WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site:	L3R			Date:	09/24/14
Applicant:	Enbridge			County:	Marshall
Investigators:	BEH/NTT	Subregion (MLRA or LRR):	MLRA 56	State:	MN
Soil Unit:	I70A	NWI Classification:			
Landform:	Depression	Local Relief:	CL	Sample Point:	**w-155n45w34-g2**
Slope (%):	0 - 2%	Latitude: 48.20201833	Longitude: -96.420784617	Datum:	
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)				☑ Yes ☐ No	Section:
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?			Township:
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No			Range: Dir:

SUMMARY OF FINDINGS

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

Remarks: The wetland is a thin strip of red-osier dogwood and willow shrubs with a ground cover of forbs and grasses, located on the edge of a woodline between a quaking aspen forest and a seasonally-flooded basin.

HYDROLOGY

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

Primary:

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

Secondary:

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

Field Observations:

Surface Water Present? Yes ☐ Depth: _____ (in.)
Water Table Present? Yes ☐ Depth: _____ (in.)
Saturation Present? Yes ☐ Depth: _____ (in.)

Wetland Hydrology Present? Y

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

Remarks: The site is an area that collects water and vegetation passes the FAC-neutral test.

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 Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture	Remarks
0-8	Hue_10YR	2/1	100						SCL	fine sand
8-19	Hue_10YR	4/1	96	Hue_2.5Y	7/8	3	C	M	FSL	
				Hue_5YR	3/4	1	C	M	FSL	
19-22	Hue_10YR	5/2	65	Hue_2.5Y	6/8	35	C	M	LFS	

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

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

Indicators for Problematic Soils[1]

- ☐ A9 - 1 cm Muck (LRR I, J)
- ☐ A16 - Coast Prairie Redox (LRR F, G, H)
- ☐ S7 - Dark Surface (LRR G)
- ☐ F16 - High Plains Depressions (LRR H, outside MLRA 72, 73)
- ☐ F18 - Reduced Vertic
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer Type: _____ Depth: _____

Hydric Soil Present? Y

Remarks: Soil is dark fine sandy clay loam underlain by two depleted layers of varying color, texture, and redox abundance; the profile meets hydric soil indicator A11-Depleted Below Dark Surface.

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

Tree Stratum (Plot size: 30 ft. radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Populus tremuloides*	15	Y	FAC
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Total Cover = 15

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

1.	*Cornus alba*	40	Y	FACW
2.	*Salix bebbiana*	15	N	FACW
3.	*Rosa acicularis*	10	N	FACU
4.	*Populus tremuloides*	10	N	FAC
5.	*Populus balsamifera*	5	N	FACW
6.	*Dasiphora fruticosa*	5	N	FACW
7.	*Toxicodendron rydbergii*	5	N	FACU
8.				
9.				
10.				

Total Cover = 90

Herb Stratum (Plot size: 5 ft. radius)

1.	*Agrostis gigantea*	30	Y	FACW
2.	*Poa pratensis*	25	Y	FACU
3.	*Spartina pectinata*	25	Y	FACW
4.	*Calamagrostis canadensis*	10	N	FACW
5.	*Anemone canadensis*	10	N	FACW
6	*Euthamia graminifolia*	5	N	FACW
7.	*Cicuta maculata*	5	N	OBL
8.	*Carex pellita*	5	N	OBL
9.	*Veronicastrum virginicum*	5	N	FAC
10.				
11.				
12.				
13.				
14.				
15.				

Total Cover = 120

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

1.				
2.				
3.				
5.				
4.				

Total Cover = 0

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)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	10	x 1 =	10
FACW spp.	145	x 2 =	290
FAC spp.	30	x 3 =	90
FACU spp.	40	x 4 =	160
UPL spp.	0	x 5 =	0
Total	225 (A)		550 (B)

Prevalence Index = B/A = ***2.444***

Hydrophytic Vegetation Indicators:

	Rapid Test for Hydrophytic Vegetation
X	Dominance Test is > 50%
X	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.

Hydrophytic Vegetation Present? Y

Remarks: Scattered quaking aspen from the adjacent forest occupies the wetland; the shrub layer is predominantly red-osier dogwood. The herbaceous layer is dominated by redtop, Kentucky bluegrass, and prairie cordgrass. Mixed forbs and other shrubs are also prevalent.

Additional Remarks: