

WETLAND DETERMINATION DATA FORM – Great Plains Region

Wetland plot

Project/Site: Keystone XL - Phase IV City/County: Harding Sampling Date: 11/4/10
 Applicant/Owner: TransCanada - Tron State: SD Sampling Point: W500 HA002
 Investigator(s): B500 Section, Township, Range: Sec 11, 19N, 4E
 Landform (hillslope, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): Northern Great Plains Lat: — Long: — Datum: —
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No —

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers 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: <u>PEM wetland w/in valley, transforms into stream down grade.</u>		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>NA</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>—</u> (A) Total Number of Dominant Species Across All Strata: <u>—</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>—</u> (A/B)
1. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
2. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
3. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
4. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
5. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
<u>—</u> = Total Cover				Hydrophytic Vegetation Indicators: <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>—</u> 2 - Dominance Test is >50% <u>—</u> 3 - Prevalence Index is ≤3.0 ¹ <u>—</u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>—</u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Sapling/Shrub Stratum (Plot size: <u>NA</u>)				
1. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
2. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
3. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
4. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
5. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
<u>—</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
2. <u>Distichlis spicata</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Juncus sp.</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Carex sp.</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
5. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
6. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
7. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
8. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
9. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
10. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
<u>60</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>NA</u>)				
1. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
2. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
<u>—</u> = Total Cover				
% Bare Ground in Herb Stratum <u>10%</u>				

Remarks:

Wetland

W500HA00

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		
☒ Surface Water (A1)	☐ Salt Crust (B11)	☒ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Invertebrates (B13)	☐ Sparsely Vegetated Concave Surface (B8)
☒ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)
☐ Water Marks (B1)	☐ Dry-Season Water Table (C2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	(where tilled)
☐ Drift Deposits (B3)	(where not tilled)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Presence of Reduced Iron (C4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ FAC-Neutral Test (D5)
☒ Water-Stained Leaves (B9)		☐ Frost-Heave Hummocks (D7) (LRR F)
Field Observations:		
Surface Water Present?	Yes ☒ No ☐ Depth (inches): <u>1"</u>	Wetland Hydrology Present? Yes ☒ No ☐
Water Table Present?	Yes ☐ No ☒ Depth (inches): <u> </u>	
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐ Depth (inches): <u>Surface</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		