

WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site:	L3R	Subregion (MLRA or LRR):	MLRA 56	Date:	09/13/14
Applicant:	Enbridge	County:	Pennington	State:	MN
Investigators:	RAJ/BEH/MRK				
Soil Unit:	I43A	NWI Classification:			
Landform:	Toeslope	Local Relief:	CC	Sample Point:	w-154n44w31-a2
Slope (%):	0 - 2%	Latitude:	48.122592	Longitude:	-96.366506
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> Soil <input type="checkbox"/> or Hydrology <input type="checkbox"/> significantly disturbed?			Are normal circumstances present?		
Are Vegetation <input type="checkbox"/> Soil <input type="checkbox"/> or Hydrology <input type="checkbox"/> naturally problematic?			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Section:				Township:	
Range:				Dir:	

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	Hydric Soils Present?	Yes
Wetland Hydrology Present?	Yes	Is This Sampling Point Within A Wetland?	Yes

Remarks: A hardwood swamp dominated by tree-size pussy willow, balsam poplar, and red osier dogwood.

HYDROLOGY

Wetland Hydrology Indicators (Check all that apply; Minimum of one primary or two secondary required):

<u>Primary:</u> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B9 - Water-Stained Leaves	<input type="checkbox"/> B11 - Salt Crust <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C2 - Dry Season Water Table <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots (not till) <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain)	<u>Secondary:</u> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots (tilled) <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input checked="" type="checkbox"/> D2 - Geomorphic Position <input checked="" type="checkbox"/> D5 - FAC-Neutral Test <input type="checkbox"/> D7 - Frost-Heaved Hummocks (LRR F)
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Field Observations:

Surface Water Present? Yes <input type="checkbox"/>	Depth: _____ (in.)	Wetland Hydrology Present? <u>Y</u>
Water Table Present? Yes <input type="checkbox"/>	Depth: _____ (in.)	
Saturation Present? Yes <input type="checkbox"/>	Depth: _____ (in.)	

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

Remarks: Indicators of wetland hydrology are present.

SOILS

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

(Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Depth (In.)	Matrix			Mottles				Texture	Remarks
	Color (Moist)	%		Color (Moist)	%	Type	Location		
0-17	Hue_10YR	2/1	100					SIL	
17-24	Hue_10YR	4/1	94	Hue_10YR	3/6	4	C	PL	SIC
				Hue_5Y	5/4	2	C	M	SIC

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers (LRR F) <input type="checkbox"/> A9 - 1 cm Muck (LRR FGH) <input type="checkbox"/> A11 - Depleted Below Dark Surface <input checked="" type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Mucky Mineral <input type="checkbox"/> S2 - 2.5 cm Mucky Peat or Peat (LRR G, H) <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat (LRR F) <input type="checkbox"/> S4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Mucky Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions <input type="checkbox"/> F16 - High Plains Depressions (MLRA 72, 73 of LRR H)	Indicators for Problematic Soils¹ <input type="checkbox"/> A9 - 1 cm Muck (LRR I, J) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR F, G, H) <input type="checkbox"/> S7 - Dark Surface (LRR G) <input type="checkbox"/> F16 - High Plains Depressions (LRR H, outside MLRA 72, 73) <input type="checkbox"/> F18 - Reduced Vertic <input type="checkbox"/> TF2 - Red Parent Material <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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¹Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer Type: _____	Depth: _____	Hydric Soil Present? <u>Y</u>
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Remarks: The soil has a 17-inch thick dark silty loam surface over depleted silty clay. The soil profile meets the criteria of indicator A12, Thick Dark Surface. The soil at this location likely developed under the conditions of a prairie community and the current dominance of woody species is fairly recent. There are earthworms present and the upper soil layer has a granular structure typical of heavy worm activity.

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Great Plains Region

Project/Site: **L3R** Sample Point: **w-154n44w31-a2**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft. radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	<i>Populus balsamifera</i>	40	Y	FACW
2.	<i>Salix discolor</i>	30	Y	FACW
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
		Total Cover =	70	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: **4** (A)

Total Number of Dominant Species Across All Strata: **5** (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **80.0%** (A/B)

Sapling/Shrub Stratum (Plot size: 15 ft. radius)

1.	<i>Cornus alba</i>	40	Y	FACW
2.	<i>Salix discolor</i>	20	Y	FACW
3.	<i>Salix bebbiana</i>	15	N	FACW
4.	<i>Prunus virginiana</i>	10	N	FACU
5.	<i>Betula pumila</i>	5	N	OBL
6.				
7.				
8.				
9.				
10.				
		Total Cover =	90	

Prevalence Index Worksheet

Total % Cover of:	Multiply by:	
OBL spp. 20	x 1 =	20
FACW spp. 148	x 2 =	296
FAC spp. 16	x 3 =	48
FACU spp. 65	x 4 =	260
UPL spp. 2	x 5 =	10
Total 251 (A)		634 (B)
Prevalence Index = B/A =		2.526

Herb Stratum (Plot size: 5 ft. radius)

1.	<i>Rubus idaeus</i>	50	Y	FACU
2.	<i>Thalictrum dasycarpum</i>	10	N	FAC
3.	<i>Symphotrichum puniceum</i>	10	N	OBL
4.	<i>Doellingeria umbellata</i>	5	N	OBL
5.	<i>Solidago gigantea</i>	5	N	FAC
6.	<i>Cirsium arvense</i>	5	N	FACU
7.	<i>Rubus pubescens</i>	3	N	FACW
8.	<i>Bromus inermis</i>	2	N	UPL
9.	<i>Zizia aurea</i>	1	N	FAC
10.				
11.				
12.				
13.				
14.				
15.				
		Total Cover =	91	

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is > 50%

Prevalence Index is ≤ 3.0 *

Morphological Adaptations (Explain) *

Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH, regardless of height.

Herb - All herbaceous (non-woody) plants, regardless of size.

Woody Vines - All woody vines, regardless of height.

Woody Vine Stratum (Plot size: 30 ft. radius)

1.				
2.				
3.				
5.				
4.				
		Total Cover =	0	

Hydrophytic Vegetation Present? **Y**

Remarks: **A hardwood swamp with a tree canopy dominated by pussy willow and balsam poplar, a shrub layer of mostly red osier dogwood and willows, and an herbaceous layer dominated by red raspberry. Hydrophytic vegetation is present.**

Additional Remarks: