

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: L3R City/County: Marshall Sampling Date: 2016-07-11
 Applicant/Owner: Enbridge State: Minnesota Sampling Point: w-156n46w7-aa1
 Investigator(s): ZCW Section, Township, Range: S 7, T 156, R 46
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): CL Slope (%): 0-2%
 Latitude: 48.341905111492 Longitude: -96.62086162...

Datum: NAD83
 Soil Map Unit Name: I16F NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in Remarks): Yes
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes
 Are Vegetation No, Soil No, or Hydrology No 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?	<u>Yes</u>	Is the Sampled Area	
Hydric Soil Present?	<u>Yes</u>	within a Wetland?	<u>Yes</u>
Wetland Hydrology Present?	<u>Yes</u>	If yes, optional Wetland Site ID:	<u>w-156n46w7-aa</u>
Remarks: (Explain alternative procedures here or in a separate report.)			

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot Size: <u>30</u>)				Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>1</u> (A)
3. _____	_____	_____	_____	Total Number of Dominant
4. _____	_____	_____	_____	Species Across All Strata: <u>2</u> (B)
	<u>0</u> = Total Cover			Percent of Dominant Species
				That Are OBL, FACW, or FAC: <u>50</u> (A/B)
Sapling/Shrub Stratum (Plot Size: <u>15</u>)				Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of:
2. _____	_____	_____	_____	Multiply by:
3. _____	_____	_____	_____	OBL species <u>15.00</u> x 1 <u>15</u>
4. _____	_____	_____	_____	FACW species <u>50.00</u> x 2 <u>100</u>
5. _____	_____	_____	_____	FACU species <u>10.00</u> x 3 <u>30</u>
	<u>0</u> = Total Cover			UPL species <u>0.00</u> x 4 <u>0</u>
				Column Totals <u>100</u> (A) <u>245</u> (B)
				Prevalence Index = B/A = <u>2.45</u>
Herb Stratum (Plot Size: <u>5</u>)				Hydrophytic Vegetation Indicators:
1. <u>Poa palustris</u>	<u>45.00</u>	<u>Yes</u>	<u>FACW</u>	<u>no</u> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Phleum pratense</u>	<u>25.00</u>	<u>Yes</u>	<u>FACU</u>	<u>no</u> 2 - Dominance Test is > 50%
3. <u>Typha X glauca</u>	<u>15.00</u>	<u>No</u>	<u>OBL</u>	<u>yes</u> 3 - Prevalence Index is ≤ 3.0 ¹
4. <u>Juncus tenuis</u>	<u>10.00</u>	<u>No</u>	<u>FAC</u>	_____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <u>Phalaris arundinacea</u>	<u>5.00</u>	<u>No</u>	<u>FACW</u>	Problematic Hydrophytic Vegetation ¹
6. _____	_____	_____	_____	(Explain)
7. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
	<u>100</u> = Total Cover			
Woody Vine Stratum (Plot Size: <u>30</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
	<u>0</u> = Total Cover			
% Bare Ground in Herb Stratum _____				Hydrophytic Vegetation Present? <u>Yes</u>

Remarks:

SOIL

Sampling Point: w-156n46...

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 1cm Muck (A9) (LRR F, G, H) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 2.5cm Mucky Peat or Peat (S2)(LRR G, H) <input type="checkbox"/> 5cm Mucky Peat or Peat (S3) (LRR F)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> High Plains Depressions (F16) <p style="text-align: center;">(MLRA 72 & 73 of LRR H)</p>	<p>Indicators for Problematic Hydric Soil³:</p> <input type="checkbox"/> 1cm Muck (A9) (LRR I, J) <input type="checkbox"/> Coast Prairie Redox (A16)(LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR G) <input type="checkbox"/> High Plains Depressions (F16) <p style="text-align: center;">(LRR H outside of MLRA 72 & 73)</p> <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input checked="" type="checkbox"/> Other (explain in remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): <input type="checkbox"/> Type: _____ Depth (inches): _____	Hydric Soil Present? <u>Yes</u>
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Remarks:
 Sample point taken in ditch. No digging in ditches. Hydric soils assumed based on vegetation and hydrology.

HYDROLOGY

Wetland Hydrology Indicators:	
<p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<p><u>Secondary Indicators (minimum of two required)</u></p> <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <p style="text-align: center;">(where not tilled)</p> <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <p style="text-align: center;">(where tilled)</p> <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> <u>yes</u> Geomorphic Position (D2) <input type="checkbox"/> <u>yes</u> FAC-Neutral Test (D5) <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	

<p>Field Observations:</p> Surface Water Present? <u>No</u> Depth (inches) _____ Water Table Present? <u>No</u> Depth (inches) _____ Saturation Present? <u>No</u> Depth (inches) _____ (includes capillary fringe)	Wetland Hydrology Present? <u>Yes</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Site Photograph 1

Sampling Point: w-156n46w7-aa1



Latitude: 48.3419062011394

Cowardin Classification: PEM

Longitude: -96.6208301112956

Circular 39: 2

Direction: Northwest

Eggers & Reed: Fresh (Wet) Meadow

Remarks:

US Army Corps of Engineers

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Site Photograph 2

Sampling Point: w-156n46w7-aa1



Latitude: 48.3419045247588

Cowardin Classification: PEM

Longitude: -96.6208305303907

Circular 39: 2

Direction: Southeast

Eggers & Reed: Fresh (Wet) Meadow

Remarks:

US Army Corps of Engineers

Great Plains Region – Version 2.0