| WETLAND DE | FERMINATION DATA | FORM - North Cen | tral and Northeast R | egion | | |
|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|--------------------------|-------------------------------------------|--|--|
| Project/Site: SPP | City/County: Cass | | S | Sampling Date: 2016-07-29 | | |
| Applicant/Owner: Enbridge | State: Minnesota | | Sa | Sampling Point: w-139n25w18-ae1 | | |
| Investigator(s): DPT, MGH | Section, Townsh | ip, Range: <u>S18, T139</u> | 9N, R25W | | | |
| Landform (hillslope, terrace, etc.): Depression | | Local Relief (conca | ve, convex, none): CC | Slope (%): 0-2% | | |
| Subregion (LRR or MLRA): | Latitude: 4 | 6.8596250890 | Longitude: -93.89988 | 547 Datum: NAD83 | | |
| Soil Map Unit Name: 217 | - – | | | WI Classification: PSSB | | |
| Are climatic/hydrologic conditions on the site typ | pical for this time of year | r? (if no, explain in R | emarks): | Yes | | |
| Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>N</u> | | | | | | |
| SUMMARY OF FINDINGS - Attach site map sh | owing sampling point lo | ocations, transects, | important features, etc. | | | |
| Hydrophytic Vegetation Present? | Yes | Is the Sampled Are | ea | | | |
| Hydric Soil Present? | Yes | within a Wetland? | | Yes | | |
| Wetland Hydrology Present? | Yes | If yes, optional We | tland Site ID: | w-139n25w18-ae1 | | |
| Remarks: (Explain alternative procedures here of | or in a separate report.) | • | | | | |
| Existing forest road, no digging, potential buried | l utilities. | | | | | |
| HYDROLOGY | | | | | | |
| Wetland Hydrology Indicators: | | | Secondary | Indicators (minimum of two required) | | |
| Primary Indicators (minimum of one is required; | check all that apply) | | Surf | ace Soil Cracks (B6) | | |
| Surface Water (A1) | Water-Stained Leaves (B9) | | Drai | Drainage Patterns (B10) | | |
| High Water Table (A2) | Aquatic Fauna (B13) | | Mos | Moss Trim Lines (B16) | | |
| Saturation (A3) | Marl Deposits (B15) | | Dry- | Dry-Season Water Table (C2) | | |
| Water Marks (B1) | Hydrogen Sulfide Odor (C1) | | Crayf | Crayfish Burrows (C8) | | |
| Sediment Deposits (B2) | Oxidized Rhizospheres on Living Roots (C3) | | Satur | Saturation Visible on Aerial Imagery (C9) | | |
| Drift Deposits (B3) | Presence of Reduce | d Iron (C4) | Stunt | Stunted/Stressed Plants (D1) | | |
| Algal Mat or Crust (B4) | Recent Iron Reduction | on in Tilled Soils (C6) | yes_Geon | Yes Geomorphic Position (D2) | | |
| Iron Deposits (B5) | Thin Muck Surface (| Thin Muck Surface (C7) | | Shallow Aquitard (D3) | | |

| | | — | | |
|---------------------------------------------|--------------|--------------------------------------------------|---------------------------------------|----|
| Iron Deposits (B5) | | _ Thin Muck Surface (C7) | Shallow Aquitard (D3) | |
| Inundation Visible on Aerial Imagery (B7) | | Other (Explain in Remarks) | Microtopographic Relief (D4) | |
| yes Sparsely Vegetated Concave Surface (B8) | | | <u>Yes</u> FAC-Neutral Test (D5) | |
| Field Observations: | | | | |
| Surface Water Present? | No | Depth (inches) | | |
| Water Table Present? | | Depth (inches) | | |
| Saturation Present? | No | Depth (inches) | Wetland Hydrology Present? Y | es |
| (includes capillary fringe) | | | | |
| Describe Recorded Data (stream gauge, n | nonitoring w | ell, aerial photos, previous inspections), if av | vailable: | |
| | | | | |
| Remarks: | | | · · · · · · · · · · · · · · · · · · · | |

No digging, could not verify water table.

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VEGETATION - Use scientific names of plants.

Sampling Point: w-139n25...

| | Absolute | Dominant | Indicator | Dominance Test worksheet: |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------|-----------|-----------------------------------------------------------------------------------------------------------|
| Tree Stratum (Plot Size: <u>30</u>) | % Cover | Species? | Status | Number of Dominant Species |
| 1. Fraxinus nigra | 60.00 | Yes | FACW | That Are OBL, FACW, or FAC: 3 (A) |
| 2. Acer rubrum | 20.00 | Yes | FAC | Total Number of Dominant |
| 3. | | | | Species Across All Strata: 3 (B) |
| 4. | | | | Percent of Dominant Species |
| 5. | | | | That Are OBL, FACW, or FAC: 100 (A/B) |
| 6. | | | | Prevalence Index worksheet: |
| 7. | | | | Total % Cover of: Multiply by: |
| | 80 | = Total Cover | - | OBL species 10.00 x 1 10 |
| Sapling/Shrub Stratum (Plot Size: 15) | | | | FACW species 75.00 x 2 150 |
| 1. Fraxinus nigra | 15.00 | Yes | FACW | FACU species 0.00 x 3 0 |
| 2. Acer rubrum | 10.00 | Yes | FAC | UPL species 0.00 x 4 0 |
| | | | | Column Totals 115 (A) 250 (B) |
| | | | | Prevalence Index = B/A = 2.1739130 |
| | | | | |
| | | | · | Hydrophytic Vegetation Indicators: |
| 6 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| 7 | | | | yes 2 - Dominance Test is > 50% yes 3 - Prevalence Index is $\leq 3.0^1$ |
| La companya en la companya de | 25 | = Total Cover | | <u> </u> |
| Herb Stratum (Plot Size: 5) | | | | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 1. Iris versicolor | 10.00 | Yes | OBL | - · · · |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless |
| 4 | | | | disturbed or problematic. |
| 5 | | <u> </u> | | Definitions of Vegetation Strata: |
| 6 | | | | 4 |
| 7 | | | | Tree - Woody plants 3 in. (.76 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8 | | | | |
| 9 | | | | Sapling/Shrub - Woody plants less than 3 in. DBH and greater than |
| 10 | | | | or equal to 3.28 ft (1 m) tall. |
| 11 | | _ | | Herb - All herbaeceous (non-woody) plants, regardless of size, and |
| 12 | | | | woody plants less than 3.28 ft tall. |
| | 10 | = Total Cover | | Woody vines - All woody vines greater than 3.28 ft in height. |
| Woody Vine Stratum (Plot Size: 30 | | | | woody miles with woody with spectre than 5.20 fem height. |
| | | | | |
| 1 | | | | - Hydrophytic |
| 2 | | | | Vegetation |
| 3 | | | | Present? Yes |
| 4 | | | | 4 |
| | 0 | =Total Cover | | |
| Remarks: (include photo numbers here or on a separate sheet. |) | | | |
| | | | | |
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Northcentral and Northeast Region – Version 2.0

SOIL

| Sampling Point: | w-139n25 |
|-----------------|----------|
|-----------------|----------|

| Depth Mat | rix | Redox F | eatures | | | | | | |
|--------------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--|--|
| (inches) Color (mois | st) % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | n, RM=Reduced Ma | atrix, MS=Masked Sand Gra | ins. | | | | ² Location: PL=Pore Lining, M=Matr | | |
| Hydric Soil Indicators: | | | | | | Indicators for Prob | lematic Hydric Soil ³ : | | |
| Histosol (A1) | | Polyvalue Below S 149B) | urface (S8 |) (LRR R, | MLRA | 2 cm Muck (A | 10) (LRR K, L, MLRA 149B) | | |
| Histic Epipedon (A2) | | Thin Dark Surface | (S9) (LRR | R, MLRA | 149B) | Coast Prairie I | Redox (A16)(LRR K, L, R) | | |
| Black Histic (A3) | | Loamy Mucky Min | eral (F1) (| LRR K, L) | | 5 cm Mucky P | Peat or Peat (S3) (LRR K, L, R) | | |
| Hydrogen Sulfide (A4) | | Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) | | | | Dark Surface (S7) (LRR K, M) | | | |
| Stratified Layers (A5) | | | | | | 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) | | | |
| Depleted Below Dark Surface (| A11) | | | | | | | | |
| Thick Dark Surface (A12) | | | | | | | | | |
| Sandy Mucky Mineral (S1) | | | | | | | | | |
| Sandy Gleyed Matrix (S4) | | | | | | Mesic Spodic (| (TA6) (MLRA 144A, 145, 149B) | | |
| Sandy Redox (S5) | | | | | | Red Parent M | laterial (F21) | | |
| Stripped Matrix (S6) | | | | | | | Dark Surface (TF12) | | |
| Dark Surface (S7) (LRR R, MLR/ | A 149B) | | | | | ✓ Other (explain | n in remarks) | | |
| Restrictive Layer (if observed): | Γ | | | | | | | | |
| Туре: | | | | | н | lydric Soil Present? Yes | 5 | | |
| Depth (inches): | | | | | | | | | |
| Remarks: | | | | I | | | | | |
| No digging, soils assumed hydric bas | a al la value a Alexadora | | | | | | | | |

Site Photograph 1

Sampling Point: w-139n25w18-ae1



Latitude: 46.8596250471164

Longitude: -93.8998856396358

Cowardin Classification: PFO

Circular 39: 1

Remarks:

Direction: south

Eggers & Reed: Seasonally Flooded Basin

Site Photograph 2

Sampling Point: w-139n25w18-ae1



Latitude: 46.8596248375688

Longitude: -93.8998858910929

Cowardin Classification: PFO

Circular 39: 1

Remarks:

Direction: west

Eggers & Reed: Seasonally Flooded Basin