WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP City/County: Aitkin Sampling Date: 2016-08-29

Applicant/Owner: Enbridge State: Minnesota Sampling Point: w-47n22w11-ad1

Investigator(s): DPT, MGG Section, Township, Range: S11, T47N, R22W

Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): CL Slope (%): 0-2%

Subregion (LRR or MLRA): Latitude: 46.5648270585... Longitude: -93.08447473... Datum: NAD83

Soil Map Unit Name: 736 NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in Remarks): No

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No 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	**Is the Sampled Area**	
Hydric Soil Present?	Yes	**within a Wetland?**	Yes
Wetland Hydrology Present?	Yes	If yes, optional Wetland Site ID:	w-47n22w11-ad

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

Existing forest road, no digging, potential buried utilities. Precipitation above normal based on WETS analysis.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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 on 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 two 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/Stressed Plants (D1)
- yes Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- yes FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	No	Depth (inches)	____
Water Table Present?	____	Depth (inches)	____
Saturation Present? (includes capillary fringe)	No	Depth (inches)	____

Wetland Hydrology Present? Yes

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

Remarks:

No digging, could not verify water table.

VEGETATION - Use scientific names of plants.

Sampling Point: w-47n22w...

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: 30)			
1. Fraxinus nigra	50.00	Yes	FACW
2. Acer rubrum	20.00	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	70 = Total Cover		
Sapling/Shrub Stratum (Plot Size: 15)			
1. Fraxinus nigra	10.00	Yes	FACW
2. Alnus incana	5.00	Yes	FACW
3. Acer rubrum	5.00	Yes	FAC
4.			
5.			
6.			
7.			
	20 = Total Cover		
Herb Stratum (Plot Size: 5)			
1. Calamagrostis canadensis	25.00	Yes	FACW
2. Onoclea sensibilis	20.00	Yes	FACW
3. Iris versicolor	5.00	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50 = Total Cover		
Woody Vine Stratum (Plot Size: 30)			
1.			
2.			
3.			
4.			
	0 =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5.00	x 1	5
FACW species	110.00	x 2	220
FACU species	0.00	x 3	0
UPL species	0.00	x 4	0
Column Totals	140 (A)		300 (B)

Prevalence Index = B/A = 2.1428571...

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

yes 2 - Dominance Test is > 50%

yes 3 - Prevalence Index is ≤ 3.0[1]

____ 4 - 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. (.76 cm) or more in diameter at breast height (DBH), regardless of height.

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

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

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

Hydrophytic Vegetation Present? **Yes**

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

SOIL Sampling Point: w-47n22w...

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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 Mucky 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 Soil[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, M**)
- ☐ Polyvalue Below Surface (S8) **(LRR K, L)**
- ☐ Thin Dark Surface (S9) (**LRR K, L**)
- ☐ Iron-Maganese 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)

Restrictive Layer (if observed): ☐

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

No digging, existing forest road, soils assumed hydric based on veg/hydro.

Site Photograph 1

Sampling Point: w-47n22w11-ad1

Latitude: 46.5648424393

Longitude: -93.0844831188145

Direction: west

Cowardin Classification: PFO

Circular 39: 1

Eggers & Reed: Seasonally Flooded Basin

Remarks:

Site Photograph 2

Sampling Point: w-47n22w11-ad1

Latitude: 46.5648522461267

Longitude: -93.0844884832325

Direction: south

Cowardin Classification: PFO

Circular 39: 1

Eggers & Reed: Seasonally Flooded Basin

Remarks: