WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: L3R City/County: Marshall Sampling Date: 2015-06-05

Applicant/Owner: Enbridge State: Minnesota Sampling Point: u-156n46w34-f1

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

Landform (hillslope, terrace, etc.): talf Local Relief (concave, convex, none): linear l... Slope (%): 0-2

Subregion (LRR or MLRA): Latitude: 48.293440695897 Longitude: -96.55051139...

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

Soil Map Unit Name: I65A 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?	No	**Is the Sampled Area**	
Hydric Soil Present?	No	**within a Wetland?**	No
Wetland Hydrology Present?	Yes	If yes, optional Wetland Site ID:	

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

The upland area is an aspen forest adjacent to a wet aspen forest and a crop field. The sample point is located at the edge of a cleared trail. Wetland hy...

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	35.00	Yes	FAC
2.			
3.			
4.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot Size: 15)			
1. Corylus americana	40.00	Yes	UPL
2. Populus tremuloides	25.00	Yes	FAC
3. Viburnum lentago	5.00	No	FACU
4. Populus balsamifera	5.00	No	FACW
5. Prunus virginiana	2.00	No	FACU
	77	= Total Cover	
Herb Stratum (Plot Size: 5)			
1. Poa pratensis	25.00	Yes	FACU
2. Thalictrum dioicum	15.00	No	FACW
3. Galium boreale	15.00	No	FACU
4. Zizia aurea	10.00	No	FAC
5. Vicia americana	10.00	No	FACU
6. Anemone quinquefolia	10.00	No	FAC
7. Maianthemum canadense	10.00	No	FACU
8. Taraxacum officinale	5.00	No	FACU
9. Solidago gigantea	5.00	No	FAC
10. Toxicodendron rydbergii	5.00	No	FACU
	110	= Total Cover	
Woody Vine Stratum (Plot Size:)			
1. Vitis riparia	2.00	No	FAC
2.			
	2	= Total Cover	

% Bare Ground in Herb Stratum 0

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: 33.3333333333... (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1	0
FACW species	20.00	x 2	40
FACU species	87.00	x 3	308
UPL species	40.00	x 4	200
Column Totals	224 (A)		809 (B)

Prevalence Index = B/A = 3.6116071...

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- no 2 - Dominance Test is > 50%
- no 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:

Vegetation is dominated by quaking aspen and American hazelnut with a variety of forbs in the herbaceous layer.

SOIL

Sampling Point: u-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
0-12	10YR 2 1	100					sil	
12-18	10YR 3 2	100					LFS	loamy fine sand

[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? No

Remarks:

The profile contains silty loam over loamy fine sand. No hydric soil indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ____ Surface Water (A1)
- ____ 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)
- ____ Drainage Patterns (B10)
- ____ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Geomorphic Position (D2)
- ____ FAC-Neutral Test (D5)
- ____ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? No Depth (inches) _____

Water Table Present? No Depth (inches) _____

Saturation Present? Yes Depth (inches) 12

(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

The soil is saturated at 12 inches.

Site Photograph 1

Sampling Point: u-156n46w34-f1