	FAC species <u>5%</u>	x 3 <u>15.0%</u>	FACU species <u>0%</u>	x 4 <u>0.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>123.0%</u>	(A) <u>223%</u> (B)	Prevalence Index = B/A = <u>1.81</u>	
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Remarks: PEM observed																																																			

SOIL

Sampling Point: DP211

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-8	10YR 4/1		10R 4/6		C	M	Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ 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)	☐ Loamy Gleyed Matrix (F2)
☐ 2 cm Muck (A10)	☒ 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)

Indicators for Problematic Hydric Soils

☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: none

Depth (inches): n/a

Remarks:

Hydric Soil Present? Yes ☒ No ☐

HYDROLOGY

Wetland Hydrology Indicators

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Pattern (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): n/aWater Table Present? Yes ☒ No ☐ Depth (inches): 2Saturation Present? Yes ☒ No ☐ Depth (inches): 0
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Tatanka Ridge City/County: Deuel County Sampling Date: 5/29/2019
Applicant/Owner: Avangrid Renewables State: SD Sampling Point: DP212
Investigator(s): Powell Section, Township, Range: _____
Landform (hillslope, terrace, etc.): drainageway Local relief (concave, convex, none): _____
Slope (%): 3 Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (if needed, explain in Remarks.)

SUMMARY OF FINDINGS – Attach 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 <u> X </u>	No _____	
Wetland Hydrology Present?	Yes _____	No <u> X </u>	
Remarks:			

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. _____ _____ = Total Cover <u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover <u>Herb Stratum</u> (Plot size: <u>5</u>) <table border="0"> <tr> <td>1. <u>Phleum pratense</u></td> <td>55%</td> <td>Y</td> <td>FACU</td> </tr> <tr> <td>2. <u>Bromus inermis</u></td> <td>35%</td> <td>Y</td> <td>FACU</td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>90%</td> <td></td> <td>= Total Cover</td> </tr> </table> <u>Woody Vine Stratum</u> (Plot size: <u>15</u>) 1. _____ _____ = Total Cover		1. <u>Phleum pratense</u>	55%	Y	FACU	2. <u>Bromus inermis</u>	35%	Y	FACU	3. _____					90%		= Total Cover	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) 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>0.0%</u></td> </tr> <tr> <td>FACW species <u>0%</u></td> <td>x 2 <u>0.0%</u></td> </tr> <tr> <td>FAC species <u>0%</u></td> <td>x 3 <u>0.0%</u></td> </tr> <tr> <td>FACU species <u>90%</u></td> <td>x 4 <u>360.0%</u></td> </tr> <tr> <td>UPL species <u>0%</u></td> <td>x 5 <u>0.0%</u></td> </tr> <tr> <td>Column Totals: <u>90.0%</u></td> <td>(A) <u>360%</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>N</u> 1 - Rapid Test for Hydrophytic Vegetation <u>N</u> 2 - Dominance Test if >50% <u>N</u> 3 - Prevalence Index is ≤ 3.0 <u>N</u> 4 - Morphological Adaptations (Provide supporting data in Remarks or on a seperate sheet) <u>N</u> Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No <u>X</u>		Total % Cover of:	Multiply by:	OBL species <u>0%</u>	x 1 <u>0.0%</u>	FACW species <u>0%</u>	x 2 <u>0.0%</u>	FAC species <u>0%</u>	x 3 <u>0.0%</u>	FACU species <u>90%</u>	x 4 <u>360.0%</u>	UPL species <u>0%</u>	x 5 <u>0.0%</u>	Column Totals: <u>90.0%</u>	(A) <u>360%</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
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Remarks:																																			

SOIL

Sampling Point: DP212

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

Depth (inches)	Matrix		Redox Features				Texture:	Remarks:
	Color:	%	Color:	%	Type:	Loc:		
0-4	10YR 3/1	80%					Loam	
4-9	10YR 4/1	100%					Loam	No redox
9-14	10YR 4/1	97%	10YR 4/6	3%	C	M	Loam	

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

Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redox (A16)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Very Shallow Dark Surface (TF12)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	☒ 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)	Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: none

Depth (inches): n/a

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

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

Secondary Indicators (2 or more required)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Pattern (B10)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): n/aWater Table Present? Yes ☐ No ☒ Depth (inches): n/aSaturation Present? Yes ☐ No ☒ Depth (inches): n/a

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: