WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

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

Applicant/Owner: Enbridge **State:** MN **Sampling Point:** **w-51n26w32-c5**

Investigator(s): SMR/RWS **Section, Township, Range:** **S.** 32 **T.** 51N **R.** 26W

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

Subregion (LRR or MLRA): LRR K **Lat.:** 46 51.8697 **Long.:** -93 38.9219 **Datum:** NAD 83

Soil Map Unit Name: B147A **NWI classification:** PSSB

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

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

WETS analysis shows precip is below normal.

Hydrology

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches):	0	
Water Table Present?	Yes ◉ No ○	Depth (inches):	2	**Wetland Hydrology Present?** Yes ◉ No ○
Saturation Present? (includes capillary fringe)	Yes ◉ No ○	Depth (inches):	0	

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

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: w-51n26w32-c5

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. *Alnus incana*	20	☑	FACW
2. *Betula pumila*	70	☑	OBL
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
	90	**= Total Cover**	
Herb Stratum (Plot size: 5)			
1. *Equisetum arvense*	10	☑	FAC
2. *Osmundastrum cinnamomeum*	10	☑	FACW
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
11.	0	☐	
12.	0	☐	
	20	**= 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	70	**x 1 =**	70	
FACW species	30	**x 2 =**	60	
FAC species	10	**x 3 =**	30	
FACU species	0	**x 4 =**	0	
UPL species	0	**x 5 =**	0	
Column Totals:	110	**(A)**	160	**(B)**

Prevalence Index = B/A = 1.455

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

Sampling Point: w-51n26w32-c5

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]	Loc[2]	Texture	Remarks
0-20	10YR	2/2	100					Peat	

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

Hydric Soil Indicators:

- [x] 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: