WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: RSA 22   **City/County:** Aitkin   **Sampling Date:** 29-Aug-17

Applicant/Owner: Enbridge   **State:** MN   **Sampling Point:** **w-51n24w31-a5**

Investigator(s): DPT   **Section, Township, Range:** S. 36   T. 51N   R. 25W

Landform (hillslope, terrace, etc.): Lowland   **Local relief (concave, convex, none):** concave   **Slope:** 0.0 **% /** 0.0 °

Subregion (LRR or MLRA): LRR K   **Lat.:** 46 51.4974   **Long.:** -93 27.2659   **Datum:** NAD 83

Soil Map Unit Name: 292   **NWI classification:** PFO1B

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ○ No ◉   (If no, explain in Remarks.)

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?**   **Are "Normal Circumstances" present?** Yes ◉ No ○

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **naturally problematic?**   (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

Hydrophytic Vegetation Present? Yes ◉ No ○		
Hydric Soil Present? Yes ◉ No ○	**Is the Sampled Area within a Wetland?** Yes ◉ No ○	
Wetland Hydrology Present? Yes ◉ No ○		

Remarks: (Explain alternative procedures here or in a separate report.)

WETS analysis shows precipitation below normal.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

		Secondary Indicators (minimum of 2 required)
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☑ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)
☑ 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 along Living Roots (C3)	☐ Crayfish Burrows (C8)
☐ Drift deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☑ Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Shallow Aquitard (D3)
☐ Sparsely Vegetated Concave Surface (B8)		☐ Microtopographic Relief (D4)
		☑ FAC-neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	0
Water Table Present?	Yes ◉ No ○	Depth (inches):	4
Saturation Present? (includes capillary fringe)	Yes ◉ No ○	Depth (inches):	0

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	0	= Total Cover	

Herb Stratum (Plot size: 5)			
1. *Carex lacustris*	20	☑	OBL
2. *Solidago gigantea*	20	☑	FACW
3. *Calamagrostis canadensis*	30	☑	OBL
4. *Phalaris arundinacea*	30	☑	FACW
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	100	= Total Cover	

Woody Vine Stratum (Plot size: 30)			
1.	0	☐	
2.	0	☐	
3.	0	☐	
4.	0	☐	
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species
That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant
Species Across All Strata: 4 (B)

Percent of dominant Species
That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	50	x 2 =	100
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		150 (B)

Prevalence Index = B/A = 1.500

Hydrophytic Vegetation Indicators:

- ☑ **Rapid Test for Hydrophytic Vegetation**
- ☑ **Dominance Test is > 50%**
- ☑ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

[1] **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.**

Definitions of Vegetation Strata:

Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall..

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?   Yes ⦿   No ○

Remarks: (Include photo numbers here or on a separate sheet.)

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

Soil

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type [1]	Loc²	Texture	Remarks
0-4	10YR 2/1	100					Sandy Clay Loam	
4-12	10YR 3/1	95	10YR 3/6	5	C	M	Sandy Clay Loam	
12-20	10YR 4/2	90	10YR 4/6	10	C	M	Sand	

[1] Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains   ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR R, MLRA 149B)

- ☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ☐ Loamy Mucky Mineral (F1) LRR K, L
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils : [3]

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L, M)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present?   Yes ⊙   No ○

Remarks: