WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: RSA 22	City/County:	Aitkin	Sampli	Sampling Date: 25-Aug-17	
Applicant/Owner: Enbridge			State: MN	Sampling Point:	u-51n26w36-a7
Investigator(s): DPT/SMR		Section, T	ownship, Range: S. 32	T. 51N	R. 25W
Landform (hillslope, terrace, etc.):	Mound	Local relief (c	oncave, convex, none):	convex	Slope: 3.5 % / 2.0 °
Subregion (LRR or MLRA): LRR K	Lat.:	46 51.7072	Long.: -9:	3 32.1839	Datum: NAD 83
Soil Map Unit Name: 243		-		WI classification:	N/A
Are Vegetation , Soil Are Vegetation , Soil Summary of Findings - At	, or Hydrology 🗌 naturally	tly disturbed? problematic? sampling p		any answers in Re	-
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes O No O Yes No O		e Sampled Area n a Wetland? Yes	○ _{No} ●	
Remarks: (Explain alternative pro WETS analysis shows precipitation	ocedures here or in a separate repo n below normal.	ort.)			

Hydrology

Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)		
Primary Indicators (minimum of one req	Surface Soil Cracks (B6)			
Surface Water (A1)	Water-Stained Leaves (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 Odor (C1)	Crayfish Burrows (C8)		
Sediment Deposits (B2)	 Oxidized Rhizospheres along Living Roots (C3) 	Saturation Visible on Aerial Imagery (C9)		
Drift deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)		
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7)		Microtopographic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)	Uther (Explain in Remarks)	FAC-neutral Test (D5)		
Field Observations:				
	Depth (inches): 0			
Water Table Present? Yes O N	Depth (inches): 0	× · · · ·		
Saturation Present? Yes O No. (includes capillary fringe)	Depth (inches): 0	ydrology Present? Yes 🔿 No 🖲		
Describe Recorded Data (stream gauge,	monitoring well, aerial photos, previous inspections), if a	vailable:		
Remarks:				

VEGETATION - Use scientific names of plants

Description Deminanter functioner Dominanter functioner Dominanter functioner 1. Product tremsholdes 0 V Induct of Known (Stratum) 1 (A) 2. Average Stocker 0 V Induct of Known (Stratum) 1 (A) 2. Average Stocker 0 V Induct of Known (Stratum) 0 0 0 3. Average Stocker 0 0 V Induct of Known (Stratum) 0 0 4	VEGETATION - Use scientific names of plan	Sampling Point: u-51n26w36-a7			
1. Popular termiddes 60 V FACU That are 0BL FACU, or FAC. 1 (A) 2. Quercus block 0 V FACU Total Aumber of Dominant Species Arrows Al Stratu: 6 (B) 4. 0 0 FACU Total Are 0BL, FACU, or FAC. 1 (A) 7. 0 0 Percent of dominant Species 16, 75. (A) (A) 7. 0 Prevalence Index worksheet: Total Ke 0BL, FACU, or Statum (A) Percent of dominant Species 10. X 1 + 0 0 2. 0 70 V FACU FACU species 30. X 1 + 0 0 7. 0 V FACU species 30. X 1 + 0 0 FACU species 30. X 1 + 0 0 7. 0 V FACU species 10. X 3 + 0.0 0 0 Column Total s: 250. A) 980. (B) 7. 0 V FACU species 10. X 4 = 720. V V V V V V V V V V V <th>Tree Stratum (Plot size: <u>30</u>)</th> <th>Absolute % Cover</th> <th></th> <th></th> <th></th>	Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover			
2. Our case blocker 20 ✓ FACW Total Number of Dominant Species Across All Stratum 6. (B) 3	1 Populus tremuloides	60		FACU	
3. 0		20			
4. 0					
5. 0 0 Percent of dominant Species 6. 0 0 Prevalence Index worksheet: 3. 0 0 Prevalence Index worksheet: 1. 0 Prevalence Index worksheet: 0 2. 0 Prevalence Index worksheet: 0 3. 0 Prevalence Index worksheet: 0 4. 0 Prevalence Index worksheet: 0 5. 0 Prevalence Index worksheet: 0 6. 0 Prevalence Index worksheet: 0 7. 0 Prevalence Index worksheet: <t< th=""><th></th><th></th><th></th><th></th><th>Species Across All Strata: \underline{b} (B)</th></t<>					Species Across All Strata: \underline{b} (B)
6. 0 Initial de Cubit, Yukit, With PR Dobbal CVM 7. 0 0 Prevalence Index worksheet: Dobbal Prevalence Index worksheet: 1. Corylis comuta 70 V FACU Species 0 x 1 = 0 2. 0 0 FACU species 30 x 2 = 60 3. 0 0 FACU species 30 x 4 = 720 4. 0 0 FACU species 40 x 5 = 220 6. 0 0 FACU species 40 x 5 = 220 6. 0 0 FACU species 40 x 5 = 220 6. 0 0 FACU species 40 x 5 = 220 7. 0 0 FACU species 180 x 4 = 720 9. 70 = Total Cover Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation 1. Eurybia macrophylla 20 V FACU Prevalence Index is 23.0 ' 2. Abin tubicial and wetand hydrol					Percent of dominant Species
7. 0 0 Prevalence Index worksheet: Sapling / Shrub Stratum (Plot size: 15) 80 = Total Cover 1. <i>Corpus conula</i> 70 V FACU 3. 0 FACU FACU species 30 x 4 = 3. 0 FACU FACU species 30 x 4 = 720 4. 0 FACU species 100 x 4 = 720 5. 0 0 FACU species 100 x 4 = 720 6. 0 0 FACU species 100 x 4 = 720 7. 0 FACU species 100 x 4 = 720 9. 0 FACU species 100 x 4 = 720 10. FACU species 100 x 4 = 720 100 11. Excycle macrophylis 20 V FACU Rapid Test for Hydrophytic Vegetation 100 12. 0 10 FACU Prevalence Index is 23.0 1 100 100 100 100 100 100 100 100 100 </th <th></th> <th></th> <th></th> <th></th> <th>That Are OBL, FACW, or FAC: <u>16.7%</u> (A/B)</th>					That Are OBL, FACW, or FAC: <u>16.7%</u> (A/B)
Sapiling /Shrub Stratum (Plot size: 15					Brevalence Index worksheet:
Sapling Shrub Stratum (Piot size: 13) 70 FACU FACU species 0 x 1 = 0 2. 0 - FACU FACU species 0 x 3 = 0 3. 0 - FACU FACU species 0 x 5 = 200 4. 0 - - - - - 5. 0 - - - - - 6. 0 - - - - - - 7. - 0 - - - - - - 7. - 0 -	1		Total Cover		
1. Corputs consta 70 V FACU FACW species 30 x 2 = 60 2. 0 0 FACW species 30 x 4 = 720 4. 0 0 FACW species 00 x 4 = 720 5. 0 0 FACW species 40 x 5 = 200 6. 0 0 FACW species 40 x 5 = 200 7. 0 = Total Cover Prevalence index = B/A = 3.920 Hydrophytic Vegetation Indicators: 1 Bapid Test for Hydrophytic Vegetation 10 Dominance Test is > 50% 7. 70 = Total Cover FACU Prevalence index = 53.0 ¹ 10 FACW 7. 0 10 FACU FACU Prevalence index is 53.0 ¹ 10 10 FACU Prevalence index is 53.0 ¹ 7. 0 10 FACU FACU Prevalence index is 53.0 ¹ 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10	Sapling/Shrub Stratum (Plot size: 15)				
2. 0 0 FAC species 0 x 3 = 0 3. 0 0 0 FAC species 180 x 4 = 720 5. 0 0 0 0 FAC species 100 x 5 = 200 6. 0 0 0 0 Col umn Totais: 250 (A) 980 (B) 7. 0 = Totai Cover Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation 3.920 1. Euryble macrophyla 20 V FACU FACU Prevalence Index is 53.0 ¹ 9. 0 0 FACU Prevalence Index is 53.0 ¹ More phylic Vegetation 1 1. Euryble macrophyla 20 V FACU Prevalence Index is 53.0 ¹ More phylic Vegetation 2. . 0 Image: Statum 0 Image: Statum 1 More phylic Vegetation 1/2 1/2 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 9 0 0 Image: Statum 0 Image: Statum 1/2	1. Corylus cornuta	70	\checkmark	FACU	
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0 0	5	0			
7. 0 Prevalence Index = B/A =3.920. Herb Stratum (Plot size: 5) 70 = Total Cover 1. Eurybla macrophylla 40 V UPL 2. Aralla nudkaulis 20 V FACU 3. Rubus hispidus 10 FACU Prevalence Index = B/A =3.920. 4. // terkfurm aguilinum 20 V FACU 5. 0 FACU Prevalence Index = S/A =3.920. 6. 0 FACU Prevalence Index = B/A =3.920. 7. 30 V FACU Dominance Test is > 50% 9. 0 FACU Problematic Nydrophytic Vegetation 1 Problematic Nydrophytic Vegetation 1 9. 0 0 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 9. 0 0 Problematic (DBH), regardless of height. 2. 0 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 9. 0 Definitions of Vegetation Strata: 1. 0 = Total Cover 1. 0 Indicatorsof hydric soil and wetland hydrology must bestasheight	6	0			Column Totals: <u>250</u> (A) <u>980</u> (B)
Herb Stratum (Plot size: 5 _) 70 = Total Cover 1. Euryble macrophylia 40 V Image: Constraint of the strate of th	_				Prevalence Index = B/A = 3.920
1. Eurybia macrophylia 40 V UPL Rapid Test for Hydrophytic Vegetation 2. Aralia nuclicaulis 20 V FACU Dominance Test is > 50% 3. Mubus hispidus 10 FACU Prevalence Index is \$3.0 1 4. Preridium aquilinum 30 FACU Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet) 5. 0 0 Prevalence Index is \$3.0 1 6. 0 10 FACU 7. 0 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 9. 0 0 1 Indicators of Vegetation Strata: 1. 0 100 = Total Cover Sapling/shrub - Woody plants, regardless of height. 2. 0 0 100 = Total Cover Sapling/shrub - All woody vines greater than 3.28 ft in height. 3. 0 0 100 = Total Cover Hydrophytic Vegetation 3.28 ft in height. 4. 0 0 100 = Total Cover Hydrophytic Vegetater than 3.28 ft in height.		70 =	Total Cover		
1. Europia macrophyla 40 ✓ UPL Dominance Test is > 50% 2. Aralia nudicaulis 20 FACU Prevalence Index is \$3.0 ¹ 3. Rubus hispidus 10 FACU Prevalence Index is \$3.0 ¹ 4. Pteridium aguilinum 30 ✓ FACU Prevalence Index is \$3.0 ¹ 5. 0 Image: Comparison of the second of	Herb Stratum (Plot size: 5)				
2. Arbits nudicaults 20 ✓ FACU Prevalence Index is ≤ 3.0 ¹ 3. Rubus hispidus 10 FACU Prevalence Index is ≤ 3.0 ¹ 4. Preridium aquilinum 30 ✓ FACU Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) 5. 0 0 Problematic Hydrophytic Vegetation ¹ (Explain) 6. 0 0 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 9. 0 0 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 0. 0 0 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 0. 0 0 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 0. 0 - Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 2. 0 - Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall 1. 0 - - - 3. 0 - - 4. <	1. Eurybla macrophylla	40	\checkmark	UPL	
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4. Preridium aquilinum 30 Intermediate in Remarks or on a separate sheet) 5. 0 Intermediate in Remarks or on a separate sheet) 6. 0 Intermediate in Remarks or on a separate sheet) 7. 0 Intermediate in Remarks or on a separate sheet) 8. 0 Intermediate in Remarks or on a separate sheet) 9. 0 Intermediate in Remarks or on a separate sheet) 9. 0 Intermediate in Remarks or on a separate sheet) 9. 0 Intermediate in Remarks or on a separate sheet) 9. 0 Intermediate in Remarks or on a separate sheet) 9. 0 Intermediate in Remarks or on a separate sheet) 9. 0 Intermediate in Remarks or on a separate sheet) 9. 0 Intermediate in Remarks or on a separate sheet) 9. 0 Intermediate in Remarks or on a separate sheet) 9. 0 Intermediate in Remarks or on a separate sheet) 9. 0 Intermediate in Remarks or on a separate sheet) 1. 0 Intermediate in Remarks or on a separate sheet) 1. 0 Intermediate in Remarks or on a separate sheet) 1. </th <th>3. Rubus hispidus</th> <th>10</th> <th></th> <th>FACW</th> <th></th>	3. Rubus hispidus	10		FACW	
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8. 0 0 0 9. 0 0 0 0. 0 0 0 1. 0 0 0 2. 0 0 0 Moody Vine Stratum (Plot size: 30 0 0 0 1. 0 0 0 0 2. 0 0 0 0 3. 0 0 0 0 3. 0 0 0 0 4. 0 0 0 0 0 0 0 0 0 0 1. 0 0 0 0 0 0 2. 0 0 0 0 0 0 0 3. 0 <th></th> <th></th> <th></th> <th></th> <th>¹ Indicators of hydric soil and wetland hydrology must</th>					¹ Indicators of hydric soil and wetland hydrology must
9. 0 0 0 0 0. 0 0 0 0 0 1. 0 0 0 0 0 0 2. 0 0 0 0 0 0 0 2. 0					
0.					Definitions of Vegetation Strata:
1. 0					Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
2. 0 - Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall Moody Vine Stratum (Plot size: 30) 0 - Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 3. 0 - - Herb - All woody vines greater than 3.28 ft tall. 4. 0 - - Herb - All woody vines greater than 3.28 ft in height. 9 - - - - 4. 0 - - 9 - - - 9 - - - 9 - - - 9 - - - 9 - - - 100 - - - 11 - - - 12 - - - 13 - - - 14 - - - 15 - - - 16 - - - 17 - - - <th></th> <th></th> <th></th> <th></th> <th></th>					
Woody Vine Stratum (Plot size: 30) 100 = Total Cover Greater than 3.28 ft (1m) tall 1. 0 0 Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 3. 0 0 Herb - All woody vines greater than 3.28 ft tall. 4. 0 Herb - All woody vines greater than 3.28 ft in height. Barborn Stratum (Plot size: 30) 0 Hydrophytic Vegetation Present? Yes No (*)					Conting/objudy Mandy plants less than 2 in DDU and
Woody Vine Stratum (Plot size: 30))			Total Cover		
2. 0 3. 0 4. 0 Total Cover Hydrophytic Vegetation Present? Yes No •					°
2. 0 3. 0 4. 0 0 0 0 0 Woody vine - All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes No No		0			
4. 0 = Total Cover Woody Vine - All Woody Vines greater than 3.28 ft in height. 0 = Total Cover					size, and woody plants less than 3.20 it tail.
0 = Total Cover Hydrophytic Vegetation Present? Yes ○ No ●	3				
Hydrophytic Vegetation Present? Yes O No O	4	-			height.
Vegetation Present? Yes O No O		=	Total Cover		
Vegetation Present? Yes O No O					
Vegetation Present? Yes O No O					
Vegetation Present? Yes O No •					Under a first in
					Vegetation
Remarks: (Include photo numbers here or on a separate sheet.)					Present? Yes V No 🔍
Remarks: (Include photo numbers here or on a separate sheet.)					
	Remarks: (Include photo numbers here or on a separate she	et.)			

* Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

US Army Corps of Engineers

Depth		Matrix	and adput						absence of indicators.)		
(inches) Color (moist)		%	Redox Features Color (moist) % Type_1			Loc ²	Texture	Remarks			
0-5	10YR	2/2	100						Silt Loam		
5-16	10YR	4/2	90	10YR	4/6	10	c	M	Silt Loam		
16-20	10YR	4/2	90	10YR	4/6	10	C		Sandy Loam	· · · · · · · · · · · · · · · · · · ·	
10-20		4/2			4/0						
				. <u> </u>							
				. <u> </u>							
						-					
		-		· ·							
										·	
Type: C=Con	centration. D	D=Depletio	on. RM=Red	luced Matrix, CS	=Cover	ed or Coate	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=M	atrix	
Hydric Soil 1	Indicators:								Indicators for Proble	ematic Hydric Soils : ³	
Histosol ((A1)			Polyvalu	ue Belo	w Surface ((S8) (LRR	 ,		(LRR K, L, MLRA 149B)	
Histic Epi	pedon (A2)			MLRA 1		(00) (1			$\Box \text{ Coast Prairie Redox (A16) (LRR K, L, MLRA 1496)}$		
Black Hist						k Surface (S9) (LRR R, MLRA 149B)			\square 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4))				Mineral (F1)	Dark Surface (S7) (LRR K, L, M)		
	Layers (A5)			Loamy Deplete		Matrix (F2))		Polyvalue Below Surface (S8) (LRR K, L)		
								Thin Dark Surface (S9) (LRR K, L)			
				Redox Dark Surface (F6) Depleted Dark Surface (F7)				Iron-Manganese Masses (F12) (LRR K, L, R)			
				,,		Piedmont Floodplain Soils (F19) (MLRA 149B)					
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Sandy Redox (S5)					Mesic Spodic (TA6) (MLRA 144A, 145, 149B)						
-									Red Parent Material (F21)		
Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B)					Very Shallow Dark Surface (TF12)						
									U Other (Explain in F	Remarks)	
			on and wetla	and hydrology m	ust be j	present, un	less distur	bed or proble	ematic.		
Restrictive L	ayer (if obs	served):									
Туре:									Hydric Soil Present?	Yes 🔍 No 🔿	
Depth (inc	:hes):										
Remarks:											