WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP	City/County: Carlton		Sampling Date: 2016-07-18							
Applicant/Owner: Enbridge		State: Minnesota	Sampling Point: u-47n18w2-ac1							
Investigator(s): ZCW	Section, Townshi	p, Range: <u>S 2, T 47N, R 18</u>	W							
Landform (hillslope, terrace, etc.): Side Slope		Local Relief (concave, cor	nvex, none): <u>VL</u> Slope (%): <u>8-15%</u>							
Subregion (LRR or MLRA):	Latitude: 46	5.5870759822 Long	gitude: -92.57800460 Datum: NAD83							
Soil Map Unit Name: 188E			NWI Classification: N/A							
Are climatic/hydrologic conditions on the site	e typical for this time of year	? (if no, explain in Remark	rs): Yes							
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> significantly disturbed? Are "Normal Circumstances" present? <u>Yes</u> Are Vegetation <u>No</u> , Soil, or Hydrology <u>No</u> naturally problematic? (If needed, explain any answers in Remarks)										
SUMMARY OF FINDINGS - Attach site map		1	tant features, etc.							
Hydrophytic Vegetation Present?	No	Is the Sampled Area								
Hydric Soil Present?	No	within a Wetland?	<u>No</u>							
Wetland Hydrology Present? Remarks: (Explain alternative procedures he	No	If yes, optional Wetland	Site ID:							
HYDROLOGY										
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)										
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)										
Surface Water (A1)	Water-Stained Leave	s (B9)	Drainage Patterns (B10)							
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lines (B16)							
Saturation (A3)	Marl Deposits (B15)		Dry-Season Water Table (C2)							
Water Marks (B1)	Hydrogen Sulfide Od	or (C1)	Crayfish Burrows (C8)							
Sediment Deposits (B2)	Oxidized Rhizosphere	es on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)							
Drift Deposits (B3)	Presence of Reduced	Iron (C4)	Stunted/Stressed Plants (D1)							
Algal Mat or Crust (B4)	Recent Iron Reductio	n in Tilled Soils (C6)	Geomorphic Position (D2)							
Iron Deposits (B5)	Thin Muck Surface (C	.7)	Shallow Aquitard (D3)							
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Rer	narks)	Microtopographic Relief (D4)							
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (D5)							
Field Observations:										
Surface Water Present? No.	Depth (inches)									
Water Table Present? <u>No</u>	Depth (inches)									
Saturation Present? <u>No</u>	Depth (inches)		Wetland Hydrology Present? <u>No</u>							
(includes capillary fringe)										
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks:										

VEGETATION - Use scientific names of plants.

Sampling Point: u-47n18w...

	Absolute	Dominant	Indicator	Dominance Test worksheet:			
ree Stratum (Plot Size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species			
Quercus rubra	60.00	Yes	FACU	That Are OBL, FACW, or FAC: 0 (A)			
Acer saccharum	15.00	No	UPL	Total Number of Dominant			
Portulaca grandiflora	5.00	No	UPL	Species Across All Strata: 4 (B)			
				Percent of Dominant Species			
				That Are OBL, FACW, or FAC: 0 (A/B)			
				Prevalence Index worksheet:			
				Total % Cover of: Multiply by:			
	80	= Total Cover		OBL species 0.00 x 1 0			
apling/Shrub Stratum (Plot Size: 15)				FACW species 0.00 x 2 0			
Acer saccharum	10.00	Yes	UPL	FACU species 100.00 x 3 400			
Corylus cornuta	5.00	Yes	UPL	UPL species <u>75.00</u> x 4 <u>375</u>			
				Column Totals <u>185</u> (A) <u>805</u> (B)			
				Prevalence Index = $B/A = \frac{4.3513513}{4.3513513}$			
				Hydrophytic Vegetation Indicators:			
				1 - Rapid Test for Hydrophytic Vegetation			
				no 2 - Dominance Test is > 50%			
	15	= Total Cover		no $3 - Prevalence Index is \le 3.0^1$			
erb Stratum (Plot Size: 5)		_		4 - Morphological Adaptations ¹ (Provide			
Carex woodii	40.00	Yes		supporting data in Remarks or on a separate sheet)			
 Eurybia macrophylla	15.00	 No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)			
Pteridium aquilinum	10.00	No	FACU				
Clintonia borealis	10.00	 No	FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
Maianthemum canadense	5.00	No	FACU	Definitions of Vegetation Strata:			
Aralia nudicaulis	5.00	No	FACU				
Vaccinium angustifolium	5.00	No	FACU	Tree - Woody plants 3 in. (.76 cm) or more in diameter at breast			
	<u></u>			height (DBH), regardless of height.			
·							
·				Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
0				4			
1				Herb - All herbaeceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
2							
	90	= Total Cover		Woody vines - All woody vines greater than 3.28 ft in height.			
Voody Vine Stratum (Plot Size: 30)							
				Hydrophytic			
				Vegetation Present? No			
		=Total Cover		1			
L	0						

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SOIL

	tion: (Describe to the	depth nee				nfirm th	e absence of ind	licators.)
Depth	Matrix			Features		. 2	_	
(inches) 0-5	Color (moist) 10YR 3 3	% 100	Color (moist)	%	Туре⁺	Loc ²	Texture VFSL	Remarks
	10YR 4 4				·			
5-24	1011144						LS	
					·			
					·			
					·			
					·			
					·			
					·			2
	tration, D=Depletion, RM	Reduced Ma	trix, MS=Masked Sand Gr	ains.				² Location: PL=Pore Lining, M=Matrix
Hydric Soil Indica	tors:		Polyvalue Below	Surface (S	8) (LRR R.	MLRA	Indicators for I	Problematic Hydric Soil ³ :
Histosol (A:	1)		149B)	(-	-, (,		🗌 2 cm Muo	ck (A10) (LRR K, L, MLRA 149B)
Histic Epipe	edon (A2)		Thin Dark Surface	e (S9) (LRF	R, MLRA	149B)	Coast Pra	irie Redox (A16)(LRR K, L, R)
Black Histic	(A3)		Loamy Mucky M	neral (F1)	(LRR K, L)		📃 5 cm Muc	cky Peat or Peat (S3) (LRR K, L, R)
Hydrogen S	ulfide (A4)		Loamy Gleyed M	atrix (F2)			Dark Surf	ace (S7) (LRR K, M)
Stratified La	ayers (A5)		Depleted Matrix	(F3)			Polyvalue	e Below Surface (S8) (LRR K, L)
Depleted B	elow Dark Surface (A11)		Redox Dark Surfa	ice (F6)			Thin Dark	Surface (S9) (LRR K, L)
Thick Dark	Surface (A12)		Depleted Dark Su	ırface (F7)			Iron-Mag	anese Masses (F12) (LRR K, L, R)
Sandy Muc	ky Mineral (S1)		Redox Depressio	ns (F8)			Piedmont	Floodplain Soils (F19) (MLRA 149B)
Sandy Gley	ed Matrix (S4)						Mesic Spo	odic (TA6) (MLRA 144A, 145, 149B)
Sandy Redo	ox (S5)						Red Parei	nt Material (F21)
Stripped M	atrix (S6)						Very Shal	low Dark Surface (TF12)
Dark Surfac	e (S7) (LRR R, MLRA 149	3)					Other (ex	plain in remarks)
Restrictive Layer	(if observed):]					
Туре:						L	Hydric Soil Present?	No
Depth (ii	nches):						iyune son Present?	
Remarks:								
1								

Site Photograph 1

Sampling Point: <u>u-47n18w2-ac1</u>



Latitude: 46.5871469350966

Longitude: -92.577957082626

Circular 39:

Eggers & Reed:

Cowardin Classification:

Remarks:

Direction: West

Site Photograph 2

Sampling Point: <u>u-47n18w2-ac1</u>



Latitude: 46.5871465579109

Longitude: -92.577956998807

Cowardin Classification:

Direction: North

Remarks:

Eggers & Reed:

Circular 39: