WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: 13_mainline	City/County: Aitkin		Sampling Date: <u>2017-06-07</u>
Applicant/Owner: Enbridge		State: Minnesota	Sampling Point: w-47n22w6-b1
Investigator(s): DPT	Section, Township,	Range: S6, T47N, R22V	N
Landform (hillslope, terrace, etc.): Depression Subregion (LRR or MLRA): Soil Map Unit Name: 502 Are climatic/hydrologic conditions on the site type Are Vegetation No , Soil No , or Hydrology No	Latitude: 4 ical for this time of year? (Local Relief (concave, 16.5864441963 (if no, explain in Remark d? Are "Normal Circum	Slope (%): convex, none): CC
SUMMARY OF FINDINGS - Attach site map sho	owing sampling point loca	ations transects imnor	rtant features, etc
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative procedures here of WETS analysis shows precipitation below normal	Yes Yes Yes in a separate report.)	Is the Sampled Area within a Wetland? If yes, optional Wetlar	<u>Yes</u>
HYDROLOGY Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required;	check all that annly)		
Surface Water (A1)	Surface Soil Cracks (B6) Drainage Patterns (B10)		
yes High Water Table (A2)	Water-Stained Leave Aquatic Fauna (B13)	5 (69)	Moss Trim Lines (B16)
yes Saturation (A3)	Marl Deposits (B15)		Dry-Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Od	or (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)		es on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced		Stunted/Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)		yes Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)		Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Ren		Microto pographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)			yes FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present? No	Depth (inches)	
Water Table Present? Yes	Depth (inches	6	
Saturation Present? Yes	Depth (inches	0	Wetland Hydrology Present? Yes
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitori	ng well, aerial photos, pre	vious inspections), if av	railable:
Remarks:			

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot Size: 30)	% Cover	Species?	Status	Num ber of Dominant Species
1.				That Are OBL, FACW, or FAC: 2 (A)
2.				Total Number of Dominant
3		_		Species Across All Strata: 2 (B)
4.				Percent of Dominant Species
5.				That Are OBL, FACW, or FAC: 100 (A/B)
				Prevalence Index worksheet:
		_		
7	0	Tatal Causa		Total % Cover of: Multiply by:
Continue (Charles Charles (Dist Circa 15	0	_ = rotarCover		OBL species <u>20.00</u> x 1 <u>20</u>
Sapling/Shrub Stratum (Plot Size: 15				FACW species 70.00 x 2 140
1		-		FACU species <u>0.00</u> x 3 <u>0</u>
2				UPL species <u>0.00</u> x 4 <u>0</u>
3				Column Totals <u>100</u> (A) <u>190</u> (B)
4		_		Prevalence Index = B/A = 1.9
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				yes 2 - Dominance Test is > 50%
	0	_ = Total Cover		yes 3 - Prevalence Index is ≤ 3.0 ¹
Herb Stratum (Plot Size: 5				4 - Morphological Adaptations (Provide
1. Carex vulpinoidea	70.00	Yes	FACW	supporting data in Remarks or on a separate sheet)
2. Carex lacustris	20.00	Yes	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Equisetum arvense	10.00	No	FAC	1 adia above of hundre cail and water at hundre by a recent unless distributed
4			_	Indicators of hydrics oil and wetland hydrology must be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				
7				Tree - Woody plants 3 in. (.76 cm) or more in diameter at breast
8				height (DBH), regardless of height.
9				Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or
40				equal to 3.28 ft (1 m) tall.
10.			_	Herb - All herbaeceous (non-woody) plants, regardless of size, and
11				woody plants less than 3.28 ft tall.
12	100		_	
	100	_ = Total Cover		Woody vines - All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot Size: 30)				
1			_	
2				Hydrop hytic Vegetation
3				Present? Yes
4	. <u></u>			
	0	_=Total Cover		
Remarks: (include photo numbers here or on a separate sheet	:.)			

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OIL							Sampling Point: w-47n22w6-b1	
rofile Description: (Describe to the de	epth need				ofirm th	ie absence of indica	ators.)	
nches) Matrix Color (moist) 10YR 2 1	% 100 _	Redox F Color (moist)	Features %	Type ¹	Loc ²	Texture MM	Remarks	
I-10 10YR 3 1	90	10YR 4 6	10	С	М	FSL		
			· ——	- — — — — — — — — — — — — — — — — — — —				
Type: C=Concentration, D=Depletion, RM=Re	educed Mat	trix, MS=Masked Sand Gr		- — — — — — — — — — — — — — — — — — — —			² Location: PL=Pore Lining, M=Mat	
Hydric Soil Indicators: ├──		Polyvalue Below S	Surface ('	58) (LRR R ,	, MLRA	-	oblematic Hydric Soil ³ :	
Histosol (A1) Histic Epipedon (A2) Black Histic (A3)		Thin Dark Surface				Coast Prairie	(A10) (LRR K, L, MLRA 149B) e Redox (A16)(LRR K, L, R) Peat or Peat (S3) (LRR K, L, R)	
Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1) (LRR K, L) Loamy Gleyed Matrix (F2)			Dark Surface (S7) (LRR K, M)			
Stratified Layers (A5)		Depleted Matrix (Polyvalue Below Surface (S8) (LRRK, L)		
Depleted Below Dark Surface (A11)		Redox Dark Surface				Thin Dark Surface (S9) (LRR K, L)		
Thick Dark Surface (A12)		Depleted Dark Surrac		<i>/</i> \		Iron-Maganese Masses (F12) (LRR K, L, R)		
Sandy Mucky Mineral (S1)		Redox Depression		,		Piedmont Floodplain Soils (F19) (MLRA 149B)		
Sandy Gleyed Matrix (S4)		LI NEGON DEPI COOLS.	15 (10,			\vdash	c (TA6) (MLRA 144A, 145, 149B)	
—							Material (F21)	
Sandy Red ox (S5)						—		
Stripped Matrix (S6)						☐ Very Shallow	w Dark Surface (TF12)	
Dark Surface (S7) (LRR R, MLRA 149B)						Other (expla	ain in remarks)	
Restrictive Layer (if observed): Type: Rock	 		_			Hydric Soil Present? Ye	es	
Depth (in ches): 10						<u>.</u>		

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