WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: L3R City/County: Marshall Sampling Date: 2015-06-08

Applicant/Owner: Enbridge State: Minnesota Sampling Point: w-156n46w27-c1

Investigator(s): ACM/KRG Section, Township, Range:

Landform (hillslope, terrace, etc.): depression Local Relief (concave, convex, none): Conca... Slope (%): 0-2

Subregion (LRR or MLRA): Latitude: 48.3009517612... Longitude: -96.56140518...

Datum: Minnesota State Plane North, NAD 83 (2011) U.S. feet

Soil Map Unit Name: I15A NWI Classification:

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?	Yes	**Is the Sampled Area**	
Hydric Soil Present?	Yes	**within a Wetland?**	Yes
Wetland Hydrology Present?	Yes	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

The wetland is a fresh wet meadow associated with a stream and located adjacent to a crop field.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	15.00	Yes	FAC
2. Populus balsamifera	10.00	Yes	FACW
3.			
4.			
	25 = Total Cover		
Sapling/Shrub Stratum (Plot Size: 15)			
1. Salix interior	5.00	Yes	FACW
2. Prunus virginiana	5.00	Yes	FACU
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot Size: 5)			
1. Agrostis gigantea	40.00	Yes	FACW
2. Phalaris arundinacea	20.00	Yes	FACW
3. Typha angustifolia	10.00	No	OBL
4. Bromus inermis	10.00	No	UPL
5. Cicuta maculata	5.00	No	OBL
6. Anemone canadensis	2.00	No	FACW
7. Toxicodendron rydbergii	2.00	No	FACU
8. Equisetum arvense	2.00	No	FAC
9. Urtica dioica	2.00	No	FAC
10. Solidago gigantea	2.00	No	FAC
	95 = Total Cover		
Woody Vine Stratum (Plot Size: 30)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3333333333...(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15.00	x 1	15
FACW species	77.00	x 2	154
FACU species	21.00	x 3	28
UPL species	10.00	x 4	50
Column Totals	130 (A)		310 (B)

Prevalence Index = B/A = 2.3846153...

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- yes 2 - Dominance Test is > 50%
- yes 3 - Prevalence Index is ≤ 3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Remarks:

The vegetation is dominated by redtop and reed canary grass.

SOIL

Sampling Point: w-156n46...

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2 1	100					MMI	loamy mucky mineral
9-18	2.5Y 3 1	95	2.5Y 5 2	5	D	M	scl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soil[3]:

- ☐ 1cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16)(**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (explain in remarks)

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

Restrictive Layer (if present): ☐

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

The soil is mucky mineral over sandy clay loam. Hydric soil indicator F1 was observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Sparsely Vegetated Concave Surface (B8)
- yes Drainage Patterns (B10)
- ____ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- yes Geomorphic Position (D2)
- yes FAC-Neutral Test (D5)
- ____ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes Depth (inches) 2

Water Table Present? Yes Depth (inches) 3

Saturation Present? Yes Depth (inches) 0

(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

Surface water and soil saturation were observed. The wetland surrounds a stream.

Site Photograph 1

Sampling Point: w-156n46w27-c1