WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP City/County: Hubbard Sampling Date: 2015-07-02

Applicant/Owner: Enbridge State: Minnesota Sampling Point: HUC5034_200b1W

Investigator(s): BCS/BEH Section, Township, Range:

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

Subregion (LRR or MLRA): LRR K Latitude: 47.1852542 Longitude: -95.1286988 Datum: Minnesota State ...

Soil Map Unit Name: 526C NWI Classification:

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

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:	

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

The wetland is a hardwood swamp dominated by black and green ash and located within a larger hardwood forest.

HYDROLOGY

Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- yes 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)
- yes 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?	Yes	Depth (inches)	14
Saturation Present? (includes capillary fringe)	Yes	Depth (inches)	8

Wetland Hydrology Present? Yes

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

Remarks:

Saturation is present at 8 inches. The wetland is located in a sparsely-vegetated depression and passes the FAC-Neutral test.

VEGETATION - Use scientific names of plants.

Sampling Point: HUC5034_...

Tree Stratum (Plot Size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus nigra	40.00	Yes	FACW
2. Fraxinus pennsylvanica	15.00	Yes	FACW
3. Ulmus americana	5.00	No	FACW
4.	5.00	No	FACW
5.			
6. Populus balsamifera			
7.			
	65	= Total Cover	
Sapling/Shrub Stratum (Plot Size: 15 ft)			
1. Populus balsamifera	5.00	Yes	FACW
2. Fraxinus nigra	5.00	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Herb Stratum (Plot Size: 5 ft)			
1. Carex retrorsa	15.00	Yes	OBL
2. Mentha arvensis	5.00	No	FACW
3. Iris versicolor	5.00	No	OBL
4. Calamagrostis canadensis	5.00	No	OBL
5. Cardamine pensylvanica	2.00	No	FACW
6. Poa palustris	2.00	No	FACW
7. Onoclea sensibilis	2.00	No	FACW
8. Phalaris arundinacea	2.00	No	FACW
9. Equisetum sylvaticum	2.00	No	FACW
10.			
11.			
12.			
	40	= Total Cover	
Woody Vine Stratum (Plot Size:)			
1.			
2.			
3.			
4.			
	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 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25.00	x 1	25
FACW species	85.00	x 2	170
FACU species	0.00	x 3	0
UPL species	0.00	x 4	0
Column Totals	110 (A)		195 (B)

Prevalence Index = B/A = 1.7727272...

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 herbaceous (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? _____

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

The wetland sample area is dominated by black ash and green ash in the tree stratum, balsam poplar and black ash in the shrub stratum, and retrorse sedge in the herb stratum.

SOIL

Sampling Point: HUC5034_...

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
0-2	10YR 2 1	100					MMI	
2-5	10YR 2 1	100					SIL	
5-8	10YR 3 1	100					SCL	
8-24	10YR 4 2	85	7.5YR 4 4	15	C	M	SCL	

[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:

The observed profile consists of a mucky mineral layer underlain by a dark silt loam further underlain by a depleted sandy clay loam. Soil meets indicator A11 - Depleted Below Dark Surface and F3- Depleted Matrix.