

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: SPP City/County: Wadena Sampling Date: 9/2/2014
 Applicant/Owner: Enbridge State: MN Sampling Point: WA003a1U
 Investigator(s): BEH/RAJ Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): VL
 Slope (%): 8 - 15% Lat.: 46.7989225 Long.: -94.91620067 Datum: _____
 Soil Map Unit Name: 458E NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)
 Are vegetation , soil , or hydrology significantly disturbed? Are "normal
 Are vegetation , soil , or hydrology naturally problematic? circumstances" present?
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> N </u> Hydric soil present? <u> N </u> Indicators of wetland hydrology present? <u> N </u>	Is the sampled area within a wetland? <u> N </u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located in a hardwood forest, upslope from a floodplain forest.	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface water present? Yes <input type="checkbox"/> Depth (inches): _____ Water table present? Yes <input type="checkbox"/> Depth (inches): _____ Saturation present? Yes <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Indicators of wetland hydrology present? <u> N </u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____ _____	
Remarks: No primary or secondary hydrological indicators were observed.	

VEGETATION - Use scientific names of plants

Sampling Point:

WA003a1U

Tree Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Populus grandidentata</i>	35	Y	FACU
2	<i>Populus tremuloides</i>	25	Y	FAC
3	<i>Quercus macrocarpa</i>	15	N	FACU
4	<i>Ostrya virginiana</i>	10	N	FACU
5	<i>Fraxinus pennsylvanica</i>	5	N	FACW
6	<i>Peltandra virginica</i>	5	N	FACU
7	<i>Fraxinus nigra</i>	5	N	FACW
8				
9				
10				
		100 = Total Cover		

Sapling/Shrub Stratum	Plot Size (15 ft)	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Corylus americana</i>	40	Y	FACU
2	<i>Ostrya virginiana</i>	5	N	FACU
3				
4				
5				
6				
7				
8				
9				
10				
		45 = Total Cover		

Herb Stratum	Plot Size (5 ft)	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Carex pensylvanica</i>	40	Y	NI
2	<i>Ostrya virginiana</i>	15	Y	FACU
3	<i>Onyxis asperifolia</i>	10	N	NI
4	<i>Osmorhiza claytonii</i>	5	N	FACU
5	<i>Aralia nudicaulis</i>	5	N	FACU
6	<i>Fraxinus nigra</i>	5	N	FACW
7	<i>Stachys lateralis</i>	5	N	FACU
8				
9				
10				
11				
12				
13				
14				
15				
		85 = Total Cover		

Woody Vine Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0 = Total Cover		

50/20 Thresholds	20%	50%
Tree Stratum	20	50
Sapling/Shrub Stratum	9	23
Herb Stratum	17	43
Woody Vine Stratum	0	0

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	1 (A)
Total Number of Dominant Species Across all Strata:	5 (B)
Percent of Dominant Species that are OBL, FACW, or FAC:	20.00% (A/B)

Prevalence Index Worksheet	
Total % Cover of:	
OBL species	0 x 1 = 0
FACW species	15 x 2 = 30
FAC species	25 x 3 = 75
FACU species	140 x 4 = 560
UPL species	0 x 5 = 0
Column totals	180 (A) 665 (B)
Prevalence Index = B/A =	3.69

Hydrophytic Vegetation Indicators:

- Rapid test for hydrophytic vegetation
- Dominance test is >50%
- Prevalence index is ≤3.0*
- Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- Problematic hydrophytic vegetation* (explain)

*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 (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? N

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

The tree layer is dominated by big-tooth aspen and quaking aspen. The shrub component is dominated by American hazelnut. Pennsylvania sedge and ironwood seedlings dominate the ground layer.

SOIL

Sampling Point:

WA003a1U

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

Depth (In.)	Matrix			Redox Features				Texture	Remarks
	Color (moist)		%	Color (moist)	%	Type*	Loc**		
0-4	Hue_10YR	2/1	100					SL	
4-14	Hue_10YR	2/2	65					LS	
4-14	Hue_10YR	3/2	35					LS	
14-20	Hue_10YR	3/2	100					LS	
20-23	Hue_10YR	4/3	100					LS	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**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

- 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:

- 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
- 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)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

Soil is dark sandy loam underlain by multiple layers of loamy sand that gradually lighten down the soil profile; the soil does not meet any hydric soil indicators.