WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site:	Sandpiper		City/County:	Waden	а	Sampling Date	: 09/1	3/2014
Applicant/Owne	er: Enbridge		_	State:	MN	Sampling F	Point:	WA018a1W
Investigator(s):	DPT			Sectior	n, Towns	ship, Range:		
Landform (hillsl	ope, terrace, etc.):	Depression	l	_ocal relief	(conca	ve, convex, none):	Cond	cave/Concave
Slope (%): 0	Lat.:	Long.:		Da	tum:			
Soil Map Unit N	lame				NV	VI Classification:		
Are climatic/hyd	drologic conditions of	of the site typical for this	time of the ye	ear?	(If	no, explain in remarl	ks)	
Are vegetation	, soil	, or hydrology	significa	ntly disturb	ed?	Are "normal		
Are vegetation	, soil	, or hydrology	naturally	problemat	ic?	circumstances'	" pres	ent? Yes
(If needed, expl	ain any answers in	remarks)						

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y Y	Is the sampled area within a wetland?	? <u>Y</u>				
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	WA018a1W				
Remarks: (Explain alternative procedures here or in a separate report.)							
PEM - Type 2, wet meadow							

HYDROLOGY				
		Secondary Indicators (minimum of two		
Primary Indicators (minimum of one is requ		required)		
Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)		
X High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)		
X Saturation (A3)	Marl Deposits (B15)	Moss Trim Lines (B16)		
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)		
Sediment Deposits (B2)	Oxidized Rhizospheres on Living	Crayfish Burrows (C8)		
Drift Deposits (B3)	Roots (C3)	Saturation Visible on Aerial Imagery		
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	(C9)		
Iron Deposits (B5)	Recent Iron Reduction in Tilled	Stunted or Stressed Plants (D1)		
Inundation Visible on Aerial	Soils (C6)	X Geomorphic Position (D2)		
Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)		
Sparsely Vegetated Concave	Other (Explain in Remarks)	X FAC-Neutral Test (D5)		
Surface (B8)		Microtopographic Relief (D4)		
Field Observations:				
Surface water present? Yes	No X Depth (inches):	Indicators of		
Water table present? Yes X	No Depth (inches): 8	wetland		
Saturation present? Yes X	No Depth (inches): 2	hydrology		
(includes capillary fringe)		present? Y		
Describe recorded data (stream gauge, mo	nitoring well, aerial photos, previous inspe	ections), if available:		
Remarks:				

VEGETATION

se scientine n	lames of	piant	5			Sampling Point: WA013 50/20 Thresholds
			Absolute	Dominant	Indicator	20% 50
Plot Size (30 ft)				Tree Stratum 0 0
				-		Sapling/Shrub Stratum 0 0
						Herb Stratum 21 53
						Woody Vine Stratum 0 0
						-
						Dominance Test Worksheet
						Number of Dominant
						Species that are OBL,
						FACW, or FAC: 1
						Total Number of Dominant Species Across all Strata: 1
			0	= Total Cover		
						Percent of Dominant Species that are OBL,
			Absolute	Dominant	Indicator	FACW, or FAC: 100.00%
Plot Size (15 ft)				
				Openico	Olaldo	Prevalence Index Worksheet
						Total % Cover of:
						OBL species $105 \times 1 = 105$ FACW species $0 \times 2 = 0$
						FAC species $0 \times 2 = 0$ FAC species $0 \times 3 = 0$
						FACU species $0 \times 4 = 0$
						UPL species $0 \times 5 = 0$
						Column totals 105 (A) 105
						Prevalence Index = $B/A = 1.00$
			0 :	= Total Cover		
						Hydrophytic Vegetation Indicators:
Plot Size (5 ft)				Rapid test for hydrophytic vegetation
	•	,				X Dominance test is >50%
						\overline{X} Prevalence index is $\leq 3.0^*$
ius			5	<u> </u>	OBL	Morphogical adaptations* (provide
						supporting data in Remarks or on a separate sheet)
						Problematic hydrophytic vegetation*
						(explain)
						*Indicators of hydric soil and wetland hydrology m
						present, unless disturbed or problematic
						Definitions of Vegetation Strata:
						Tree - Woody plants 3 in. (7.6 cm) or more in dian
						breast height (DBH), regardless of height.
						Sapling/shrub - Woody plants less than 3 in. DBH greater than 3 28 ft (1 m) tall
			105	- Total Cover		greater than 3.28 ft (1 m) tall.
			105			Herb - All herbaceous (non-woody) plants, regard
			Absolute	Dominant	Indicator	size, and woody plants less than 3.28 ft tall.
Plot Size ()	% Cover	Species	Status	Woody vines - All woody vines greater than 3.28
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			height.
						Hydrophytic
						vegetation
				= Total Cover		vegetation present? Y
		_	0 =	= Total Cover		vegetation present? Y
noto numbers hei		separa		= Total Cover		_
	Plot Size (Plot Size (Plot Size (Canadensis Dus	Plot Size (30 ft Plot Size (15 ft Plot Size (5 ft canadensis nus	Plot Size (30 ft) Plot Size (15 ft) Plot Size (5 ft) Plot Size (5 ft) Canadensis DUS		Plot Size (30 ft Absolute % Cover Dominant Species	Plot Size (30 ft) Absolute % Cover Dominant Species Indicator Status

SOIL							Sa	mpling Point: WA018a1W
Profile Deso	cription: (Descri	be to th	e depth needed	to docui	ment the	indicato	r or confirm the absence	e of indicators.)
Depth	Matrix		Red	ox Feat	ures		Texture	Remarks
(Inches)	Color (moist)	%	Color (moist) % Type* Loc**		Loc**			
0-3 3-10	10YR 2/1 10YR 4/1	100			M	Loamy sand Sand		
10-20	101R 4/1 10YR 5/2	90 90	10YR 4/6 10YR 4/6	10 10			Sand	
10 20	1011(3/2	50	1011(4/0	10	0	IVI	Gand	
				d Matrix	k, CS=Co	overed o	r Coated Sand Grains	
	PL=Pore Lining,	M=Mat	rix					
Hydric Soi	Indicators:						Indicators for Prob	plematic Hydric Soils:
Histisol (A1) Polyvalue Below Surface 2 cm Muck (A10) (LRR K, L, MLRA 149B Histic Epipedon (A2) (S8) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) (LRR R, MLRA 149B Dark Surface (S7) (LRR K, L Stratified Layers (A5) Loamy Mucky Mineral (F1) Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Loamy Gleyed Matrix (F2) Thin Dark Surface (S9) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (MLRA 149B) X Sandy Redox (S5) Depleted Dark Surface (F7) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Yery Shallow Dark Surface (S7) (LRR R, MLRA Network Surface (S7) (LRR R, MLRA Other (Explain in Remarks) 149B) *Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic								
Restrictive Layer (if observed): Type: Hydric soil present? Y Depth (inches): Y								
Remarks:								