WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/Cou | unty: Ashland | Sampling Date: <u>2020-05-22</u> |
|--|--|---------------------------------|--|
| Applicant/Owner: Enbridge | | | |
| Investigator(s): SBR/DGL | | | |
| Landform (hillslope, terrace, etc.): Depression | | | |
| Subregion (LRR or MLRA): Northcentral Forests | | | |
| Soil Map Unit Name: Sanborg-Badriver co | | | |
| Are climatic / hydrologic conditions on the site typical | • | • | |
| | | | |
| Are Vegetation, Soil, or Hydrology _ | | | |
| Are Vegetation, Soil, or Hydrology _ | naturally problemation | c? (If needed, explair | any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site | map showing samp | ling point locations, t | transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes | / No I | s the Sampled Area | |
| | / No v | within a Wetland? | Yes ✓ No |
| Wetland Hydrology Present? Yes | | f yes, optional Wetland Site I | D: |
| Remarks: (Explain alternative procedures here or | in a separate report.) | | |
| The wetland is a shallow depressi | | snape and located | within a hay field. The |
| feature seems to collect water and | a drain the field. | | |
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| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | Seco | ndary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; ch | neck all that apply) | | Surface Soil Cracks (B6) |
| Surface Water (A1) | Water-Stained Leaves | (B9) [| Orainage Patterns (B10) |
| High Water Table (A2) | Aquatic Fauna (B13) | N | Moss Trim Lines (B16) |
| Saturation (A3) | Marl Deposits (B15) | [| Ory-Season Water Table (C2) |
| | Hydrogen Sulfide Odor | | Crayfish Burrows (C8) |
| | Oxidized Rhizospheres | = : : | Saturation Visible on Aerial Imagery (C9) |
| | Presence of Reduced I | | Stunted or Stressed Plants (D1) |
| 1 | Recent Iron Reduction | · , — | Geomorphic Position (D2) |
| | Thin Muck Surface (C7) | | Shallow Aquitard (D3) |
| | Other (Explain in Rema | | Microtopographic Relief (D4) |
| Sparsely Vegetated Concave Surface (B8) | | <u> </u> | FAC-Neutral Test (D5) |
| Field Observations: | (B # (| | |
| | Depth (inches): | | |
| | <pre>/ Depth (inches):</pre> / Depth (inches): | | logy Present? Yes ✓ No |
| (includes capillary fringe) | Deptif (inches). | vvetiand nydroi | ogy Fresent: Tes No |
| Describe Recorded Data (stream gauge, monitoring | ng well, aerial photos, previo | ous inspections), if available: | |
| | | | |
| Remarks: | | | |
| The hydrologic regime is saturated | d. | | |
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VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: 30) | (A) |
|---|--------|
| That Are OBL, FACW, or FAC: 2 Total Number of Dominant Species Across All Strata: 2 4 | (A) |
| 3 Species Across All Strata: | . , |
| 3 Species Across All Strata: 2 4 Percent of Dominant Species That Are ORL FACE at 540 | |
| 4 Percent of Dominant Species | (B) |
| That A ODL FACIAL FAC. 100 | |
| · | (A/B) |
| | |
| 6 Prevalence Index worksheet: | |
| 7 Total % Cover of: Multiply by: | |
| | |
| Sapling/Shrub Stratum (Plot size: 15) FACW species 34 x 2 = 68 | |
| 1 FAC species x 3 = 15 | |
| 2. FACU species 0 x 4 = 0 | |
| UPL species | |
| Column rotals. <u>79</u> (A) <u>123</u> | (B) |
| 4 | |
| 6. Hydrophytic Vegetation Indicators: | |
| | |
| 2. Dominance Test is >50% | |
| U = Total Cover √ 3 - Prevalence Index is ≤3 0 ¹ | |
| Herb Stratum (Plot size:) 4 - Morphological Adaptations (Provide supp | orting |
| | , |
| | ' |
| 3. <u>Glyceria grandis</u> 10 N OBL Indicators of hydric soil and wetland hydrology m | ıst |
| 4. <u>Barbarea vulgaris</u> | |
| 5. Salix petiolaris 2 N FACW Definitions of Vegetation Strata: | |
| 6. Ranunculus cf recurvatus 2 N FACW | . |
| 7 Tree – Woody plants 3 in. (7.6 cm) or more in dia at breast height (DBH), regardless of height. | neter |
| | |
| 9. Sapling/shrub – Woody plants less than 3 in. DE and greater than or equal to 3.28 ft (1 m) tall. | 1 |
| | . |
| 10 Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall. | less |
| | ft in |
| | 10 111 |
| height | |
| height. | |
| height | |
| height. | |
| Woody Vine Stratum (Plot size: 30) height. | |
| | |
| T9 | |
| T9 | |
| Moody Vine Stratum (Plot size: | |
| T9 | |
| No No No No No No No No | |
| Total Cover No No No No No No No N | |
| Total Cover No No No No No No No N | |
| Total Cover No No No No No No No N | |
| Total Cover No No No No No No No N | |

Sampling Point: wasa1026e_w

SOIL Sampling Point: wasa1026e_w

| Depth (inches) Matrix Color (moist) Redox Features Type¹ Loc² Texture Remarks 0-10 7.5YR 4/2 90 7.5YR 4/6 10 C M SIC 10-20 7.5YR 4/1 80 7.5YR 4/6 20 C M C |
|--|
| 0-10 7.5YR 4/2 90 7.5YR 4/6 10 C M SIC |
| |
| 10-20 7.5YR 4/1 80 7.5YR 4/6 20 C M C |
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| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : |
| Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| Histic Epipedon (A2) |
| Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) |
| Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) |
| Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) |
| Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Popleted Dark Surface (F7) Pidment Fleedalein Soils (F10) (MLRA 140P) |
| Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| Sandy Redox (S5) Red Parent Material (F21) |
| Stripped Matrix (S6) Very Shallow Dark Surface (TF12) |
| Dark Surface (S7) (LRR R, MLRA 149B) 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): No |
| Remarks: |
| The soils are clayey with redox concentrations throughout the profile. |
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wasa1026e_w_E



wasa1026e_w_SW

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | |
|---|--|------------------------------|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | |
| File #: wasa1026 | Date of visit(s): 2020-05-22 | |
| Location: PLSS: sec 20 T047N R004W | Ecological Landsca Lake Superior Clay Plair | • |
| Lat: <u>46.541295</u> Long: <u>-90.895057</u> | Watershed: LS09, Lower Bad River | |
| County: Ashland Town/City/Village: Gingles town | | |
| SITE DESCRIPTION | | |
| Soils: | WWI Class: | |
| Mapped Type(s): | N/A | |
| Sanborg-Badriver complex, 0 to 6 percent slopes | Wetland Type(s): PEM wet meadow | |
| Field Verified: | | |
| The soils were not field verified. | Wetland Size: 0.3315 | Wetland Area Impacted 0.3315 |
| | Vegetation: Plant Community D | Description(s): |
| Hydrology: The hydrologic regime is saturated, and the major hydrologic source is from surface water. | • | wet meadow dominated by |
| | | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | | Functional Value Assessment |
|----|------|-----------|---|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | N | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | Ν | N | Used for educational or scientific purposes |
| 3 | Υ | Υ | Visually or physically accessible to public |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| _ | | | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | | ., | Wildlife Habitat |
| 1 | N | N | Wetland and contiguous habitat >10 acres |
| 2 | N | N | 3 or more strata present (>10% cover) |
| 3 | N | N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | N | N | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | Occurs in a Joint Venture priority township |
| 6 | N | N | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| | IN | IN | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| 7 | Ν | N | plans |
| 0 | N.I. | | |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | N | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | Ν | N | Along shoreline of a stream, lake, pond or open water area (<a>2 1 acre) - if no, not applicable |
| 2 | N.I | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| | N | N | water levels or high flows – if no, not applicable |
| 3 | Ν | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | N | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | Υ | Υ | Water flow through wetland is NOT channelized |
| 3 | Υ | Υ | Dense, persistent vegetation |
| 4 | Ν | N | Evidence of flashy hydrology |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | N | N | Within a watershed with <10% wetland |
| 8 | N | N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | | | Water Quality Protection |
| 1 | N | N | Provides substantial storage of storm and floodwater based on previous section |
| 2 | N | N | Basin wetland or constricted outlet |
| 3 | Y | Y | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Y | Y | Dense, persistent vegetation |
| 6 | | N N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | N | | Stormwater or surface water from agricultural land is major hydrology source |
| | Y | Y | |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | Ν | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | Ν | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | N | N | Wetland is within a wellhead protection area |
| | | | |

| Section 1 Comments (Refer to Section 1 numbers) | | | | | |
|---|-----------------------|---|--|--|--|
| HU-3 the wetland is | visible from the road | . WH-10/FA-2/4 ponding and inundation is likely at some point and would provide habitat for aquatic organisms. Snails were observed during the survey. will grow taller later in the growing season. St-5/WQ-7 the wetland is fed primarily by surface water. | | | |
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| 147 | 1.11.6 - 11.1.1.1. | | | | |
| | | at and Species Observation (including amphibians and reptiles) oservation, tracks, scat, other sign; type of habitat: nesting, migratory, | | | |
| | nter, etc. | oservation, tracks, scat, other sign, type of habitat. hesting, migratory, | | | |
| | | | | | |
| Observed | Potential | Species/Habitat/Comments | | | |
| Y | Y | Avian | | | |
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| Fis | sh and Agua | atic Life Habitat and Species Observations | | | |
| | | oservation, other sign; type of habitat: nesting, spawning, nursery areas, etc. | | | |
| | T | | | | |
| Observed | Potential | Species/Habitat | | | |
| Y | Y | Snails/Aquatic invertebrates | | | |
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SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 🗌 | S2 🗌 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) Mean C (optional) | <13 <u> </u> | 13-23 2.4-4.2 | 23-32 4.3-4.7 | >32 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of C | Plant communities | Comments (Estimate of % Cover, Abundance) |
|--------------------------|-------------|-----------|-------------------|---|
| Agrostis gigantea* | | | Pem | Rare |
| Barbarea vulgaris | | | Pem | Barren |
| Cardamine pensylvanica | | | Pem | Barren |
| Carex sp | | | Pem | Rare |
| Equisetum arvense | | | Pem | Barren |
| Glyceria grandis | | | Pem | Rare |
| Juncus effusus* | | | Pem | Patchy |
| Phalaris arundinacea | | | Pem | Rare |
| Ranunculus cf recurvatus | | | Pem | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low due to the presence of invasive species, only a single strata being represented, and the commonality of the plant community.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| • | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| Χ | Х | | М | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| Х | Х | | Н | С | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | Х | | L | С | Roads or railroad |
| | Х | | L | С | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| V | V | | N.4 | 0 | Removal of herbaceous stratum – mowing, |
| X | X | | M | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| X | Χ | | L | С | Cover of non-native and/or invasive species |
| | Χ | | L | С | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is located in a large hay field. Adjacent features in the buffer area include an occasionally mowed utility |
|---|
| corridor, a private residence, and a gravel road. Invasive species are present in the wetland at relatively low cover. |
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^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|----------|-------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | / | | | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | / | | | | |
| Fish and Aquatic Life Habitat | / | | | | |
| Shoreline Protection | | | | | / |
| Flood and Stormwater Storage | | ✓ | | | |
| Water Quality Protection | | / | | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|--|
| Floristic Integrity | The floristic integrity is low due to overall low species diversity, missing strata, and the presence of invasive species. |
| Human Use Values | The area is used to grow hay. |
| Wildlife Habitat | The wetland is likely used by avian species for cover or nesting. |
| Fish and Aquatic Life Habitat | The wetland is possibly used by aquatic organisms during times of sustained inundation. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The relative size snd shape of the wetland helps collect water from the surrounding hay field. |
| Water Quality Protection | The wetland is likely able to filter polluted water runoff from the nearby gravel road and surrounding hay field. |
| Groundwater Processes | The feature does not appear to influence ground water processes. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ashland Sampling Date: 2020-05-22 |
|--|---|
| • | State: Wisconsin Sampling Point: wasa1027e_w |
| Investigator(s): SBR/DGL | |
| | ocal relief (concave, convex, none): Concave Slope (%): 0-2% |
| | 2 Long: <u>-90.895302</u> Datum: <u>WGS84</u> |
| | 6 percent slopes NWI classification: |
| Are climatic / hydrologic conditions on the site typical for this time of y | |
| | y disturbed? Are "Normal Circumstances" present? Yes No |
| | |
| Are Vegetation, Soil, or Hydrology naturally pr | |
| SUMMARY OF FINDINGS – Attach site map showing | g sampling point locations, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes _ ✓ No | Is the Sampled Area |
| Hydric Soil Present? Yes No | |
| Wetland Hydrology Present? Yes _ ✓ No | |
| Remarks: (Explain alternative procedures here or in a separate repo | ort.) |
| • | es to help drain water off the hayfield in which the |
| feature is located. The feature is dominated by | / disturbance tolerant graminoids. |
| | |
| | |
| | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | |
| Surface Water (A1) Water-Stained | |
| High Water Table (A2) Aquatic Fauna | |
| ✓ Saturation (A3) Marl Deposits | (B15) Dry-Season Water Table (C2) |
| Water Marks (B1) Hydrogen Sulf | |
| | ospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) |
| Drift Deposits (B3) Presence of R | · , , |
| | eduction in Tilled Soils (C6) _v Geomorphic Position (D2) |
| Iron Deposits (B5) Thin Muck Sul | |
| Inundation Visible on Aerial Imagery (B7) Other (Explain | |
| Sparsely Vegetated Concave Surface (B8) | FAC-Neutral Test (D5) |
| Field Observations: | , |
| Surface Water Present? Yes No Depth (inches | |
| Water Table Present? Yes No _ ✓ Depth (inchest of the second of t | |
| Saturation Present? Yes _ v No _ Depth (inches (includes capillary fringe) | s): 12 Wetland Hydrology Present? Yes _ v No |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos | os, previous inspections), if available: |
| | |
| Remarks: | |
| The hydrologic regime is saturated with obser | ved saturation at 12 inches. |
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| VEGETATION – Use scientific names of plants. |
|---|
|---|

| EGETATION – Use scientific names of plants. | | | | Sampling Point: wasa1027e_w |
|--|-------------|---------------------|-------------|---|
| Tree Stratum (Plot size: 30) | Absolute | Dominan Species? | t Indicator | Dominance Test worksheet: |
| | | | | Number of Dominant Species |
| 1 | | | | That Are OBL, FACW, or FAC:4 (A) |
| 2 | | | | Total Number of Dominant Species Across All Strata: 4 (B) |
| 3 | | | | (, |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC:100 (A/B) |
| 5 | | | | |
| 6. | | | | Prevalence Index worksheet: |
| 7 | _ | | | Total % Cover of: Multiply by: |
| 0. 11. 101. 1. 01. 1. 101. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 | | = Total Co | ver | OBL species <u>45</u> x 1 = <u>45</u> FACW species <u>33</u> x 2 = <u>66</u> |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FAC species |
| 1 | | | | FACU species x 4 =0 |
| 2 | | | | UPL species x 5 =0 |
| 3 | | | | Column Totals: <u>83</u> (A) <u>126</u> (B) |
| 4 | | | | Prevalence Index = B/A =1.52 |
| 5 | | | | |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | ∠ 1 - Rapid Test for Hydrophytic Vegetation ∠ 2 - Dominance Test is >50% |
| | 0 | = Total Co | ver | ∠ 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5 | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| 1. <u>Scirpus cyperinus</u> | _ <u>15</u> | <u> </u> | OBL | data in Remarks or on a separate sheet) |
| 2. <u>Agrostis gigantea</u> | 10 | <u>Y</u> | FACW | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Carex stipata</u> | _ 10_ | Y | OBL | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. <u>Glyceria grandis</u> | _ 10_ | Y | OBL | be present, unless disturbed or problematic. |
| 5. <u>Phalaris arundinacea</u> | 10 | <u>N</u> | <u>FACW</u> | Definitions of Vegetation Strata: |
| 6. <u>Cicuta maculata</u> | 5 | _N_ | OBL | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7. <u>Equisetum arvense</u> | 5 | N | FAC | at breast height (DBH), regardless of height. |
| 8. <u>Juncus effusus</u> | 5 | <u>N</u> | OBL | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9. <u>Solidago gigantea</u> | _ 5 | N | <u>FACW</u> | and greater than or equal to 3.28 ft (1 m) tall. |
| 10. <u>Salix petiolaris</u> | 5 | N | <u>FACW</u> | Herb – All herbaceous (non-woody) plants, regardless |
| 11. Impatiens capensis | 3 | <u>N</u> | <u>FACW</u> | of size, and woody plants less than 3.28 ft tall. |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | _83 | = Total Co | ver | height. |
| Woody Vine Stratum (Plot size:) | | | | |
| 1. | | | | |
| 2 | | | | |
| 3. | | | | Hydrophytic |
| 4 | | | | Vegetation |
| | | = Total Co | ver | Present? Yes <u>✓</u> No |
| Remarks: (Include photo numbers here or on a separate | sheet.) | | | |
| | | ınd feat | ure. The | e vegetation is still emerging at the time |
| of the survey and there is not 100% co | ver. | | | |
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SOIL Sampling Point: wasa1027e_w

| Profile Desc | ription: (D | escribe t | o the dep | th needed | to docun | nent the i | ndicator | or confirm | the absence of i | indicators.) |
|------------------------|-----------------------------|------------|----------------|------------------|--------------------------------|------------|-------------|------------------|--------------------------|--|
| Depth | | Matrix | 0/ | Color /r | | x Features | 4 | Loc ² | Touture | Domarka |
| (inches) | Color (I | | <u>*</u> 95 | Color (r 7.5R | 4/6 | 5 | Type' | M | SICI | Remarks |
| 5-12 | 7.5YR | 5/2 | 90 | 7.5R | | 10 | | M | | <u> </u> |
| | 7.5R | | 100 | 7.01 | | 0 | | | | |
| 12 20 | 1.01 | 0/ 7 | 100 | | | | | | | |
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| ¹ Type: C=C | | | etion, RM | =Reduced N | Matrix, MS | S=Masked | Sand Gr | ains. | ² Location: P | L=Pore Lining, M=Matrix. |
| Hydric Soil | | | | 5.1 | | 0 (| (00) (I DI | | | Problematic Hydric Soils ³ : |
| Histosol Histic E | (A1) pipedon (A2 | <u>'</u>) | | | alue Belov RA 149B) | | (58) (LRI | κк, | | k (A10) (LRR K, L, MLRA 149B) irie Redox (A16) (LRR K, L, R) |
| Black Hi | stic (A3) | | | | | | | LRA 149B) |) 5 cm Mucl | ky Peat or Peat (S3) (LRR K, L, R) |
| | n Sulfide (A d Layers (A | | | | / Mucky M / Gleyed N | | | , L) | | ace (S7) (LRR K, L) Below Surface (S8) (LRR K, L) |
| | d Below Da | | (A11) | | ted Matrix | | , | | | Surface (S9) (LRR K, L) |
| | ark Surface | | | | Dark Sur | | .7) | | - | anese Masses (F12) (LRR K, L, R) |
| - | lucky Miner Gleyed Matri | | | | ted Dark S Depressi | | 7) | | | Floodplain Soils (F19) (MLRA 149B) odic (TA6) (MLRA 144A, 145, 149B) |
| - | Redox (S5) | | | | | | | | | nt Material (F21) |
| | Matrix (S6) rface (S7) (| | Ι R Δ 149Ι | 3) | | | | | - | low Dark Surface (TF12) plain in Remarks) |
| | | | | | | | | | | , |
| Indicators o | | | on and we | etland hydro | ology mus | t be prese | ent, unless | disturbed | or problematic. | |
| Type: | Layer (II Ob | isci veuj. | | | | | | | | |
| | ches): | | | | | | | | Hydric Soil Pre | esent? Yes <u>/</u> No |
| Remarks: | | | | | | | | | | |
| The soils | are cla | yey wi | th redo | x featu | res fou | nd witl | hin the | first 12 | 2 inches. | |
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wasa1027e_w_E



wasa1027e_w_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | |
|---|--|---------------------------------|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | |
| File #: wasa1027 | Date of visit(s): 2020-05-22 | |
| Location: PLSS: sec 20 T047N R004W | Ecological Landsca Lake Superior Clay Plair | • |
| Lat: <u>46.540332</u> Long: <u>-90.895302</u> | Watershed: LS09, Lower Bad River | |
| County: Ashland Town/City/Village: Gingles town | | |
| SITE DESCRIPTION | | |
| Soils: Mapped Type(s): | WWI Class: N/A | |
| Sanborg-Badriver complex, 0 to 6 percent slopes Field Verified: | Wetland Type(s): PEM- wet mead | ow |
| The soils were not field verified. | Wetland Size: 0.2191 | Wetland Area Impacted 0.2191 |
| | Vegetation: Plant Community D | Description(s): |
| Hydrology: The hydrologic regime is saturated with water saturation observed at 12 inches. The major source of hydrology is from surface water. | • | wet meadow dominated by |
| | | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| HU Y/N Potential Human Usa Values: recreation, culture, education, science, natural scenic beauty | | | | Functional Value Assessment | | | | | |
|--|----|-----|------|---|--|--|--|--|--|
| 2 N N Used for educational or scientific purposes 3 N Y Visually or physically accessible to public 4 N N A Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation 5 N N List 6 N N In or adjacent to RED FLAG areas 7 N N N In or adjacent to archaeological or cultural resource site WH WH Widtlife Habitat 1 N N Welland and contiguous habitat for endangered, threatened or special concern species 2 N N 3 or more strata present (-10% cover) 3 N N Within or adjacent to habitat common to the provide of the provide | | | | | | | | | |
| 3 | | N | | | | | | | |
| N | 2 | Ν | N | Used for educational or scientific purposes | | | | | |
| 5 | 3 | Ν | Υ | Visually or physically accessible to public | | | | | |
| 5 | 4 | | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation | | | | | |
| S | _ | | | | | | | | |
| 7 | 5 | N | N | | | | | | |
| 7 | 6 | N | N | | | | | | |
| WH | | | | | | | | | |
| 1 N N Welland and contiguous habital >10 acres 2 N N N 3 or more strata present (> 10% cover) 3 N N N Within or adjacent to habitat corridor or established wildlife habitat area 4 N N N 100 m buffer − natural land cover ≥50% (south) 75% (north) intact 5 N N Coccurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex,etc.) 7 N N Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) Fish and Aquatic Life Habitat 1 N N Welland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 2 N N Provides habitat Stream, lake, pond or open water area (≥1 acre) - if no, not applicable water levels or high flows - if no, not applicable 3 N N Densely roted emergent or woody vegetation 5 Storm and Floodwater Storage 1 N N Basin welland, constricted outlet, has through-flow or is adjacent to a stream 4 N Potential for errosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable 5 N N Dense, persistent vegetation 6 N N Dense, persistent vegetation 7 N N N Welthin a watershed with ≤10% or the namelized 8 N N Potential to hold-10% of the runoff from contributing area from a 2-year 24-hour storm event 9 N N N Seprings, seeps or indicators of storm and floodwater based on previous section 1 N N Provides su | | IN | IN | | | | | | |
| 2 | | NI | NI | | | | | | |
| 3 | | | | | | | | | |
| 4 N N 100 m buffer − natural land cover ≥60%(south) 75% (north) intact 5 N N Occurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex,etc.) 7 N Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 11 N N Seasonally exposed mudflats present 11 N N N Wetland is connected or continuous with perennial stream or lake 11 N N Wetland is connected or continuous with perennial stream or lake 12 N Y Standing water provides habitat for amphibians and aquatic invertebrates 13 N N N Wetland is connected or continuous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 2 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable 2 N N Densely rooted emergent or woody vegetation Storm and Floodwater Storage 1 N N Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 Y Y Water flow through wetland is NOT channelized 4 N N Evidence of flashy hydrology 5 Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Water flow through wetland is NOT channelized 9 N N Basin wetland or constricted outlet 4 N N Provides substantial storage of storm and floodwater based on previous section 9 N N Stormwater or surface water from agricultural land is major hydrology source 1 | | | | | | | | | |
| 5 N N S Cocurs in a Joint Venture priority township 6 N N N Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) 7 N Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) Fish and Aquatic Life Habitat 1 N N Wetland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring 5 P Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 2 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable 3 N N Densely rooted emergent or woody vegetation 5 Storm and Floodwater Storage 1 N N Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 Y Y Water flow through wetland is NOT channelized 4 N N Evidence of flashy hydrology 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Method Standard or constricted outlet 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event Water Quality Protection 1 N N Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N N Standard or constricted outlet 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event Water Quality Protection 1 N N Basin wetland or constricted outlet 9 N N Standard or constricted outlet 9 | | | | | | | | | |
| 6 N N N Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex,etc.) 7 N N Supports or provides habitat for SGCN or birds listed in the Wi All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudifats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) FAA Fish and Aquatic Life Habitat 1 N N Wetland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable 3 N N Densely rooted emergent or woody vegetation ST Storm and Floodwater Storage 1 N N Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 4 N N Evidence of flashy hydrology 5 Y Y Dense, persistent vegetation 4 N N N Evidence of flashy hydrology 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with <210% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WO | | | | _ | | | | | |
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| 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) FA FA Fish and Aquatic Life Habitat 1 N Wetland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 2 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable 3 N Densely rooted emergent or woody vegetation ST Storm and Floodwater Storage 1 N N Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 Y Y Water flow through wetland is NOT channelized 3 Y Y Dense, persistent vegetation 4 N N Evidence of flashy hydrology 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with ≤10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 1 N N Provides substantial storage of storm and floodwater based on previous section 1 N N Provides substantial storage of storm and floodwater based on previous section 1 N N Provides substantial storage of storm and floodwater based on previous section 1 N N Provides substantial storage of storm and floodwater based on previous section 1 N N Sasin wetland associated with a lake or stream 1 N | - | | | | | | | | |
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| 12 | | | | • ' ' | | | | | |
| FA Fish and Aquatic Life Habitat | | N | N | | | | | | |
| 1 N N Wetland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 2 N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable 3 N Densely rooted emergent or woody vegetation ST Storm and Floodwater Storage 1 N N Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 Y Y Water flow through wetland is NOT channelized 3 Y Y Dense, persistent vegetation 4 N N Evidence of flashy hydrology 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with ≤10% wetland 8 N N Potential to hold >10% of the runofit from contributing area from a 2-year 24-hour storm event WQC Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 8 Basin wetland or constricted outlet 9 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water 9 N N N Natural land cover in 100m buffer area < 50% Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N N Springs, seeps or indicators of groundwater present 2 N N N Springs, seeps or indicators of groundwater present 2 N N N Wetland soils are organic | 12 | N | N | , , | | | | | |
| 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable 3 N N Densely rooted emergent or woody vegetation ST Storm and Floodwater Storage 1 N N Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 Y Water flow through wetland is NOT channelized 3 Y Y Dense, persistent vegetation 4 N N Evidence of flashy hydrology 5 Y P Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with <10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Perovides substantial storage of storm and floodwater based on previous section 2 N N Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water 9 N N Natural land cover in 100m buffer area < 50% Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Natural land cover in 100m buffer area < 50% Groundwater Processes 1 N N Wetland soils are organic | FA | | | Fish and Aquatic Life Habitat | | | | | |
| 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable 3 N N Densely rooted emergent or woody vegetation Storm and Floodwater Storage 1 N N Basin wetland, constricted outlet, has through-flow or is adjacent to a stream Storm and Floodwater Storage 1 N N Evidence of flashy hydrology 4 N N Evidence of flashy hydrology 5 Y Y Dense, persistent vegetation 4 N N Impervious surfaces cover >10% of land surface within the watershed N N Within a watershed with ≤10% wetland N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 N N Basin wetland or constricted outlet N N Perovides substantial storage of storm and floodwater based on previous section 2 N N Sasin wetland or constricted outlet N N Servine Provides a substantial storage of storm and floodwater based on previous section 2 N N Sasin wetland or constricted outlet N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth Y Y Stormwater or surface water from agricultural land is major hydrology source N N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth Y Y Stormwater or surface water from agricultural land is major hydrology source N N N Springs, seeps or indicators of groundwater present N N Springs, seeps or indicators of groundwater wetland N N Wetland remains saturated for an extended time period with no additional water inputs | 1 | N | N | Wetland is connected or contiguous with perennial stream or lake | | | | | |
| N | 2 | | | | | | | | |
| 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 2 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable 3 N N Densely rooted emergent or woody vegetation ST Storm and Floodwater Storage 1 N N Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 Y Y Water flow through wetland is NOT channelized 3 Y Y Dense, persistent vegetation 4 N N Evidence of flashy hydrology 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section | 3 | | | • ' ' | | | | | |
| SP Shoreline Protection N | - | | | | | | | | |
| 1 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable 3 N N D Densely rooted emergent or woody vegetation ST Storm and Floodwater Storage 1 N N Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 Y Y Water flow through wetland is NOT channelized 3 Y Y Dense, persistent vegetation 4 N N Evidence of flashy hydrology 5 Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with ≤10% wetland 8 N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 N N Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Dense, persistent vegetation 8 N N Discharge to surface water from agricultural land is major hydrology source 9 N N Natural land cover in 100m buffer area < 50% Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | ., | | | | | | | |
| Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows — if no, not applicable | | N | N | | | | | | |
| N | | 11 | 11 | | | | | | |
| ST | 2 | Ν | N | | | | | | |
| Storm and Floodwater Storage 1 N N Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 Y Y Water flow through wetland is NOT channelized 3 Y Y Dense, persistent vegetation 4 N N Evidence of flashy hydrology 5 Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with <10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 N N Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland soils are organic | 3 | NI | NI | | | | | | |
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| 7 N N Within a watershed with ≤10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 N N Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N N Natural land cover in 100m buffer area < 50% | | | | | | | | | |
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| 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% | - | | | | | | | | |
| 9 N N Natural land cover in 100m buffer area < 50% Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | | | | | | |
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| 4 N N Wetland soils are organic | | | | | | | | | |
| | - | | | | | | | | |
| 5 N N Wetland is within a wellhead protection area | | | | | | | | | |
| | 5 | N | N | Wetland is within a wellhead protection area | | | | | |

Section 1 Comments (Refer to Section 1 numbers) HU-3 the wetland is visible from the road but will likely disappear from view as the growing season progresses and the surrounding vegetation grows taller. WH-10/FA-2/4 inundation is likely in spring or after large rain events. During these times, the wetland could likely hold water long enough to provide cover for some aquatic organisms. ST-3/WQ-5 the vegetation is dense at the time of the survey. St-5/WQ-7 the wetland is fed primarily by surface water and runoff from the hay field. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Avian Υ **Butterflies** Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | inty intogrity (on olo) | | | |
|--|--|---|--|--|
| | Low | Medium | High | Exceptional |
| Invasive species cover | > 50% | 20-50% | 10-20% 🗸 | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 | S2 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-----------------------|-------------|------|-------------------|---|
| Agrostis gigantea | | | Pem | Rare |
| Carex stipata | | | Pem | Rare |
| Cicuta maculata | | | Pem | Barren |
| Equisetum arvense | | | Pem | Barren |
| Glyceria grandis | | | Pem | Rare |
| Impatiens capensis | | | Pem | Barren |
| Juncus effusus* | | | Pem | Patchy |
| Phalaris arundinacea* | | | Pem | Rare |
| Salix petiolaris | | | Pem | Rare |
| Scirpus cyperinus* | | | Pem | Rare |
| Solidago gigantea | | | Pem | Rare |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low due to presence of invasive species, only a herbaceous layer being represented, and the abundance of the plant community.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| Х | Х | | М | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| Х | Х | | Н | С | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | Х | | L | С | Roads or railroad |
| Х | Х | | Н | С | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | | | | 0 | Removal of herbaceous stratum – mowing, |
| | X | | M | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Х | Х | | М | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | , |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is located in a hayfield and within a likely mowed utility corridor. There is a gravel road and a personal |
|--|
| residence within the buffer area. The wetland potentially receives runoff from these areas. Invasive species are |
| present within the wetland feature. |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|--------|-------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | / | | | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | V | | | | |
| Fish and Aquatic Life Habitat | / | | | | |
| Shoreline Protection | | | | | / |
| Flood and Stormwater Storage | / | | | | |
| Water Quality Protection | ✓ | | | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | The floristic integrity is low due to the presence of invasive species, missing strata, and commonality of the plant community. |
| Human Use Values | The area is used to grow hay. |
| Wildlife Habitat | Only a single strata present limits the wetlands use by wildlife species. |
| Fish and Aquatic Life Habitat | There is potential for the area to be used by aquatic organisms during times of sustained ponding. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The feature is shallow and narrow which limits the amount of water the feature can hold. |
| Water Quality Protection | The feature is narrow and linear which limits the amount of water it can filter overall . |
| Groundwater Processes | The feature does not appear to influence ground water processes. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ash | land sa | ampling Date: 2020-05-22 | | | | |
|--|---|---------------------------------------|-----------------------------|--|--|--|--|
| • | State: Wisconsin Sampling Point: wasa1027_u | | | | | | |
| Investigator(s): SBR/DGL | | | | | | | |
| Landform (hillslope, terrace, etc.): Rise | | | | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46.54 | | | | | | | |
| Soil Map Unit Name: Sanborg-Badriver complex, (|) to 6 percent slor | NWI classification | nn. | | | | |
| Are climatic / hydrologic conditions on the site typical for this time | | | | | | | |
| Are Vegetation, Soil, or Hydrology signifi | | | | | | | |
| | - | | | | | | |
| Are Vegetation, Soil, or Hydrology natura | | | | | | | |
| SUMMARY OF FINDINGS – Attach site map sho | wing sampling poir | nt locations, transects, ir | nportant features, etc. | | | | |
| Hydrophytic Vegetation Present? Yes No | ✓ Is the Samp | oled Area | | | | | |
| Hydric Soil Present? Yes No | <u>· </u> | etland? Yes | No <u>/</u> | | | | |
| Wetland Hydrology Present? Yes No | | nal Wetland Site ID: | | | | | |
| Remarks: (Explain alternative procedures here or in a separate | e report.) | | | | | | |
| The upland is located on a rise between tw | | , | , | | | | |
| sample serves as their shared upland poin | t. The area is located | ated within a hay field | and dominated by | | | | |
| pasture grasses. | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| HYDROLOGY | | | | | | | |
| Wetland Hydrology Indicators: | | Secondary Indicators | s (minimum of two required) | | | | |
| Primary Indicators (minimum of one is required; check all that a | apply) | · · · · · · · · · · · · · · · · · · · | | | | | |
| | ained Leaves (B9) | Drainage Patter | | | | | |
| High Water Table (A2) Aquatic F | | Moss Trim Lines | | | | | |
| Saturation (A3) Marl Dep | osits (B15) | Dry-Season Wa | ter Table (C2) | | | | |
| Water Marks (B1) Hydroger | n Sulfide Odor (C1) | Crayfish Burrow | s (C8) | | | | |
| | - | Roots (C3) Saturation Visib | le on Aerial Imagery (C9) | | | | |
| <u> </u> | e of Reduced Iron (C4) | Stunted or Stres | | | | | |
| | on Reduction in Tilled Soi | | | | | | |
| | ck Surface (C7) | Shallow Aquitar | | | | | |
| | xplain in Remarks) | Microtopographi | ` ' | | | | |
| Sparsely Vegetated Concave Surface (B8) | | FAC-Neutral Te | st (D5) | | | | |
| Field Observations: Surface Water Present? Yes No ✓ Depth (i | nohoo); | | | | | | |
| Surface Water Present? Yes No _v _ Depth (i Water Table Present? Yes No _v _ Depth (i | | | | | | | |
| Saturation Present? Yes No _v Depth (i | | Wetland Hydrology Present? | Vos No v | | | | |
| (includes capillary fringe) | · | | 165 NO | | | | |
| Describe Recorded Data (stream gauge, monitoring well, aeria | photos, previous inspecti | ions), if available: | | | | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| No indicators of wetland hydrology were of | oserved. | | | | | | |
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VEGETATION – Use scientific names of plants.

| 7. 0 | Absolute | | t Indicator | Dominance Test worksheet: |
|---|---------------|------------|--------------|--|
| Tree Stratum (Plot size: 30 | | | Status | Number of Dominant Species |
| 1 | | | | That Are OBL, FACW, or FAC:(A) |
| 2 | | | | Total Number of Dominant |
| 3 | - | - | | Species Across All Strata: (B) |
| 4 | | | | Percent of Dominant Species |
| 5 | | | | That Are OBL, FACW, or FAC:0 (A/B) |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | 0 | = Total Co | over | OBL species0 x 1 =0 |
| Sapling/Shrub Stratum (Plot size:) | | | | FACW species0 x 2 =0 |
| 1 | | | | FAC species0 x 3 =0 |
| 2. | | | | FACU species x 4 = |
| 3 | | | | UPL species <u>27</u> x 5 = <u>135</u> |
| 4 | | | | Column Totals:100 (A)427 (B) |
| 5 | | | | Prevalence Index = B/A = 4.27 |
| | | | | Hydrophytic Vegetation Indicators: |
| 6 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| 7 | | | | 2 - Dominance Test is >50% |
| | | = Total Co | over | 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5) | 50 | V | FACU | 4 - Morphological Adaptations ¹ (Provide supporting |
| 1. <u>Dactylis glomerata</u> | | | UPL | data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) |
| 2. Bromus inermis | | <u>I</u> | | 1 Tobiematic Hydrophytic Vegetation (Explain) |
| 3. Poa pratensis | _ | N | FACU | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. <u>Trifolium pratense</u> | | _N_ | FACU | be present, unless disturbed or problematic. |
| 5. <u>Taraxacum officinale</u> | | <u>N</u> | <u>FACU</u> | Definitions of Vegetation Strata: |
| 6. <u>Plantago major</u> | | | <u>FACU</u> | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7. <u>Fragaria virginiana</u> | 2 | N | <u>FACU</u> | at breast height (DBH), regardless of height. |
| 8. <u>Leucanthemum vulgare</u> | 2 | N | <u>UPL</u> | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | ī | | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12. | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | | = Total Co | over | height. |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | | |
| | | | | |
| 2 | | | | |
| 3 | | | - | Hydrophytic Vegetation |
| 4 | _ | | | Present? Yes No |
| Demander (Include whate growth are have as an account. | | = Total Co | over | |
| Remarks: (Include photo numbers here or on a separate The sample point is representative of the | | nd area | and is d | ominated by pasture grasses including |
| orchard grass and smooth brome. | io apiai | | aa | graces mercang |
| grace and emergine | | | | |
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Sampling Point: wasa1027_u

SOIL Sampling Point: wasa1027_u

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | | | |
|---|------------------------------|-------------|------------|--------------|-------------------------|------------|-------------|------------------|-----------------|---|
| Depth Matrix Redox Features | | | | | | | | | | |
| (inches) | Color (| - | <u>%</u> | Color (r | noist) | | Type' | Loc ² | <u>Texture</u> | Remarks |
| 0-16 | <u>5YR</u> | 3/3 | <u>100</u> | | | 0 | | | SIL | |
| 16-20 | <u>5YR</u> | 5/2 | 95 | 5YR | 4/6 | 5 | _C_ | _M_ | SICL | |
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| ¹ Type: C=Co | | | etion, RM | =Reduced I | Matrix, MS | S=Masked | Sand Gr | ains. | | PL=Pore Lining, M=Matrix. or Problematic Hydric Soils ³ : |
| Histosol | | | | Polyve | alue Belov | v Surface | (S8) (I RI | 2 P | | ck (A10) (LRR K, L, MLRA 149B) |
| | oipedon (A2 | 2) | | - | RA 149B) | | (00) (EIX | ν ιν, | | airie Redox (A16) (LRR K, L, R) |
| | stic (A3) | | | | | | | LRA 149B) | | cky Peat or Peat (S3) (LRR K, L, R) |
| | en Sulfide (A d Layers (A | | | | y Mucky N y Gleyed I | | | ., L) | | face (S7) (LRR K, L) e Below Surface (S8) (LRR K, L) |
| | d Below Da | | e (A11) | | ted Matrix | | .) | | | k Surface (S9) (LRR K, L) |
| Thick Da | ark Surface | (A12) | , | Redox | d Dark Sui | rface (F6) | | | Iron-Man | ganese Masses (F12) (LRR K, L, R) |
| - | lucky Mine | | | | ted Dark S | | 7) | | | t Floodplain Soils (F19) (MLRA 149B) |
| - | Gleyed Matr Redox (S5) | ix (S4) | | Redox | Depress | ions (F8) | | | | oodic (TA6) (MLRA 144A, 145, 149B) ent Material (F21) |
| - | Matrix (S6 |) | | | | | | | | allow Dark Surface (TF12) |
| | rface (S7) (| | ILRA 1491 | 3) | | | | | | xplain in Remarks) |
| 3Indicators o | f bydrophyt | io vogototi | ion and w | stland bydr | ology muo | t ha proof | ant unloc | a diaturhad | or problematic. | |
| Restrictive I | | - | ion and we | etiano nyoro | ology mus | t be prese | ent, unies: | s disturbed | or problematic. | |
| Type: | , (| ,. | | | | | | | | |
| | ches): | | | | | | | | Hydric Soil Pr | resent? Yes No/_ |
| Remarks: | | | | | | | | | | |
| A reddish | n colore | d soil t | hat do | es not r | neet ar | ny hyd | ric soil | indicate | ors. | |
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wasa1027_u_N



wasa1027_u_SE

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project City | /County: Ashland Sampling Date: 2020-05-22 |
|---|---|
| • | State: Wisconsin Sampling Point: wasa1028e_w |
| Investigator(s): SBR/DGL Sec | |
| | elief (concave, convex, none): Concave Slope (%): 0-2% |
| | Long: -90.895031 Datum: WGS84 |
| | ercent slopes NWI classification: |
| Are climatic / hydrologic conditions on the site typical for this time of year? | |
| | urbed? Are "Normal Circumstances" present? Yes No |
| | |
| Are Vegetation, Soil, or Hydrology naturally problem | |
| SUMMARY OF FINDINGS – Attach site map showing sa | mpling point locations, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes No | Is the Sampled Area |
| Hydric Soil Present? Yes No | within a Wetland? Yes No |
| Wetland Hydrology Present? Yes No | If yes, optional Wetland Site ID: |
| Remarks: (Explain alternative procedures here or in a separate report.) | a hay field. The feature is deminated by |
| The wetland is a small depression on the edge of disturbance-tolerant graminoids like soft rush and | • |
| disturbance-tolerant graniinolds like soft fusit and | woolgrass. |
| | |
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| | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | · , |
| Surface Water (A1) Water-Stained Lear | |
| High Water Table (A2) Aquatic Fauna (B1: | |
| Saturation (A3) Marl Deposits (B15 | |
| Water Marks (B1) Hydrogen Sulfide C | Odor (C1) Crayfish Burrows (C8) eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) |
| | |
| Drift Deposits (B3) Presence of Reduction Algal Mat or Crust (B4) Recent Iron Reduction | · · · · · · · · · · · · · · · · · · · |
| Iron Deposits (B5) Thin Muck Surface | |
| Indit Deposits (B5) Thin Mack outlace Inundation Visible on Aerial Imagery (B7) Other (Explain in R | |
| Sparsely Vegetated Concave Surface (B8) | FAC-Neutral Test (D5) |
| Field Observations: | I AC-Neutiai Test (D3) |
| Surface Water Present? Yes No _ ✓ Depth (inches): | |
| Water Table Present? Yes No _v Depth (inches): | |
| Saturation Present? Yes No _ v _ Depth (inches): | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, p | raviaus inspections) if available: |
| Describe Recorded Data (stream gauge, monitoring well, aeriai priotos, p | revious inspections), ii avaliable. |
| | |
| Remarks: | |
| The hydrologic regime is temporarily flooded. | |
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VEGETATION – Use scientific names of plants.

| T 01 1 (D11) 20 | Absolute | | Indicator | Dominance Test worksheet: |
|---|---------------------|--------------|-------------|---|
| Tree Stratum (Plot size:30) | | Species? | | Number of Dominant Species |
| 1 | | | | That Are OBL, FACW, or FAC:3 (A) |
| 2 | _ | | | Total Number of Dominant |
| 3 | _ | | | Species Across All Strata: (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: |
| | | _= Total Co | ver | OBL species <u>45</u> x 1 = <u>45</u> |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species5 x 2 =10 |
| 1 | _ | | | FAC species 0 x 3 = 0 |
| 2 | _ | _ | | FACU species x 4 = 0 |
| 3 | | | | UPL species <u>0</u> x 5 = <u>0</u> |
| 4. | | | | Column Totals:(A) |
| 5 | | | | Prevalence Index = B/A =1_1 |
| 6. | | | | Hydrophytic Vegetation Indicators: |
| | | - | | 1 - Rapid Test for Hydrophytic Vegetation |
| 7 | | | | 2 - Dominance Test is >50% |
| _ | | _= Total Co | ver | 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5) 1. Juncus effusus | 20 | V | OBL | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| | | _ <u> </u> | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. <u>Eleocharis acicularis</u> | | <u></u> | OBL | 1 Toblematic Trydrophytic Vegetation (Explain) |
| 3. <u>Persicaria hydropiper</u> | | _ <u>Y</u> | <u>OBL</u> | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. <u>Scirpus cyperinus</u> | 5 | _ <u>N</u> | OBL | be present, unless disturbed or problematic. |
| 5. <i>Phalaris arundinacea</i> | 5 | N | <u>FACW</u> | Definitions of Vegetation Strata: |
| 6 | _ | | | |
| 7. | | | | Tree – Woody plants 3 in. (7.6 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 or equal to 3.28 ft (1 m) tall. |
| | | | | |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 11 | | | · | |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in height. |
| | 50 | _ = Total Co | ver | |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | _ | | | |
| 2 | | | | |
| 3. | | | | Hydrophytic |
| | | | | Vegetation |
| 4 | _ | | | Present? Yes <u>✓</u> No |
| Describes (Include abote growthers have an agency and | | _= Total Co | ver | |
| Remarks: (Include photo numbers here or on a separate The vegetation is still emerging at the t | sheet.) ima of s | SURVAV S | nd half | of the wetland is covered with remnant |
| biomass. The sample point is represen | | • | | |
| biomass. The sample point is represent | ianv e U | i lile we | uailu ite | aturo. |
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Sampling Point: wasa1028e_w

SOIL Sampling Point: wasa1028e_w

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | | | |
|--|------------------|------------|------|-------------------|-----|----------------|-------------------|------------------|---|-----------------------|
| Depth Matrix Redox Features | | | | | | | | | | |
| (inches) | Color (7.5YR | | 90 | Color (r 7.5YR | | <u>%</u> 10 | Type ¹ | Loc ² | <u>Texture</u> SIC | <u>Remarks</u> |
| 0-5 | | | | | | | | | <u> </u> | |
| | <u>5YR</u> | 4/2 | _80_ | <u>5YR</u> | 4/6 | _20_ | <u> </u> | _M_ | <u> </u> | |
| <u>16-20</u> | <u>5YR</u> | 3/1 | 95 | 5YR | 3/4 | 5 | <u> </u> | _M_ | C | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) Histose 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 Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, L) Piedmont Floodplain Soils (F19) (MLRA 149B) MERA 149B) Polyvalue Below Surface (S9) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Sandy Flood (TA6) (MLRA 144A, 145, 149B) Thindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. | | | | | | | | | for Problematic Hydric Soils ³ : luck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) lucky Peat or Peat (S3) (LRR K, L, R) urface (S7) (LRR K, L) lue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L) anganese Masses (F12) (LRR K, L, R) both Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21) hallow Dark Surface (TF12) Explain in Remarks) | |
| Restrictive Type: | Layer (II or | osci vcuj. | | | | | | | | |
| Depth (in | ches): | | | | | | | | Hydric Soil | Present? Yes <u> </u> |
| Remarks: A clayey soil with redox concentrations throughout the profile. | | | | | | | | | | |



wasa1028e_w_E



wasa1028e_w_NE

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | |
|--|--|--|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | | |
| File #: wasa1028 | Date of visit(s): 2020-05-22 | | |
| Location: PLSS: sec 20 T047N R004W | Ecological Landsca Lake Superior Clay Plair | • | |
| Lat: 46.540358 Long: -90.895303 County: Ashland Town/City/Village: Gingles town | Watershed: LS09, Lower Bad River | | |
| SITE DESCRIPTION | | | |
| Soils: Mapped Type(s): | WWI Class: | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes Field Verified: | Wetland Type(s): PEM- wet meadow | | |
| The soils were not field verified. | Wetland Size: 0.0658 | Wetland Area Impacted 0.0658 | |
| | Vegetation: Plant Community D | Description(s): | |
| Hydrology: The hydrologic regime is temporarily flooded with inundation likely in the spring or with heavy rain events. The major source of hydrology is from surface water. | | a wet meadow dominated by rant graminoids including soft | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | | Functional Value Assessment | | | | |
|----|--------|-----------|--|--|--|--|--|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty | | | | |
| 1 | Ν | N | Used for recreation (hunting, birding, hiking, etc.). List: | | | | |
| 2 | Ν | N | Used for educational or scientific purposes | | | | |
| 3 | Ν | N | Visually or physically accessible to public | | | | |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation | | | | |
| E | | | In or adjacent to RED FLAG areas | | | | |
| 5 | N | N | List: | | | | |
| 6 | Ν | N | Supports or provides habitat for endangered, threatened or special concern species | | | | |
| 7 | Ν | N | In or adjacent to archaeological or cultural resource site | | | | |
| WH | | • • | Wildlife Habitat | | | | |
| 1 | N | N | Wetland and contiguous habitat >10 acres | | | | |
| 2 | N | N | 3 or more strata present (>10% cover) | | | | |
| 3 | N | N | Within or adjacent to habitat corridor or established wildlife habitat area | | | | |
| 4 | N | Y | 100 m buffer – natural land cover >50%(south) 75% (north) intact | | | | |
| 5 | N | N | Occurs in a Joint Venture priority township | | | | |
| 6 | N | N | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) | | | | |
| | IN | IN | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other | | | | |
| 7 | Ν | Ν | plans | | | | |
| 8 | N | N | Part of a large habitat block that supports area sensitive species | | | | |
| 9 | N N | N N | Ephemeral pond with water present > 45 days | | | | |
| 10 | | | Standing water provides habitat for amphibians and aquatic invertebrates | | | | |
| 11 | N | Y | · · · · · · · · · · · · · · · · · · · | | | | |
| | N | N | Seasonally exposed mudflats present | | | | |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) | | | | |
| FA | | . | Fish and Aquatic Life Habitat | | | | |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake | | | | |
| 2 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates | | | | |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system | | | | |
| 4 | N | Y | Vegetation is inundated in spring | | | | |
| SP | | | Shoreline Protection | | | | |
| 1 | N | N | Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable | | | | |
| 2 | N | N | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating | | | | |
| | | | water levels or high flows – if no, not applicable | | | | |
| 3 | N | N | Densely rooted emergent or woody vegetation | | | | |
| ST | | | Storm and Floodwater Storage | | | | |
| 1 | N | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream | | | | |
| 2 | Υ | Υ | Water flow through wetland is NOT channelized | | | | |
| 3 | N | Υ | Dense, persistent vegetation | | | | |
| 4 | N | N | Evidence of flashy hydrology | | | | |
| 5 | Υ | Υ | Point or non-point source inflow | | | | |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed | | | | |
| 7 | N | N | Within a watershed with ≤10% wetland | | | | |
| 8 | Ν | N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event | | | | |
| WQ | | | Water Quality Protection | | | | |
| 1 | Ν | N | Provides substantial storage of storm and floodwater based on previous section | | | | |
| 2 | N | N | Basin wetland or constricted outlet | | | | |
| 3 | Υ | Y | Water flow through wetland is NOT channelized | | | | |
| 4 | Ζ | N | Vegetated wetland associated with a lake or stream | | | | |
| 5 | Ν | Y | Dense, persistent vegetation | | | | |
| 6 | N | N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth | | | | |
| 7 | Y | Y | Stormwater or surface water from agricultural land is major hydrology source | | | | |
| 8 | N | N | Discharge to surface water | | | | |
| 9 | N | N | Natural land cover in 100m buffer area < 50% | | | | |
| GW | | 1.4 | Groundwater Processes | | | | |
| 1 | N | N | Springs, seeps or indicators of groundwater present | | | | |
| | | | | | | | |
| 2 | N | N | Location near a groundwater divide or a headwater wetland Wetland remains acturated for an extended time period with ne additional water inputs | | | | |
| 3 | N | N | Wetland remains saturated for an extended time period with no additional water inputs | | | | |
| 4 | N | N | Wetland soils are organic | | | | |
| 5 | N | N | Wetland is within a wellhead protection area | | | | |

| Section 1 Comments (Refer to Section 1 numbers) NH-10/FA-2/4 After spring inundation or heavy rain events, it is likely the wetland will hold enough water to be able to provide habitat for some aquatic organisms. ST-3/WQ-5 the vegetation is not approximately the second of the comment of th | | | | | | |
|--|---------------|--|--|--|--|--|
| | | likely be dense later on in the growing season. St-5/WQ-7 the wetland is fed primarily by surface water. | | | | |
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| Wi | Idlife Habita | at and Species Observation (including amphibians and reptiles) | | | | |
| | | oservation, tracks, scat, other sign; type of habitat: nesting, migratory, | | | | |
| wii | nter, etc. | | | | | |
| Observed | Potential | Species/Habitat/Comments | | | | |
| Y | Y | Avian | | | | |
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| Fis | sh and Agua | atic Life Habitat and Species Observations | | | | |
| | | oservation, other sign; type of habitat: nesting, spawning, nursery areas, etc. | | | | |
| | T | | | | | |
| Observed | Potential | Species/Habitat | | | | |
| | Y | Aquatic invertebrates | | | | |
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SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| Traine Community intogrety (Circle) | | | | | |
|--|--|---|--|--|--|
| | Low | Medium | High | Exceptional | |
| Invasive species cover | > 50% | 20-50% | 10-20% 🗸 | <10% | |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented | |
| NHI plant community ranking | S4V | S3 | S2 | S1-S2 (S2 high quality) | |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare | |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 | |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 | |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|------------------------|-------------|------|-------------------|---|
| Agrostis gigantea* | | | Pem | Rare |
| Carex stipata | | | Pem | Rare |
| Eleocharis acicularis* | | | Pem | Rare |
| Juncus effusus* | | | Pem | Rare |
| Persicaria hydropiper | | | Pem | Rare |
| Phalaris arundinacea | | | Pem | Rare |
| Scirpus cyperinus | | | Pem | Rare |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low due to the presence of invasive species, limited strata representation, and the common abundance of the plant community type.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| ` ' | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| Х | Х | | М | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| Х | Х | | Н | С | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | Х | | L | С | Roads or railroad |
| Х | Х | | Н | С | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | V | | | | Removal of herbaceous stratum – mowing, |
| | X | | L | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| X | Χ | | L | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
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^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is a small depression in a hay field and next to a pine plantation. The buffer zone contains a likely |
|---|
| mowed utility corridor and a gravel road. The feature likely receives hydrologic input from stormwater or field runoff. |
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^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|--------|-------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | / | | | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | V | | | | |
| Fish and Aquatic Life Habitat | V | | | | |
| Shoreline Protection | | | | | / |
| Flood and Stormwater Storage | / | | | | |
| Water Quality Protection | ✓ | | | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE | | | |
|----------------------------------|--|--|--|--|
| Floristic Integrity | The floristic integrity is low due to the presence of invasive species, low species diversity, presence of only one strata, and commonness of the plants within the community. | | | |
| Human Use Values | The area is used to grow hay. | | | |
| Wildlife Habitat | The feature is small in size and missing strata which limits the availabilty of wildlife habitat. | | | |
| Fish and Aquatic Life Habitat | There is potential for the wetland to support aquatic organisms but only during times of sustained inundation. | | | |
| Shoreline Protection | N/A | | | |
| Flood and Stormwater Storage | The feature's small size limits is holding capacity. | | | |
| Water Quality Protection | The feature's small size limits the amount of water it can filter. | | | |
| Groundwater Processes | The wetland does not appear to influence ground water processes. | | | |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ash | ıland | Sampling Date: <u>2020-05-22</u> |
|--|--|--|--|
| Applicant/Owner: Enbridge | | State: Wiscons | in Sampling Point: wasa1030e_w |
| Investigator(s): SBR/DGL | Section, Township | , Range: Sec 20 T047N | I R004W |
| Landform (hillslope, terrace, etc.): Depression | | = | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 4 | | | |
| Soil Map Unit Name: Sanborg-Badriver comp | | | |
| Are climatic / hydrologic conditions on the site typical for | this time of year? Yes N | No (If no, explain in R | emarks.) |
| Are Vegetation, Soil, or Hydrology | significantly disturbed? | Are "Normal Circumstances" p | oresent? Yes No |
| Are Vegetation, Soil, or Hydrology | | (If needed, explain any answer | |
| SUMMARY OF FINDINGS - Attach site ma | p showing sampling poi | nt locations, transects | , important features, etc. |
| Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes V | No within a Wo | pled Area etland? Yes <u>/</u> | No |
| Wetland Hydrology Present? Yes Remarks: (Explain alternative procedures here or in a second content of the content of | ' ' ' | nal Wetland Site ID: | |
| The wetland is a sedge meadow dominated potential ATV trail, extend the wetland sligh wetland and hold water, with slight overflow surrounding area are not dominated by lake other sedges. There is evidence (mowed slime. | ntly beyond its shallow de v onto the nearby surroun e sedge like the sample p | pression. The ruts likely ding area, after heavy r oint is, but also include | y drain water from the rain events. The ruts and reed canary grass and |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | Secondary Indica | tors (minimum of two required) |
| Primary Indicators (minimum of one is required; check a | | | , , |
| | Vater-Stained Leaves (B9) | Drainage Pat | |
| | Aquatic Fauna (B13) | Moss Trim Li | |
| | Marl Deposits (B15) | | Water Table (C2) |
| | lydrogen Sulfide Odor (C1) | Crayfish Burr | |
| | Oxidized Rhizospheres on Living In Presence of Reduced Iron (C4) | | sible on Aerial Imagery (C9) tressed Plants (D1) |
| | Recent Iron Reduction in Tilled So | | ` ' |
| | hin Muck Surface (C7) | Shallow Aqui | |
| | Other (Explain in Remarks) | Microtopogra | |
| Sparsely Vegetated Concave Surface (B8) | (Explain in Nomano) | <u> </u> FAC-Neutral | |
| Field Observations: | | | |
| Surface Water Present? Yes No ✓ I | Depth (inches): | | |
| | Depth (inches): | | |
| | Depth (inches): | Wetland Hydrology Presen | t? Yes <u>/</u> No |
| (includes capillary fringe) | II. a said all all all a said and a said and a said | the second secon | |
| Describe Recorded Data (stream gauge, monitoring we | ii, aeriai pnotos, previous inspect | lions), if available: | |
| | | | |
| Remarks: | | | |
| The hydrologic regime is saturated. | | | |
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VEGETATION – Use scientific names of plants Sampling Point: wasa1030e_w

| 1 | 202 Trition Coo ocionamo names el plante. | | | | - Camping Font. | |
|--|---|-------------|-------------|---------|---|-------|
| Number of Dominant Species That Are OBL, FACW, or FAC: 1 | Tree Stratum (Plot size:30) | | | | | |
| Total Number of Dominant Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B) | | | | | | A) |
| Species Across Al Strata: | 2 | <u> </u> | | | Total Number of Dominant | |
| That Are OBL, FACW, or FAC: 100 (A/B) Prevalence Index worksheet: | 3 | | | | | B) |
| Prevalence Index worksheet: Total % Cover of: Multiply by: | 4 | | | | Percent of Dominant Species | |
| Total % Cover of: | 5 | | | | That Are OBL, FACW, or FAC:(/ | A/B) |
| O | 6 | | | | Prevalence Index worksheet: | |
| Sapling/Shrub Stratum (Plot size: | 7 | | | | Total % Cover of: Multiply by: | |
| FAC species | | 0 | = Total Cov | /er | OBL species 50 x 1 = 50 | |
| FACU species | Sapling/Shrub Stratum (Plot size:) | | | | | |
| UPL species Q x 5 = Q Column Totals: S0 (A) S0 (B) | 1 | <u> </u> | | | | |
| 3. | 2 | | | | | |
| 4 | | | | | | (D) |
| Prevalence Index = B/A =1.0 | | | | | Column Totals: 50 (A) 50 | (B) |
| Hydrophytic Vegetation Indicators: 7. | | | | | Prevalence Index = B/A =1.0 | |
| 7 | | | | | Hydrophytic Vegetation Indicators: | |
| A continue of the problem of the p | | | | | 1 - Rapid Test for Hydrophytic Vegetation | |
| Herb Stratum (Plot size: | | _ | | | 2 - Dominance Test is >50% | |
| 1. Carex lacustris 2 | Herh Stratum (Plot size: 5 | | | | | |
| | | 50 | V | OBI | 4 - Morphological Adaptations ¹ (Provide suppo | rting |
| 3 | | | | | · | i |
| 4 | | | | | | |
| 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 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 Vine Stratum (Plot size: | | | | | | st |
| 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 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 Vine Stratum (Plot size: | | | | | | |
| 7 | | | | | Definitions of Vegetation Strata: | |
| 8 | | | | | , , | neter |
| 9 | | | | | | |
| 10 | | | | | , . . | 1 |
| of size, and woody plants less than 3.28 ft tall. Woody Vine Stratum (Plot size: | | · | | | | logo |
| Woody Vine Stratum (Plot size: 30) 1 | | · | | | | E55 |
| SO | | | | | Woody vines – All woody vines greater than 3.28 t | ft in |
| Woody Vine Stratum (Plot size: | 12. | | - Total Ca | | | |
| 1 | Wasada Viina Otratura (Diataina 20 | | = Total Cov | /er | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| Present? Yes No O = Total Cover Remarks: (Include photo numbers here or on a separate sheet.) | 3 | | | | | |
| Remarks: (Include photo numbers here or on a separate sheet.) | 4 | | - | | | |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | = Total Cov | /er | | |
| | Remarks: (Include photo numbers here or on a separate | sheet.) | 00 000 | | olf of the wetlend semale resist is | |
| | covered by remnant biomass of likely la | repank | seage. | THE Off | her hall of the point is dominated by | |

emerging lakebank sedge. Deep ruts that are also included in the wetland feature, but not within the sample point, have other sedges, like chestnut-colored sedge, and reed canary present.

SOIL Sampling Point: wasa1030e_w

| Profile Desc | ription: (E | Describe t | to the de | oth needed | to docur | nent the i | indicator | or confirm | the absence | of indicators.) |
|----------------------------|---------------------------|-------------|---------------|--------------|------------|-------------|--------------------|------------------|----------------|---|
| Depth | | Matrix | | | | x Feature | S1 | . 2 | | |
| (inches) | Color (| | <u>%</u> | Color (r | | % | _Type ¹ | Loc ² | Texture | Remarks |
| 8 | <u>5YR</u> | | | <u>5YR</u> | | 2 | _ <u>C</u> _ | _M_ | SICL | |
| 8-20 | <u>5YR</u> | 4/6 | _95_ | <u>2.5YR</u> | 4/4 | 5 | _C_ | _M_ | C | |
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| ¹Type: C=Co | | | etion, RM | =Reduced N | Matrix, MS | S=Masked | d Sand Gr | ains. | | PL=Pore Lining, M=Matrix. |
| Hydric Soil I | | | | Dobac | lua Dalay | u Curfoso | (CO) (I D | D D | | for Problematic Hydric Soils ³ : |
| Histosol Histic Er | (AT) pipedon (A2 | 2) | | - | RA 149B) | w Surface | (30) (LK | ĸκ, | | luck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) |
| Black Hi | | , | | | , | | RR R, M | LRA 149B) | | lucky Peat or Peat (S3) (LRR K, L, R) |
| | n Sulfide (A | | | | - | /lineral (F | | (, L) | | urface (S7) (LRR K, L) |
| | d Layers (A d Below Da | | - (Δ11) | - | ed Matrix | Matrix (F2 | (1) | | | lue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L) |
| | ark Surface | | , (, (, 1, 1, | | | rface (F6) | | | | anganese Masses (F12) (LRR K, L, R) |
| Sandy M | lucky Mine | ral (S1) | | | | Surface (F | 7) | | | ont Floodplain Soils (F19) (MLRA 149B) |
| | Bleyed Matr | ix (S4) | | Redox | Depress | ions (F8) | | | | Spodic (TA6) (MLRA 144A, 145, 149B) |
| - | Redox (S5) Matrix (S6 |) | | | | | | | | arent Material (F21) hallow Dark Surface (TF12) |
| | rface (S7) (| | ILRA 149 | B) | | | | | | Explain in Remarks) |
| ³ Indicators of | f hydronhyt | ic vegetati | ion and w | etland hydro | ology mus | at he prese | ent unles | s disturbed | or problematic | |
| Restrictive I | | | | | | 7. 50 p. 50 | , | | | · |
| Type: | | | | | | | | | | |
| Depth (inc | ches): | | | | | | | | Hydric Soil | Present? Yes No |
| Remarks: | | | | | | | | | | |
| | is red co | olored | with a | clayey t | exture | and s | ome re | edox co | ncentratio | ns present throughout the |
| profile. | | | | | | | | | | |
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wasa1030e_w_N



wasa1030e_w_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | |
|--|--|------------------------------|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | | |
| File #: wasa1030 | Date of visit(s): 2020-05-22 | | |
| Location: PLSS: sec 20 T047N R004W | Ecological Landsca Lake Superior Clay Plair | • | |
| Lat: 46.539967 Long: -90.895843 County: Ashland Town/City/Village: Gingles town | Watershed: LS09, Lower Bad River | | |
| SITE DESCRIPTION | | | |
| Soils: Mapped Type(s): | WWI Class: N/A | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes Field Verified: | Wetland Type(s): PEM sedge mea | adow | |
| The soils were not field verified. | Wetland Size: 0.0459 | Wetland Area Impacted 0.0459 | |
| Llydralogy | Vegetation: Plant Community D | | |
| Hydrology: The hydrologic regime is saturated. The major hydrology source is from surface water. | The wetland is a by lake sedge. | a sedge meadow dominated | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | ECTION 1: | Functional Value Assessment |
|----|-----|-----------|--|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | Ν | Υ | Used for recreation (hunting, birding, hiking, etc.). List: atv trail |
| 2 | N | N | Used for educational or scientific purposes |
| 3 | N | N | Visually or physically accessible to public |
| 4 | Ν | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| | | | In or adjacent to RED FLAG areas |
| 5 | Ν | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | IN | IN | Wildlife Habitat |
| 1 | N | Υ | Wetland and contiguous habitat >10 acres |
| 2 | N | N | 3 or more strata present (>10% cover) |
| 3 | N | N N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | | | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | |
| | N | N | Occurs in a Joint Venture priority township |
| 6 | N | N | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| 7 | N | N | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| | | | plans |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | Ν | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | Z | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | N | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | Ν | N | Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable |
| | | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| 2 | N | N | water levels or high flows – if no, not applicable |
| 3 | Ν | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | N | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | Y | Y | Water flow through wetland is NOT channelized |
| 3 | N | Y | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | | | Within a watershed with <10% wetland |
| 8 | N | N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | N | N | Water Quality Protection |
| | N. | N.I | |
| 1 | N | N | Provides substantial storage of storm and floodwater based on previous section |
| 2 | N | N | Basin wetland or constricted outlet |
| 3 | Y | Y | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | N | Y | Dense, persistent vegetation |
| 6 | N | N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | Υ | Υ | Stormwater or surface water from agricultural land is major hydrology source |
| 8 | N | N | Discharge to surface water |
| 9 | Ν | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | Ν | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | N | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | N | N | Wetland is within a wellhead protection area |
| | IN | IN | Trouville to within a womeda protoction area |

Section 1 Comments (Refer to Section 1 numbers) HU-1 there is an atv trail going through the wetland and the utility corridor. The tracks are evident. WH-10/FA-2/4 there is potential for aquatic invertebrate habitat if/when the wetland is inundated. ST-3/WQ-5 based on remnant biomass, the wetland will likely have dense, persistent vegetation later in the growing season. ST-5/WQ-7 a major source of hydrology is from surface water and runoff from the utility corridor and adjacent pine plantation. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Avian Υ White tailed deer Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4 | S3 🗸 | S2 🗌 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗌 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-----------------------|-------------|------|-------------------|---|
| Agrostis gigantea | | | Pem | Rare |
| Carex castanea | | | Pem | Rare |
| Carex lacustris* | | | Pem | Patchy |
| Carex stipata | | | Pem | Rare |
| Phalaris arundinacea* | | | Pem | Rare |
| Poa pratensis | | | Pem | Rare |
| Salix petiolaris | | | Pem | Rare |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is average due to the presence of a single strata and vegetation that is dominated by sedges, which is somewhat uncommon for the area.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| - | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| Х | Х | | М | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | Х | | L | С | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | | | | | Roads or railroad |
| Х | Х | | Н | С | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| V | V | | 1.1 | | Removal of herbaceous stratum – mowing, |
| X | Х | | Н | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Χ | Χ | | L | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| Х | Х | | М | С | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is located within a utility corridor that is clearly mowed (based on shrub stumpage) and adjacent to a pine plantation and a hay field. The wetland likely receives stormwater and polluted runoff from the field, plantation, and the corridor. An ATV trail goes through the wetland and the utility corridor. There are invasive species present in the feature.

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|----------|-------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | | ✓ | | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | V | | | | |
| Fish and Aquatic Life Habitat | / | | | | |
| Shoreline Protection | | | | | ' |
| Flood and Stormwater Storage | ✓ | | | | |
| Water Quality Protection | / | | | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | The floristic integrity is medium because of the presence of a single strata, presence of invasive species, and the somewhat less common plant community. |
| Human Use Values | The area is within a utiltiy corridor with an atv trail. |
| Wildlife Habitat | There is only a single strata present, the area is mowed which eliminates cover, and the wetland is small in size. |
| Fish and Aquatic Life Habitat | There is some potential for the wetland to be inundated and provide habitat for aquatic organisms. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is small and can only hold a small amount of water. |
| Water Quality Protection | The wetland is small in size and can only filter a small amount of water. |
| Groundwater Processes | The wetland is mainly fed by surface water. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation | Project | City/County: As | hland | _ Sampling Date: <u>2020-05-22</u> | | |
|--|------------------------------|--|--------------------------------|---|--|--|
| Applicant/Owner: Enbridge | • | | | | | |
| Investigator(s): SBR/DGL | | Section, Townshi | p, Range: <u>sec 20 T047</u> I | N R004W | | |
| Landform (hillslope, terrace, etc.): <u>Ta</u> | | | · | | | |
| Subregion (LRR or MLRA): Northcent | | | | | | |
| Soil Map Unit Name: Sanborg-Ba | | | | | | |
| Are climatic / hydrologic conditions on | the site typical for this ti | me of year? Yes | No (If no, explain in I | Remarks.) | | |
| Are Vegetation, Soil, or | · Hydrology sigr | nificantly disturbed? | Are "Normal Circumstances" | present? Yes _ v No | | |
| Are Vegetation, Soil, or | | | (If needed, explain any answe | ers in Remarks.) | | |
| SUMMARY OF FINDINGS - A | Attach site map sh | owing sampling po | int locations, transects | s, important features, etc. | | |
| Hydrophytic Vegetation Present? | Yes No _ | | npled Area | | | |
| Hydric Soil Present? | Yes No _ | | Vetland? Yes | No <u> </u> | | |
| Wetland Hydrology Present? | | , , , | ional Wetland Site ID: | | | |
| Remarks: (Explain alternative proced The upland point is locate | lures here or in a separ | ate report.) | المنائل مسلما المسلم | The feeture | | |
| has cover from the red pin feature serves as a share | | • | • | | | |
| HYDROLOGY | | | | | | |
| Wetland Hydrology Indicators: | | | | cators (minimum of two required) | | |
| Primary Indicators (minimum of one is | | | ` , | | | |
| Surface Water (A1) | | Stained Leaves (B9) | | Drainage Patterns (B10) | | |
| High Water Table (A2) | | c Fauna (B13) | | Moss Trim Lines (B16) | | |
| Saturation (A3) | | eposits (B15) gen Sulfide Odor (C1) | | Dry-Season Water Table (C2) Crayfish Burrows (C8) | | |
| Water Marks (B1) Sediment Deposits (B2) | | gen Suilide Odor (CT) ed Rhizospheres on Living | | /isible on Aerial Imagery (C9) | | |
| Drift Deposits (B3) | | nce of Reduced Iron (C4) | | Stressed Plants (D1) | | |
| Algal Mat or Crust (B4) | | t Iron Reduction in Tilled S | | c Position (D2) | | |
| Iron Deposits (B5) | | uck Surface (C7) | Shallow Aqu | | | |
| Inundation Visible on Aerial Imag | | (Explain in Remarks) | | raphic Relief (D4) | | |
| Sparsely Vegetated Concave Su | rface (B8) | | FAC-Neutra | al Test (D5) | | |
| Field Observations: | | | | | | |
| | | (inches): | | | | |
| | | (inches): | | | | |
| Saturation Present? Yes _ (includes capillary fringe) | No <u>v</u> Depth | (inches): | Wetland Hydrology Prese | nt? Yes No <u>/</u> | | |
| Describe Recorded Data (stream gau | ge, monitoring well, aer | ial photos, previous inspe | _l ctions), if available: | | | |
| , , | | | · | | | |
| | | | | | | |
| Remarks: No indicators of wetland I | ovdrology were | observed | | | | |
| The management of mediane. | lydrology more | ODGGI VGG. | | | | |
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VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size:) | Absolute | | | Dominance Test worksheet: |
|---|----------|-------------|-------------|--|
| 1. Pinus resinosa | | Species? | | Number of Dominant Species |
| | | | | That Are OBL, FACW, or FAC:1 (A) |
| 2 | | | | Total Number of Dominant Species Across All Strata: 4 (B) |
| 3 | | | | ` , , |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B) |
| 5 | | | | 111dt/110 OBE, 1710W, 01 1710. |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| 4- | 20 | = Total Cov | /er | OBL species 0 x 1 = 0 |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species10 x 2 =20 FAC species17 x 3 =51 |
| 1. Rhamnus cathartica | | | <u>FAC</u> | FACU species 120 x 4 = 480 |
| 2. <u>Prunus pensylvanica</u> | | | <u>FACU</u> | UPL species |
| 3. <u>Rubus idaeus</u> | 2 | N | <u>FAC</u> | Column Totals: <u>147</u> (A) <u>551</u> (B) |
| 4 | | | | |
| 5 | | | | Prevalence Index = B/A = <u>3.748299319727891</u> |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% |
| | 32 | = Total Cov | er er | 3 - Prevalence Index is ≤3.0 ¹ |
| Herb Stratum (Plot size: 5) | 70 | V | FACU | 4 - Morphological Adaptations ¹ (Provide supporting |
| 1. <u>Poa pratensis</u> | | N | FACU | data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) |
| 2. Elymus repens | | | | robiematic riyarophytic vegetation (Explain) |
| 3. <u>Bromus cf ciliatus</u> | | | <u>FACW</u> | ¹ Indicators of hydric soil and wetland hydrology must |
| 4 | | | | be present, unless disturbed or problematic. |
| 5 | | | | Definitions of Vegetation Strata: |
| 6 | | | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7 | | | | at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. |
| 9 | | | | |
| 10 | | | · | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 11 | | | | Woody vines – All woody vines greater than 3.28 ft in |
| 12 | | = Total Cov | | height. |
| Wasdi Vina Stratium (Blataina) | | = Total Cov | /er | |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic Vegetation |
| 4 | _ | = Total Cov | | Present? Yes No V |
| Remarks: (Include photo numbers here or on a separate s | | - Total Cov | /ei | |
| The upland is located on the edge of a | | e plantat | tion and | I is dominated by Kentucky bluegrass |
| in the herbaceous layer. | | | | |
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Sampling Point: wasa1030_u

SOIL Sampling Point: wasa1030_u

| Profile Desc | ription: (Des | scribe t | o the dep | th needed | to docun | nent the i | ndicator | or confirm | the absence of | indicators.) | |
|-------------------|--------------------------------|----------|------------|--------------|---------------------------------|----------------------------|-------------------|------------------|---|---|--|
| Depth (inches) | Color (mo | latrix | % | Color (r | | x Features % | Type ¹ | Loc ² | Texture | Remarks | |
| 0-15 | 5YR 2 | | | Color (I | HOISL) | 0 | туре | LOC | SICL | Remarks | |
| · | 5YR 4 | | | 5YR | 4/3 | 10 | С | M | C | | |
| 10 20 | <u> </u> | 17 0 | | <u> </u> | 170 | | | | | | |
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| | oncentration, | D=Deple | etion, RM: | =Reduced N | Matrix, MS | S=Masked | Sand Gr | ains. | ² Location: F | PL=Pore Lining, M=Matrix. | |
| Hydric Soil I | | | | | | | | _ | | r Problematic Hydric Soils ³ : | |
| Histosol | (A1) pipedon (A2) | | | | alue Belov R A 149B) | v Surface | (S8) (LRI | RR, | | ck (A10) (LRR K, L, MLRA 149B) airie Redox (A16) (LRR K, L, R) | |
| Black Hi | | | | Thin D | ark Surfa | ce (S9) (L | | LRA 149B) | 5 cm Mud | cky Peat or Peat (S3) (LRR K, L, R) | |
| | n Sulfide (A4) Layers (A5) |) | | | | lineral (F1 Matrix (F2) | | , L) | | face (S7) (LRR K, L) e Below Surface (S8) (LRR K, L) | |
| | Below Dark | Surface | (A11) | | ted Matrix | | | | | Surface (S9) (LRR K, L) | |
| | ark Surface (A | , | | | | face (F6) | | | | ganese Masses (F12) (LRR K, L, R) | |
| - | lucky Mineral Bleyed Matrix | | | | ted Dark s Depress | Surface (F | 7) | | | t Floodplain Soils (F19) (MLRA 149B) | |
| - | ledox (S5) | (04) | | 11000 | Сергозз | 10113 (1 0) | | | Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) | | |
| | Matrix (S6) | | | | | | | | Very Shallow Dark Surface (TF12) | | |
| Dark Sui | rface (S7) (LF | RR R, M | LRA 149E | 3) | | | | | Other (Ex | xplain in Remarks) | |
| | | - | on and we | etland hydro | ology mus | t be prese | nt, unles | s disturbed | or problematic. | | |
| Type: | _ayer (if obse | ervea): | | | | | | | | | |
| • • • | ches): | | | | | | | | Hydric Soil Pr | resent? Yes No/_ | |
| Remarks: | ches): | | | | | | | | | | |
| The soil i | s clayey | with s | some r | edox fe | atures | preser | nt belo | w 15 ind | ches. | | |
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wasa1030_u_E



wasa1030_u_SW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ash | ıland | Sampling Date: <u>2020-05-22</u> | | | | |
|--|--|--------------------------------|----------------------------------|--|--|--|--|
| Applicant/Owner: Enbridge | | | | | | | |
| Investigator(s): SBR/DGL | estigator(s): SBR/DGL Section, Township, Range: Sec 20 T047N R004W | | | | | | |
| Landform (hillslope, terrace, etc.): Depression | Local relief (concave, | convex, none): Concave | Slope (%): <u>0-2%</u> | | | | |
| | Ets Lat: 46.539545 Long: -90.895662 Datum: WGS84 | | | | | | |
| Soil Map Unit Name: Sanborg-Badriver comp | | | | | | | |
| Are climatic / hydrologic conditions on the site typical for t | his time of year? Yes N | No (If no, explain in R | emarks.) | | | | |
| Are Vegetation, Soil, or Hydrology | _ significantly disturbed? | Are "Normal Circumstances" p | present? Yes 🔽 No | | | | |
| Are Vegetation, Soil, or Hydrology | _ naturally problematic? | (If needed, explain any answer | rs in Remarks.) | | | | |
| SUMMARY OF FINDINGS - Attach site map | showing sampling poi | nt locations, transects | , important features, etc. | | | | |
| Hydrophytic Vegetation Present? Hydric Soil Present? Yes Yes | No within a W | etland? Yes <u>/</u> | | | | | |
| Wetland Hydrology Present? Yes Remarks: (Explain alternative procedures here or in a s | 1 2 1 | onal Wetland Site ID: | | | | | |
| The wetland is a sedge meadow doming the wetland is located half on the edge. There are ATV tracks going through the sedge meadow doming the wetland is a sedge meadow doming the wetland is located half on the edge of the wetland is a sedge meadow doming the wetland is located half on the edge of the wetland is a sedge meadow doming the wetland is located half on the edge of the wetland is a sedge meadow doming the wetland is located half on the edge of the wetland is a sedge of the wetland is located half on the edge of the wetland is a sedge of the wetland is a sedg | ge of a red pine planta | | | | | | |
| HYDROLOGY | | | | | | | |
| Wetland Hydrology Indicators: | | Secondary Indica | tors (minimum of two required) | | | | |
| Primary Indicators (minimum of one is required; check a | | · , | | | | | |
| | ater-Stained Leaves (B9) | Drainage Patterns (B10) | | | | | |
| | quatic Fauna (B13) | | Moss Trim Lines (B16) | | | | |
| | arl Deposits (B15) | | Water Table (C2) | | | | |
| | ydrogen Sulfide Odor (C1) | | Crayfish Burrows (C8) | | | | |
| | xidized Rhizospheres on Living I resence of Reduced Iron (C4) | | sible on Aerial Imagery (C9) | | | | |
| | ecent Iron Reduction in Tilled Sc | | tressed Plants (D1) | | | | |
| | nin Muck Surface (C7) | Shallow Aqui | | | | | |
| | ther (Explain in Remarks) | Microtopogra | | | | | |
| Sparsely Vegetated Concave Surface (B8) | Hor (Explain in Romano) | FAC-Neutral | | | | | |
| Field Observations: | | <u></u> •••• | 1001 (20) | | | | |
| | Depth (inches): | | | | | | |
| | Depth (inches): | | | | | | |
| Saturation Present? Yes No _ C | Depth (inches): | Wetland Hydrology Presen | t? Yes <u>/</u> No | | | | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring wel | L aerial photos, previous inspec | tions) if available: | | | | | |
| Describe Necolded Data (Stream gauge, monitoring wor | i, denai priotos, previous mopos | IIOIIS), II available. | | | | | |
| | | | | | | | |
| Remarks: The hydrologic regime is saturated. | | | | | | | |
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| VEGETATION - | Use scientific name | es of plants |
|--------------|---------------------|---------------|
| VEGETATION - | | 50 UI DIAHIO. |

| Absolute % Cover | Dominant Species? | | Dominance Test worksheet: | | | |
|---------------------|-------------------|--------|--|--|--|--|
| | | | Number of Dominant Species That Are OBL, FACW, or FAC: (A | | | |
| | | | Total Number of Dominant | | | |
| | | | Species Across All Strata: 2 (E | | | |
| | | | Percent of Dominant Species | | | |
| | | | That Are OBL, FACW, or FAC:100 (A | | | |
| | | | Prevalence Index worksheet: | | | |
| | | | Total % Cover of: Multiply by: | | | |
| 0 | = Total Co | ver | OBL species <u>40</u> x 1 = <u>40</u> | | | |
| | | | FACW species 31 x 2 = 62 | | | |
| | | | FAC species x 3 =0 | | | |
| | | | FACU species | | | |
| | | | UPL species $0 \times 5 = 0$ | | | |
| | | | Column Totals:(A)(A)(| | | |
| | | | Prevalence Index = B/A = 1.4366197183098592 | | | |
| <u> </u> | | | Hydrophytic Vegetation Indicators: | | | |
| | | | 1 - Rapid Test for Hydrophytic Vegetation | | | |
| | | | ∠ 2 - Dominance Test is >50% | | | |
| | | | y 3 - Prevalence Index is ≤3.0¹ | | | |
| 35 | Υ | OBI | 4 - Morphological Adaptations ¹ (Provide suppor data in Remarks or on a separate sheet) | | | |
| | Y | | Problematic Hydrophytic Vegetation ¹ (Explain) | | | |
| | | 171011 | | | | |
| | NI NI | OBL | ¹Indicators of hydric soil and wetland hydrology mus | | | |
| | | | be present, unless disturbed or problematic. | | | |
| | | | Definitions of Vegetation Strata: | | | |
| | | | Tree – Woody plants 3 in. (7.6 cm) or more in diame 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, regardle | | | |
| | · | | of size, and woody plants less than 3.28 ft tall. | | | |
| | | | Woody vines – All woody vines greater than 3.28 ft | | | |
| 81 | = Total Co | ver | height. | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | Hydrophytic | | | |
| | | | Vegetation | | | |
| | = Total Co | vor | Present? Yes <u>✓</u> No | | | |
| | | | | | | |

SOIL Sampling Point: wasa1031e_w

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | | | | | |
|---|-----------------------------|-------------|-----------|--------------|------------|---------------------------|--------------------|------------------|----------------|---|--|--|
| Depth | Matrix Redox Features | | | | | | | | | | | |
| (inches) | Color (| | <u>%</u> | Color (r | | % | _Type ¹ | Loc ² | <u>Texture</u> | Remarks | | |
| _0-10_ | 5YR | | | <u>5YR</u> | 4/4 | 2 | _ <u>C</u> _ | _M_ | SICL | | | |
| 10-20 | <u>5YR</u> | 4/6 | _95_ | <u>2.5Y</u> | 4/4 | 5 | _C_ | _M_ | C | | | |
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| | | | | - | | | · - <u></u> | | | | | |
| ¹ Type: C=Co | | | etion, RM | =Reduced I | Matrix, MS | S=Masked | Sand Gr | ains. | | PL=Pore Lining, M=Matrix. | | |
| Hydric Soil | | | | Polyve | alue Belov | w Surface | (S8) (I D I | D D | | for Problematic Hydric Soils ³ : luck (A10) (LRR K, L, MLRA 149B) | | |
| | oipedon (A2 | 2) | | - | RA 149B) | | (30) (LIV | ι ιν, | | Prairie Redox (A16) (LRR K, L, R) | | |
| Black Hi | | | | | | | | LRA 149B) | | lucky Peat or Peat (S3) (LRR K, L, R) | | |
| | n Sulfide (A d Layers (A | | | | - | /lineral (F Matrix (F2 | | (, L) | | urface (S7) (LRR K, L) lue Below Surface (S8) (LRR K, L) | | |
| | d Below Da | | e (A11) | | ted Matrix | | .) | | | ark Surface (S9) (LRR K, L) | | |
| | ark Surface | | , | | | rface (F6) | | | | anganese Masses (F12) (LRR K, L, R) | | |
| | lucky Miner | | | | | Surface (F | 7) | | | ont Floodplain Soils (F19) (MLRA 149B) | | |
| | Bleyed Matr Redox (S5) | ix (S4) | | Redox | Depress | ions (F8) | | | | Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21) | | |
| | Matrix (S6 |) | | | | | | | | hallow Dark Surface (TF12) | | |
| | rface (S7) (| | ILRA 149 | 3) | | | | | | Explain in Remarks) | | |
| ³ Indicators of | f hydrophyti | ic vegetati | ion and w | etland hydro | oloav mus | t be prese | ent. unles | s disturbed | or problematic | | | |
| Restrictive I | | - | | | 3) | | , | | | | | |
| Type: | | | | | | | | | | | | |
| Depth (inc | ches): | | | | | | | | Hydric Soil | Present? Yes No | | |
| Remarks: | | | | | | | | | | | | |
| | | nd clay | ey wit | n redox | conce | ntratio | ns, and | d it mee | ets the Dep | oleted Matrix hydric soil | | |
| indicator | | | | | | | | | | | | |
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wasa1031e_w_E



wasa1031e_w_SW

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| Evaluator(s): | | | |
|---|---|--|--|
| SBR/DGL | | | |
| Date of visit(s): | | | |
| 2020-05-22 | | | |
| Ecological Landsca | ape: | | |
| Lake Superior Clay Plair | | | |
| Lake Superior Slay I lail | • | | |
| Watershed: | | | |
| <i>'</i> | | | |
| | | | |
| | | | |
| | | | |
| WWI Class: | | | |
| N/A | | | |
| Wetland Type(s): | | | |
| PEM - sedge meadow | | | |
| | | | |
| Wetland Size: | Wetland Area Impacted | | |
| 0.0521 | 0.0521 | | |
| Vegetation: | | | |
| Plant Community Description(s): | | | |
| The wetland feature is a sedge meadow | | | |
| dominated by sedges including cottongrass | | | |
| bulrush and soft rush, as well as by reed | | | |
| | rusii, as well as by reed | | |
| canary grass. | | | |
| | SBR/DGL Date of visit(s): 2020-05-22 Ecological Landsca Lake Superior Clay Plair Watershed: LS09, Lower Bad River WWI Class: N/A Wetland Type(s): PEM - sedge me Wetland Size: 0.0521 Vegetation: Plant Community Description: The wetland feat dominated by see | | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | ECTION 1: | Functional Value Assessment |
|----|----------|-----------|--|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | Υ | Υ | Used for recreation (hunting, birding, hiking, etc.). List: atv trail |
| 2 | N | N | Used for educational or scientific purposes |
| 3 | N | N | Visually or physically accessible to public |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| | | | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | IN | IN | Wildlife Habitat |
| 1 | N | Υ | Wetland and contiguous habitat >10 acres |
| 2 | N | N | 3 or more strata present (>10% cover) |
| 3 | N | N N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | | | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | <u>N</u> | N | |
| | <u>N</u> | N | Occurs in a Joint Venture priority township |
| 6 | N | N | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| 7 | N | N | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| | | | plans |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | N | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | N | Υ | Vegetation is inundated in spring |
| SP | | - | Shoreline Protection |
| 1 | N | N | Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable |
| | | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| 2 | N | N | water levels or high flows – if no, not applicable |
| 3 | N | N | Densely rooted emergent or woody vegetation |
| ST | 1.4 | 11 | Storm and Floodwater Storage |
| 1 | N | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | Y | Y | Water flow through wetland is NOT channelized |
| 3 | N | Y | Dense, persistent vegetation |
| 4 | | - | Evidence of flashy hydrology |
| | N Y | N | Point or non-point source inflow |
| 5 | <u>Y</u> | Y | |
| 6 | <u>N</u> | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | <u>N</u> | N | Within a watershed with <10% wetland |
| 8 | N | N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | | | Water Quality Protection |
| 1 | N | N | Provides substantial storage of storm and floodwater based on previous section |
| 2 | N | N | Basin wetland or constricted outlet |
| 3 | Υ | Υ | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | N | Υ | Dense, persistent vegetation |
| 6 | N | N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | Υ | Υ | Stormwater or surface water from agricultural land is major hydrology source |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | N | N | Springs, seeps or indicators of groundwater present |
| 2 | | N | Location near a groundwater divide or a headwater wetland |
| 3 | N N | | Wetland remains saturated for an extended time period with no additional water inputs |
| | N N | N | |
| 4 | N N | N | Wetland soils are organic |
| 5 | N | N | Wetland is within a wellhead protection area |

Section 1 Comments (Refer to Section 1 numbers) HU-1 there is an atv trail going through the wetland and the utility corridor. WH-10/FA-2/4 there is potential for aquatic invertebrate habitat after the wetland is inundated in spring or by rain events. ST-3/WQ-5 based on remnant biomass, the wetland will likely have dense, persistent vegetation later in the growing season. ST-5/WQ-7 a major source of hydrology is from surface water and runoff from the utility corridor and adjacent pine plantation. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Avian White tailed deer scat Υ Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Traine Community Integrity (Cholo) | | | | | | | | |
|--|--|---|--|--|--|--|--|--|--|
| | Low | Medium | High | Exceptional | | | | | |
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% | | | | | |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented | | | | | |
| NHI plant community ranking | S4 | S3 🗸 | S2 | S1-S2 (S2 high quality) | | | | | |
| Relative frequency of plant community in watershed | Abundant 🗌 | Common | Uncommon | Rare | | | | | |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 | | | | | |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 | | | | | |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-----------------------|-------------|------|-------------------|---|
| Alopecurus aequalis | | | Pem | Barren |
| Carex sp | | | Pem | Rare |
| Juncus effusus | | | Pem | Rare |
| Lysimachia cf ciliata | | | Pem | Barren |
| Phalaris arundinacea* | | | Pem | Patchy |
| Poa pratensis | | | Pem | Rare |
| Scirpus cyperinus* | | | Pem | Patchy |
| Solidago gigantea | | | Pem | Rare |
| | | | | |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The florisric integrity is low to moderate due to amount of invasives species cover, the lack of multiple strata, and the less abundant plant community present in the feature.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| • | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| X | Χ | | Н | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | | | | | Roads or railroad |
| X | Χ | | М | С | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| Х | Х | | М | С | Removal of herbaceous stratum – mowing, |
| ^ | ^ | | IVI | C | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| X | X | | Н | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| Χ | Χ | | М | UC | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is located half in the edge of a pine plantation and half in a mowed utility corridor. An ATV trail goes through the utility corridor and the wetland feature. Storm water and, potentially polluted, runoff from the plantation are likely sources of hydrology for this feature. Invasive species occupy roughly 25% of the wetland.

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | SIGNIFICANCE | | | | | | | | |
|-------------------------------|--------------|----------|------|-------------|----------|--|--|--|--|
| | Low | Medium | High | Exceptional | NA | | | | |
| Floristic Integrity | | ✓ | | | | | | | |
| Human Use Values | V | | | | | | | | |
| Wildlife Habitat | V | | | | | | | | |
| Fish and Aquatic Life Habitat | / | | | | | | | | |
| Shoreline Protection | | | | | ' | | | | |
| Flood and Stormwater Storage | ✓ | | | | | | | | |
| Water Quality Protection | / | | | | | | | | |
| Groundwater Processes | ✓ | | | | | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|--|
| Floristic Integrity | The florisric integrity is medium due to presence of invasives, the lack of multiple strata, and the less common plant community present in the feature. |
| Human Use Values | An ATV trail cuts through the wetland. |
| Wildlife Habitat | The small size limits the opportunity for wildlife use. |
| Fish and Aquatic Life Habitat | There is potential for the wetland to provide habitat for aquatic organisms during times of sustained inundation. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is small and can only hold small amounts of water. |
| Water Quality Protection | The wetlands small size limits its filtering capabilities. |
| Groundwater Processes | The wetland's major source of hydrology is surface water. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Reloc | ation Proiect | City/C | County: Ashland | Sampling | Date: <u>2020-05-30</u> |
|---|------------------------|-----------------------------|--|----------------------------|-------------------------|
| Applicant/Owner: Enbridge | • | | | | |
| Investigator(s): SBR/DGL | | | | | |
| | | | Local relief (concave, convex, none): Concave Slope (%): 0-2 | | |
| Subregion (LRR or MLRA): Nor | | | | | |
| Soil Map Unit Name: Sanbo | | | | | |
| Are climatic / hydrologic condition | | | | | |
| | | | | | Van de Na |
| Are Vegetation, Soil | | | | | |
| Are Vegetation, Soil | | | | | |
| SUMMARY OF FINDING | S - Attach site | map showing sam | pling point location | ns, transects, import | tant features, etc. |
| Hydrophytic Vegetation Prese | nt? Vas w | / No | Is the Sampled Area | | |
| Hydric Soil Present? | | No | | Yes 🗸 No _ | |
| Wetland Hydrology Present? | | / No | If yes, optional Wetland S | Site ID: | |
| Remarks: (Explain alternative | procedures here or | in a separate report.) | | | |
| The wetland is found | | • | | • | |
| dominated by lake se | edge. There's | a small border of | of red raspberry or | n the edge of the v | wetland feature |
| | | | | | |
| | | | | | |
| | | | | | |
| HYDROLOGY | | | | | |
| Wetland Hydrology Indicator | rs: | | <u> </u> | Secondary Indicators (mini | mum of two required) |
| Primary Indicators (minimum o | of one is required; ch | eck all that apply) | | Surface Soil Cracks (B | 6) |
| Surface Water (A1) | _ | Water-Stained Leave | s (B9) | Drainage Patterns (B1 | 0) |
| High Water Table (A2) | _ | Aquatic Fauna (B13) | _ | Moss Trim Lines (B16) | |
| Saturation (A3) | | Marl Deposits (B15) | | Dry-Season Water Tab | ole (C2) |
| Water Marks (B1) | | Hydrogen Sulfide Ode | | Crayfish Burrows (C8) | |
| Sediment Deposits (B2) | | | = | Saturation Visible on A | |
| Drift Deposits (B3) | | Presence of Reduced | | Stunted or Stressed PI | |
| Algal Mat or Crust (B4) | | Recent Iron Reductio | | ✓ Geomorphic Position (| D2) |
| Iron Deposits (B5) | | Thin Muck Surface (C | | Shallow Aquitard (D3) | .f (D4) |
| Inundation Visible on Aeri | | Other (Explain in Ren | · - | Microtopographic Relie | |
| Sparsely Vegetated Conc Field Observations: | ave Surface (Bo) | | <u> </u> | FAC-Neutral Test (D5) | |
| Surface Water Present? | Yes No • | Depth (inches): | | | |
| Water Table Present? | | Depth (inches): | | | |
| Saturation Present? | | Depth (inches): | | /drology Present? Yes | ∨ No |
| (includes capillary fringe) | | | | | |
| Describe Recorded Data (stream | am gauge, monitorin | ig well, aerial photos, pre | vious inspections), if availa | able: | |
| | | | | | |
| Remarks: | | | | | |
| The hydrologic regime | ne is saturated | d. | | | |
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VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: 30) | Absolute | | | Dominance Test worksheet: |
|---|-------------|------------|-------------|---|
| 1. Populus tremuloides | | Species? | | Number of Dominant Species |
| • | | | | That Are OBL, FACW, or FAC:3(A) |
| 2 | | | | Total Number of Dominant Species Across All Strata: 3 (B) |
| 3 | | | | ` ' |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B) |
| 5 | | | | |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| 0 15 (0) 1 0) 1 (0) 1 | 5 | = Total Co | ver | OBL species x 1 = 70 FACW species 22 x 2 = 44 |
| Sapling/Shrub Stratum (Plot size: 15) | 4.5 | V | E | FAC species x2 = 44 FAC species 24 x3 = 72 |
| 1. <u>Rubus idaeus</u> | | | | FACU species 2 x 4 = 8 |
| 2 | | | | UPL species0 x 5 =0 |
| 3 | | | | Column Totals: <u>118</u> (A) <u>194</u> (B) |
| 4 | | | | Prevalence Index = B/A = 1.6440677966101696 |
| 5 | | | | |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | 15 | = Total Co | ver | |
| Herb Stratum (Plot size:) | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| 1. Carex lacustris | 70 | <u>Y</u> | OBL | data in Remarks or on a separate sheet) |
| 2. Phalaris arundinacea | 10 | <u>N</u> | FACW | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. <u>Poa palustris</u> | _10_ | N | <u>FACW</u> | 1 adicates of hydric cell and wetlend hydrology much |
| 4. Solidago gigantea | | N | FACW | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. Athyrium angustum | 2 | N | FAC | Definitions of Vegetation Strata: |
| 6. Tanacetum vulgare | 2 | N | FACU | |
| 7. <u>Equisetum arvense</u> | 2 | N | FAC | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11. | | | | of size, and woody plants less than 3.28 ft tall. |
| 12. | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | | = Total Co | ver | height. |
| Woody Vine Stratum (Plot size:30) | | | | |
| 1 | | | | |
| | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic Vegetation |
| 4 | _ | | | Present? Yes _ v No |
| Remarks: (Include photo numbers here or on a separate s | | = Total Co | ver | |
| The sample point is somewhat represent | | of the w | etland fe | eature. The red raspberry is more |
| found on the edge of the wetland with la | | | | |
| | | | _ | |
| | | | | |
| | | | | |

Sampling Point: wasa1038e_w

SOIL Sampling Point: wasa1038e_w

| Profile Desc | cription: (Describe t | o the dep | th needed | to docun | nent the in | ndicator | or confirm | the absence | of indicators.) |
|-------------------|---|-----------|--------------|--------------------------------|-----------------------------|-------------------|------------------|------------------------|---|
| Depth (inches) | Matrix Color (moist) | % | Color (r | | x Features % | Type ¹ | Loc ² | Texture | Remarks |
| 0-8 | 7.5YR 3/1 | | 5YR | | 5 | С | M | CL | Nemarks |
| | 5YR 2.5/1 | | - | | | С | | Cl | |
| 0 20 | 0111 2:0/1 | | <u> </u> | 0/0 | | | | <u> </u> | |
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| | | | | | | | | | |
| ¹Type: C=Ce | oncentration, D=Deple | etion, RM | =Reduced I | Matrix, MS | S=Masked | Sand Gr | ains. | ² Location: | PL=Pore Lining, M=Matrix. |
| Hydric Soil | | | | | | | | | for Problematic Hydric Soils ³ : |
| Histosol | (A1) pipedon (A2) | | | alue Belov RA 149B) | v Surface | (S8) (LR | R R, | | uck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) |
| Black Hi | istic (A3) | | Thin D | ark Surfa | ce (S9) (L | | LRA 149B) | 5 cm M | ucky Peat or Peat (S3) (LRR K, L, R) |
| | en Sulfide (A4) d Layers (A5) | | | | /lineral (F1 Matrix (F2) | | (, L) | | urface (S7) (LRR K, L) ue Below Surface (S8) (LRR K, L) |
| | d Below Dark Surface | (A11) | | ted Matrix | | | | - | ark Surface (S9) (LRR K, L) |
| | ark Surface (A12) | | | | rface (F6) | 7 \ | | | inganese Masses (F12) (LRR K, L, R) |
| | Mucky Mineral (S1) Gleyed Matrix (S4) | | | ted Dark t Depress | Surface (Fi ions (F8) | /) | | | ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) |
| Sandy F | Redox (S5) | | | ., | - (-, | | | Red Pa | rent Material (F21) |
| | l Matrix (S6) rface (S7) (LRR R, M | LRA 149 | 3) | | | | | - | nallow Dark Surface (TF12) Explain in Remarks) |
| | f hydrophytic vegetati | on and w | etland hydro | ology mus | t be prese | nt, unles | s disturbed | or problematic | |
| | Layer (if observed): | | | | | | | | |
| Type: | chos): | | | | | | | Hvdric Soil | Present? Yes <u>v</u> No |
| Remarks: | ches): | | | | | | | ., | |
| | ay loam soil w | ith red | ox cond | entrati | ons pre | esent. | | | |
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wasa1038e_w_NW



wasa1038e_w_SW

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | | |
|---|--|---|--|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | | | |
| File #: wasa1038 | Date of visit(s): 2020-05-30 | | | |
| Location: PLSS: sec 20 T047N R004W | Ecological Landsca Lake Superior Clay Plain | • | | |
| Lat: 46.539092 Long: -90.895803 County: Ashland Town/City/Village: Gingles town | Watershed: LS09, Lower Bad River | | | |
| SITE DESCRIPTION | | | | |
| Soils: Mapped Type(s): | WWI Class: N/A | | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes Field Verified: | Wetland Type(s): PEM - sedge meadow | | | |
| The soils was not field verified. Soils were a reduced reddish clay loam throughout the profile. | Wetland Size: 0.0431 | Wetland Area Impacted 0.0431 | | |
| | Vegetation: Plant Community D | Description(s): | | |
| Hydrology: The hydrologic regime is saturated. The major water input source for the feature is surface water, and the feature is located in a mowed utility corridor. | | sedge meadow dominated ous cover of lake sedge. | | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | ECTION 1: | Functional Value Assessment |
|----|-----|-----------|---|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | Ν | Υ | Used for recreation (hunting, birding, hiking, etc.). List: ATV use |
| 2 | N | N | Used for educational or scientific purposes |
| 3 | N | N | Visually or physically accessible to public |
| 4 | Ν | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| | | | In or adjacent to RED FLAG areas |
| 5 | Ν | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | IN | IN | Wildlife Habitat |
| 1 | Υ | Υ | Wetland and contiguous habitat >10 acres |
| 2 | N | N | 3 or more strata present (>10% cover) |
| 3 | N | N N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | Y | Y | 100 m buffer – natural land cover ≥50%(south) 75% (north) intact |
| 5 | | • | |
| | N | N N | Occurs in a Joint Venture priority township |
| 6 | N | N | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| 7 | Υ | Υ | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| | | | plans |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | N | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | Ν | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | Z | N | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | N | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | N | N | Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable |
| | | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| 2 | N | N | water levels or high flows – if no, not applicable |
| 3 | N | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | N | Υ | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | Y | Ϋ́ | Water flow through wetland is NOT channelized |
| 3 | Y | Y | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | | - | Impervious surfaces cover >10% of land surface within the watershed |
| | N | N | |
| 7 | N | N | Within a watershed with ≤10% wetland Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| 8 | N | N | Water Quality Protection |
| WQ | A I | | • |
| 1 | N | Y | Provides substantial storage of storm and floodwater based on previous section |
| 2 | N | Y | Basin wetland or constricted outlet |
| 3 | Y | Y | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Υ | Υ | Dense, persistent vegetation |
| 6 | N | N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | N | N | Stormwater or surface water from agricultural land is major hydrology source |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | Ν | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | N | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N N | Wetland soils are organic |
| 5 | N | N N | Wetland is within a wellhead protection area |
| J | IN | <u>IN</u> | wedana is within a weinteau protection area |

| Se | Section 1 Comments (Refer to Section 1 numbers) | | | | | |
|--------------------|---|---|--|--|--|--|
| ST-3/WQ-5: The wet | ST-2/WQ-3: The wetland is not channelized. ST-3/WQ-5: The wetland has a dense herbaceous layer comprised mostly of lake sedge. ST-5: Surface water the most likely source of hydrology for the wetland. | | | | | |
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| Lis | | at and Species Observation (including amphibians and reptiles) oservation, tracks, scat, other sign; type of habitat: nesting, migratory, | | | | |
| Observed | Potential | Species/Habitat/Comments | | | | |
| | Υ | Small mammals | | | | |
| Υ | Υ | Avian | | | | |
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| | | <u> </u> | | | | |
| | | atic Life Habitat and Species Observations oservation, other sign; type of habitat: nesting, spawning, nursery areas, etc. | | | | |
| Observed | Potential | Species/Habitat | | | | |
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SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | inty intogrity (on olo) | | | |
|--|--|----------|--|--|
| | Low | Medium | High | Exceptional |
| Invasive species cover | > 50% | 20-50% 🔽 | 10-20% | <10% |
| Strata | Missing stratum(a) All strata present but reduced native species | | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4 | S3 🗸 | S2 🗌 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant [| Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-----------------------|-------------|------|-------------------|---|
| Carex lacustris* | | | PEM | Interrupted |
| Phalaris arundinacea | | | PEM | Rare |
| Rhamnus cathartica | | | PEM | Rare |
| Rubus idaeus | | | PEM | Rare |
| Poa pratensis | | | PEM | Rare |
| Populus tremuloides | | | PEM | Rare |
| Onoclea sensibilis | | | PEM | Barren |
| Tanacetum vulgare | | | PEM | Barren |
| Athyrium filix-femina | | | PEM | Barren |
| Equisetum arvense | | | PEM | Barren |
| Equisetum pratense | | | PEM | Barren |
| Solidago gigantea | | | PEM | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low due to limited strata and the near complete dominance of a single species in the herbaceous layer, as well as the presence of buckthorn and reed canary grass.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor | |
|-------------------------|--------|----------|------------------|-------------------------|---|--|
| , , | | | | | Filling, berms (non-impounding) | |
| | | | | | Drainage – tiles, ditches | |
| | | | | | Hydrologic changes - high capacity wells, | |
| | | | | | impounded water, increased runoff | |
| | | | | | Point source or stormwater discharge | |
| | | | | | Polluted runoff | |
| | | | | | Pond construction | |
| | | | | | Agriculture – row crops | |
| | | | | | Agriculture – hay | |
| | | | | | Agriculture – pasture | |
| | | | | | Roads or railroad | |
| X | Х | | Н | С | Utility corridor (above or subsurface) | |
| | | | | | Dams, dikes or levees | |
| | | | | | Soil subsidence, loss of soil structure | |
| | | | | | Sediment input | |
| V | V | | - 11 | 0 | Removal of herbaceous stratum – mowing, | |
| X | Х | | Н | С | grading, earthworms, etc. | |
| | | | | | Removal of tree or shrub strata – logging, | |
| | | | | | unprescribed fire | |
| | | | | | Human trails – unpaved | |
| | | | | | Human trails – paved | |
| | | | | | Removal of large woody debris | |
| Χ | Χ | | М | С | Cover of non-native and/or invasive species | |
| | | | | | Residential land use | |
| | | | | | Urban, commercial or industrial use | |
| | | | | | Parking lot | |
| | | | | | Golf course | |
| | | | | | Gravel pit | |
| Х | Х | | М | UC | Recreational use (boating, ATVs, etc.) | |
| | | | | | Excavation or soil grading | |
| | | | | | Other (list below): | |
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^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is within a mowed utility corridor with adjacent ATV tracks. |
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^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|----------|-------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | / | | | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | / | | | | |
| Fish and Aquatic Life Habitat | / | | | | |
| Shoreline Protection | | | | | / |
| Flood and Stormwater Storage | | ✓ | | | |
| Water Quality Protection | | / | | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|--|
| Floristic Integrity | The floristic integrity is low due to presence of invasive species, missing strata, and almost monotypic herbaceous layer. |
| Human Use Values | The wetland is within a utility corridor. |
| Wildlife Habitat | The wetland is small and missing strata that would attract more wildlife species. |
| Fish and Aquatic Life Habitat | There is no standing water present at the time of survey and the wetland is relatively shallow. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is small, but densely vegetated with lake sedge. |
| Water Quality Protection | The wetland has dense vegetation, but is small and somewhat limited in its filtering capacity. |
| Groundwater Processes | The wetland does not appear to influence groundwater processes. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project Cit | y/County: Ashland Sampling Date: <u>2020-05-30</u> |
|---|---|
| • | State: Wisconsin Sampling Point: wasa1038_u |
| Investigator(s): SBR/DGL Se | ction, Township, Range: Sec 20 T047N R004W |
| | relief (concave, convex, none): None Slope (%): 0-2% |
| Subregion (LRR or MLRA): Northcentral Forests Lat. 46,539040 | Long: <u>-90.895659</u> Datum: <u>WGS84</u> |
| Soil Map Unit Name: Sanborg-Badriver complex. 0 to 6 r | percent slopes NWI classification: |
| Are climatic / hydrologic conditions on the site typical for this time of year? | |
| | sturbed? Are "Normal Circumstances" present? Yes No |
| Are Vegetation, Soil, or Hydrology naturally proble | |
| | |
| SUMMARY OF FINDINGS – Attach site map showing sa | ampling point locations, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes No | Is the Sampled Area |
| Hydric Soil Present? Yes No ✓ | within a Wetland? Yes No |
| Wetland Hydrology Present? Yes No v | If yes, optional Wetland Site ID: |
| Remarks: (Explain alternative procedures here or in a separate report.) The upland point is located slightly upslope from | the wetland and on the edge of a red pine |
| plantation. The overstory is dominated by red pir | |
| shrub layer. | ie and the edge had commen backment in the |
| Siliub layer. | |
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| HYDROLOGY | |
| Wetland Hydrology Indicators: | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | |
| Surface Water (A1) Water-Stained Lea | |
| High Water Table (A2) Aquatic Fauna (B1 | |
| Saturation (A3) Marl Deposits (B1: | |
| Water Marks (B1) Hydrogen Sulfide (| |
| Sediment Deposits (B2) Oxidized Rhizosph Drift Deposits (B3) Presence of Redu | neres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) ced Iron (C4) Stunted or Stressed Plants (D1) |
| | ction in Tilled Soils (C6) Geomorphic Position (D2) |
| Iron Deposits (B5) Thin Muck Surface | |
| Inundation Visible on Aerial Imagery (B7) Other (Explain in F | |
| Sparsely Vegetated Concave Surface (B8) | FAC-Neutral Test (D5) |
| Field Observations: | |
| Surface Water Present? Yes No Depth (inches): _ | |
| Water Table Present? Yes No _ ✓ Depth (inches): _ | |
| Saturation Present? Yes No Depth (inches): _ | Wetland Hydrology Present? Yes No |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, | previous inspections), if available: |
| Describe Necorded Bata (stream gauge, monitoring well, acrial priotos, | previous inspections), il available. |
| | |
| Remarks: | 7 |
| No indicators of wetland hydrology were observed | ·u. |
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VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size:) | Absolute | | | Dominance Test worksheet: |
|---|----------|-------------|-------------|---|
| 1. Pinus resinosa | | Species? | | Number of Dominant Species |
| | | | | That Are OBL, FACW, or FAC:1 (A) |
| 2 | | | | Total Number of Dominant Species Across All Strata: 4 (B) |
| 3 | | | | ` ' / |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B) |
| 5 | | | | 111dt/110 OBE, 1710W, 01 1710. |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| 4- | 55 | = Total Cov | /er | OBL species x 1 = 0 |
| Sapling/Shrub Stratum (Plot size:15) | | | | FACW species0 x 2 =0 FAC species20 x 3 =60 |
| 1. Rhamnus cathartica | | | | FACU species x3 = 80 |
| 2 | | | | UPL species15 x 5 =75 |
| 3 | | | | Column Totals: <u>167</u> (A) <u>663</u> (B) |
| 4 | | | | |
| 5 | | | | Prevalence Index = B/A = 3.97 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | 20 | = Total Cov | /er | 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5 | | | | 4 - Morphological Adaptations¹ (Provide supporting |
| 1. Poa pratensis | | <u>Y</u> | <u>FACU</u> | data in Remarks or on a separate sheet) |
| 2. <u>Carex gracillima</u> | | <u> </u> | <u>FACU</u> | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Bromus inermis</u> | 15 | N | <u>UPL</u> | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. Lotus corniculatus | | <u>N</u> | <u>FACU</u> | be present, unless disturbed or problematic. |
| 5. <u>Taraxacum officinale</u> | 5 | <u>N</u> | <u>FACU</u> | Definitions of Vegetation Strata: |
| 6. <u>Symphyotrichum sp.</u> | 5 | N | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7. Achillea millefolium | | N | <u>FACU</u> | at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | 97 | = Total Cov | ver | height. |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3. | | | | Hydrophytic |
| 4 | | | | Vegetation |
| | _ | = Total Cov | /er | Present? Yes No |
| Remarks: (Include photo numbers here or on a separate | | | | |
| The upland point is representative of th | e uplan | d area. | It is loca | ated on the edge of the pine plantation. |
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Sampling Point: wasa1038_u

SOIL Sampling Point: wasa1038_u

| cription: (De | scribe t | to the dep | th needed to docum | nent the i | ndicator | or confirm | the absence of | indicators.) |
|---|--|---|--|--|---|--|---|---|
| | | | | | | | | |
| | | | Color (moist) | | Type ¹ | <u>Loc²</u> | | Remarks |
| | | | | | | | | |
| 2.5YR | 4/4_ | _90_ | | 0 | | | | |
| _10Y | 6/1 | _10_ | | 0 | | | CL | _ |
| | | | | | | | | |
| | D=Depl | etion, RM= | Reduced Matrix, MS | S=Masked | Sand Gr | ains. | | PL=Pore Lining, M=Matrix. |
| ol (A1) Epipedon (A2) distic (A3) en Sulfide (A4) ed Layers (A5) ed Below Dark Dark Surface (A1) Mucky Mineral Gleyed Matrix Redox (S5) d Matrix (S6) urface (S7) (LI | Surface A12) I (S1) (S4) | ILRA 149E | MLRA 149B) Thin Dark Surfar Loamy Mucky M Loamy Gleyed M Depleted Matrix Redox Dark Sur Depleted Dark S Redox Depressi | ce (S9) (L lineral (F1 Matrix (F2 (F3) face (F6) Surface (F ons (F8) | .RR R, MI)) (LRR K) | .RA 149B) | 2 cm Muc Coast Pra 5 cm Muc Dark Surf Polyvalue Thin Dark Iron-Mang Piedmont Mesic Sp Red Pare Very Sha Other (Ex | r Problematic Hydric Soils ³ : ck (A10) (LRR K, L, MLRA 149B) cairie Redox (A16) (LRR K, L, R) cky Peat or Peat (S3) (LRR K, L, R) cace (S7) (LRR K, L) cace (S9) (LRR K, L |
| | - | | ctana nyarology mas | t be prese | in, unico | distarbed | or problematic. | |
| | | | | | | | | |
| nches): | | | | | | | Hydric Soil Pr | esent? Yes No |
| ayey soil. | Inche | es 18-2 | 0 have 10% g | leyed ı | materia | al in the | e matrix. | |
| | Concentration, Indicators: Ind | Matrix Color (moist) 2.5YR 4/4 2.5YR 4/4 10Y 6/1 Concentration, D=Depi Indicators: ol (A1) Epipedon (A2) distic (A3) en Sulfide (A4) ed Layers (A5) ed Below Dark Surface Park Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) d Matrix (S6) urface (S7) (LRR R, Note) of hydrophytic vegetat Layer (if observed): | Matrix Color (moist) % 2.5YR 4/4 100 2.5YR 4/4 90 10Y 6/1 10 Concentration, D=Depletion, RM= Indicators: I | Matrix Redox Color (moist) % Color (moist) 2.5YR 4/4 100 2.5YR 4/4 90 10Y 6/1 10 Concentration, D=Depletion, RM=Reduced Matrix, MS Indicators: Indic | Matrix Color (moist) % Color (moist) % 2.5YR 4/4 100 0 2.5YR 4/4 90 0 10Y 6/1 10 0 Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Matrix (MS=Masked Matrix) MS=Masked Matrix (MS=Masked Matrix) MS=Masked Matrix (MS=Masked Matrix) MS=Masked MLRA 149B) Signification (A2) MLRA 149B) Signification (A3) Thin Dark Surface (S9) (Learny Mucky Mineral (F1) and Layers (A5) Loamy Mucky Mineral (F2) Mark Surface (A11) Depleted Matrix (F3) Ark Surface (A12) Redox Dark Surface (F6) Matrix (S4) Redox (S5) Matrix (S6) Matrix (S6) Matrix (S6) Matrix (S6) Matrix (S6) Matrix (MS=Masked Matrix (MS=Masked Matrix (MS=Masked Matrix) MS=Masked Matrix (MS=Masked | Matrix Redox Features Color (moist) % Type¹ 2.5YR 4/4 100 | Matrix Redox Features Color (moist) % Type¹ Loc² 2.5YR 4/4 100 0 2.5YR 4/4 90 0 10Y 6/1 10 0 10Y 6/1 10 0 Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Indicators: I(A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Ispipedon (A2) Insite (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Islictic (A3) Surface (A11) Depleted Matrix (F2) Ed Below Dark Surface (A11) Depleted Matrix (F3) Eark Surface (A12) Redox Dark Surface (F6) Mucky Mineral (S1) Depleted Dark Surface (F7) Gleyed Matrix (S4) Redox Depressions (F8) Redox Depresent, unless disturbed Layer (if observed): Inches): | Color (moist) |



wasa1038_u_N



wasa1038_u_NE

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ashland | Sampling Date: <u>2020-05-22</u> |
|--|---|--|
| Applicant/Owner: Enbridge | | State: Wisconsin Sampling Point: wasa1032e_w |
| Investigator(s): SBR/DGL | Section, Township, Rane | ge: sec 20 T047N R004W |
| Landform (hillslope, terrace, etc.): Depression | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46.536 | | |
| Soil Map Unit Name: Sanborg-Badriver complex, 0 | | |
| Are climatic / hydrologic conditions on the site typical for this time | | |
| Are Vegetation, Soil, or Hydrology signific | - | lormal Circumstances" present? Yes ✓ No |
| Are Vegetation, Soil, or Hydrology natura | | eded, explain any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map show | wing sampling point lo | cations, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes ✓ No | Is the Sampled A | |
| Hydric Soil Present? Yes No | *** *** *** | d? Yes <u>✓</u> No |
| Wetland Hydrology Present? Yes ✓ No | If yes, optional W | etland Site ID: |
| Remarks: (Explain alternative procedures here or in a separate | report.) | |
| The wetland is roughly figure 8-shaped with w | | |
| through a connecting, short, linear component | • | |
| has more standing water and is dominated by | lake sedge with more | cover of meadow willow (but not |
| enough cover to be considered a shrub-carr). | The smaller depression | on is dominated by woolgrass and reed |
| canary grass. Both features are within an oper | n area of a large pine | plantation. |
| HYDROLOGY | | |
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that a | pply) | Surface Soil Cracks (B6) |
| | ained Leaves (B9) | Drainage Patterns (B10) |
| ✓ High Water Table (A2) Aquatic F. | | Moss Trim Lines (B16) |
| Saturation (A3) Marl Depo | | Dry-Season Water Table (C2) |
| | Sulfide Odor (C1) | Crayfish Burrows (C8) |
| | Rhizospheres on Living Roots | |
| | of Reduced Iron (C4) | Stunted or Stressed Plants (D1) |
| | on Reduction in Tilled Soils (Co | |
| | k Surface (C7) | Shallow Aquitard (D3) |
| | plain in Remarks) | Microtopographic Relief (D4) |
| Sparsely Vegetated Concave Surface (B8) | , | FAC-Neutral Test (D5) |
| Field Observations: | | <u></u> |
| Surface Water Present? Yes No _ ✓ Depth (in | nches): | |
| Water Table Present? Yes _ v No Depth (in | | |
| Saturation Present? Yes _ V No _ Depth (in | | land Hydrology Present? Yes No |
| (includes capillary fringe) | | · · · · · |
| Describe Recorded Data (stream gauge, monitoring well, aerial | photos, previous inspections), | if available: |
| | | |
| Remarks: | | |
| The hydrologic regime is saturated with so | me nockets of stand | ing present in the feature but not at |
| the sample point. Saturation was observed | • | ing process in the reature but not at |
| line sample point. Saturation was observed | at o inches. | |
| | | |
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VEGETATION – Use scientific names of plants.

| - Use scientific names of plants. Sampling Point: wasa1032e_w |
|--|
| Absolute Dominant Indicator lot size: 30) |
| Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A) |
| |
| Species Across All Strata: (B) |
| Percent of Dominant Species |
| That Are OBL, FACW, or FAC: (A/B) |
| Prevalence Index worksheet: |
| |
| O = Total Cover OBL species x 1 =50 |
| <u>ratum</u> (Plot size:15) FACW species47 x 2 =94 |
| <u>1aris</u> <u>5 Y FACW</u> FAC species <u>2</u> x 3 = <u>6</u> |
| FACU species x 4 = UPL species x 5 = U |
| Column Totals: 99 (A) 150 (B) |
| |
| Prevalence Index = B/A = 1.5151515151515151 |
| Hydrophytic Vegetation Indicators: |
| 1 - Rapid Test for Hydrophytic Vegetation |
| 5 = Total Cover 2 - Dominance Test is >50% |
| Plot size:5 3 - Prevalence Index is ≤3.0¹ |
| perinus 45 Y OBL data in Remarks or on a separate sheet) |
| rundinacea 40 Y FACW — Problematic Hydrophytic Vegetation ¹ (Explain) |
| hydropiperoides 5 N OBL 1 and control by dealers and by dealers an |
| iligantea 2 N FACW be present, unless disturbed or problematic. |
| arvense 2 N FAC 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 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 |
| 94 = Total Cover height. |
| tum (Plot size: 30 |
| |
| |
| Hydrophytic |
| Vegetation |
| O = Total Cover |
| le photo numbers here or on a separate sheet.) |
| |

SOIL Sampling Point: wasa1032e_w

| Profile Des | cription: (D | Describe t | o the dep | th needed | to docun | nent the ir | ndicator | or confirm | the absence | of indicators.) |
|---|---------------------------|--|--------------------|---|---|--|-----------------------------------|-------------------|---|--|
| Depth | | Matrix Redox Features | | | | - . | | | | |
| (inches) | Color (I | | % 80 | 7.5YR | | % | Type' | Loc ² | SICL | <u>Remarks</u> |
| | 7.51R 7.5R | | | 7.51R 7.5YR | | 10 | <u> </u> | M | SICL | |
| 8-16 | | | | 1.31K | 4/0 | | | IVI | | |
| <u>16-20</u> | <u>7.5YR</u> | <u>2.5/1</u> | 100 | | | _0_ | | | M | |
| Type: C=C Hydric Soil Histic E Black H Hydrog Stratifie Deplete Thick D Sandy I Sandy I Sandy I | concentration Indicators: | n, D=Depl 2) A4) 5) rk Surface (A12) ral (S1) ix (S4) | etion, RM | Polyva MLF Thin D Loamy Loamy Peplet Redox Deplet | Ilue Below RA 149B) ark Surfa Mucky M Gleyed M ed Matrix Dark Sur | S=Masked v Surface (ce (S9) (L lineral (F1 Matrix (F2) (F3) face (F6) Surface (F | (S8) (LRI RR R, MI) (LRR K | R R, LRA 149B) | 2Location: Indicators 2 cm M Coast I 5 cm M Dark S Polyva Thin Da Iron-Ma Piedmo Mesic S Red Pa | E PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : fluck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) flucky Peat or Peat (S3) (LRR K, L, R) urface (S7) (LRR K, L) lue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L) anganese Masses (F12) (LRR K, L, R) ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21) hallow Dark Surface (TF12) |
| Dark Su | urface (S7) (| LRR R, M | LRA 1491 | 3) | | | | | Other (| Explain in Remarks) |
| ³ Indicators of Restrictive | | _ | on and w | etland hydro | logy mus | t be prese | nt, unles | disturbed | or problematic | i. |
| Type: | Layer (II OL | isei veuj. | | | | | | | | |
| • • • | nches): | | | | | | | | Hydric Soil | Present? Yes No |
| Remarks: A red, cl deep mu | | | | | | | a dar | k muck | was obse | erved. The presence of |



wasa1032e_w_S



wasa1032e_w_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | |
|--|-------------------------------------|---|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | | |
| File #: wasa1032 | Date of visit(s): 2020-05-22 | | |
| Location: PLSS: sec 20 T047N R004W | Ecological Landsca | • | |
| Lat: <u>46.536830</u> Long: <u>-90.894905</u> County: <u>Ashland</u> Town/City/Village: Gingles town | Watershed: LS09, Lower Bad River | | |
| SITE DESCRIPTION | | | |
| Soils: Mapped Type(s): | WWI Class: | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes Field Verified: | Wetland Type(s): PEM sedge mea | adow | |
| The soils were not field verified. | Wetland Size: 0.1486 | Wetland Area Impacted 0.1486 | |
| Hydrology: The hydrologic regime is saturated with standing water present in some parts of the wetland feature at the time of survey. The major source of hydrology is from surface water. Major hydrologic indicators include an observed saturation at 0 inches and a water table at 1 inch. | by sedges, inclu | Description(s): a sedge meadow dominated ding cottongrass bulrush and also by reed canary grass. | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | ECTION 1: | Functional Value Assessment |
|----|-------|-----------|--|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | Ν | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | N | N | Used for educational or scientific purposes |
| 3 | N | N | Visually or physically accessible to public |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| | - ' ' | - 1 | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | - 11 | 111 | Wildlife Habitat |
| 1 | N | Υ | Wetland and contiguous habitat >10 acres |
| 2 | N | N | 3 or more strata present (>10% cover) |
| 3 | N | N N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | | | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | |
| | N | N | Occurs in a Joint Venture priority township |
| 6 | N | N | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| 7 | N | N | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| | | | plans |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | Ν | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | N | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | N | N | Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable |
| | | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| 2 | N | N | water levels or high flows – if no, not applicable |
| 3 | N | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | N | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | N | N | Water flow through wetland is NOT channelized |
| 3 | N | N | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | N | N | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | | | Within a watershed with <10% wetland |
| 8 | N | N N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | N | N | Water Quality Protection |
| | N. | N 1 | |
| 1 | N | N | Provides substantial storage of storm and floodwater based on previous section |
| 2 | N | N | Basin wetland or constricted outlet |
| 3 | Y | Y | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Υ | Y | Dense, persistent vegetation |
| 6 | N | N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | N | Υ | Stormwater or surface water from agricultural land is major hydrology source |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | N | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | N | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | N | N N | Wetland is within a wellhead protection area |
| J | IN | l IN | wedana is widin a weineau protection area |

Section 1 Comments (Refer to Section 1 numbers) WH-10/FA-2/4 there is standing water in parts of the wetland feature at the time of survey and though none were observed, there is potential for aquatic organisms to use the feature ST-3/WQ-5 based on remnant biomass, the wetland will likely have dense, persistent vegetation later in the growing season. ST-5/WQ-7 a major source of hydrology is from surface water and runoff from the surrounding pine plantation. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Avian White tailed deer scat Υ Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat Aquatic organisms

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 🗌 | S2 🗌 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant [| Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|----------------------------|-------------|------|-------------------|---|
| Carex lacustris* | | | PEM | Interrupted |
| Equisetum arvense | | | PEM | Barren |
| Lonicera tatarica | | | PEM | Barren |
| Persicaria hydropiperoides | | | PEM | Rare |
| Phalaris arundinacea | | | PEM | Rare |
| Poa pratensis | | | PEM | Rare |
| Rhamnus cathartica | | | PEM | Rare |
| Salix petiolaris | | | PEM | Rare |
| Salix petiolaris | | | PEM | Rare |
| Scirpus cyperinus* | | | PEM | Rare |
| Solidago gigantea | | | PEM | Barren |
| Tanacetum vulgare | | | PEM | Barren |
| Valeriana edulis | | | PEM | Barren |
| | | | | |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The sedge meadow community is less abundant than others in the area, but the lack of strata and the presence of invasives reduce the floristic integrity.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| | | | | | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | | | | | Roads or railroad |
| | | | | | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | | | | | Removal of herbaceous stratum – mowing, |
| | | | | | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Х | Х | | М | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| _ | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is within an open area of the pine plantation. Its major source of hydrology is from stormwater. Invasive |
|---|
| species are present below 20% cover for the wetland feature. |
| |
| |
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| |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | SIGNIFICANCE | | | | | | | | | |
|-------------------------------|--------------|----------|----------|-------------|----------|--|--|--|--|--|
| | Low | Medium | High | Exceptional | NA | | | | | |
| Floristic Integrity | | / | | | | | | | | |
| Human Use Values | V | | | | | | | | | |
| Wildlife Habitat | | ✓ | | | | | | | | |
| Fish and Aquatic Life Habitat | | / | | | | | | | | |
| Shoreline Protection | | | | | / | | | | | |
| Flood and Stormwater Storage | | | ✓ | | | | | | | |
| Water Quality Protection | | ✓ | | | | | | | | |
| Groundwater Processes | / | | | | | | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | Floristic integrity is moderate due to the relatively uncommon sedge meadow community, but the only one strata is presents and invasive species cover is fairly high. |
| Human Use Values | The wetland is on private property and within a pine plantation. |
| Wildlife Habitat | The wetland's size and interspersion of some shrub cover allows the space to be more attractive to varied wildlife species. |
| Fish and Aquatic Life Habitat | There is standing water present in parts of the wetland and has potential to support aquatic organisms, though none were observed at the time of survey. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The relative large size and depth of the wetland likely allows for it to hold large amounts of water. |
| Water Quality Protection | The size the wetland and its dense persistent vegetation likely helps the feature filter large amounts of water. |
| Groundwater Processes | The features main input is from surface water. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ashla | nd Sam | pling Date: 2020-05-22 | |
|--|------------------------------|---|--------------------------|--|
| • | | State: Wisconsin Sa | | |
| Investigator(s): SBR/DGL | | | | |
| Landform (hillslope, terrace, etc.): Rise | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46.53 | 6620 Lo | ng: -90 894871 | Datum: WGS84 | |
| Soil Map Unit Name: Sanborg-Badriver complex, C |) to 6 percent slope | S NWI classification: | Butum <u>*******</u> | |
| Are climatic / hydrologic conditions on the site typical for this time | | | | |
| Are Vegetation, Soil, or Hydrology signifi | | | | |
| Are Vegetation, Soil, or Hydrology natura | | | | |
| | | | | |
| SUMMARY OF FINDINGS – Attach site map sho | wing sampling point | locations, transects, imp | oortant features, etc. | |
| Hydrophytic Vegetation Present? Yes No | ✓ Is the Sample | | | |
| Hydric Soil Present? Yes No | | and? Yes N | No <u> </u> | |
| Wetland Hydrology Present? Yes No | | Wetland Site ID: | | |
| Remarks: (Explain alternative procedures here or in a separate The upland point is located on a rise upslo | report.) | d within a nine nlantat | tion | |
| The upland point is located on a rise upsio | pe nom the wettam | a within a pine plantat | uon. | |
| | | | | |
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| HYDROLOGY | | | | |
| Wetland Hydrology Indicators: | | | minimum of two required) | |
| Primary Indicators (minimum of one is required; check all that a | | | | |
| | ained Leaves (B9) | Drainage Patterns | | |
| High Water Table (A2) Aquatic F | | Moss Trim Lines (B16)Dry-Season Water Table (C2) | | |
| Saturation (A3) Marl Dep | | · · | | |
| 1 | n Sulfide Odor (C1) | Crayfish Burrows (ots (C3) Saturation Visible of | | |
| | e of Reduced Iron (C4) | Stunted or Stresse | = | |
| | on Reduction in Tilled Soils | | | |
| | ck Surface (C7) | Shallow Aquitard (I | | |
| | xplain in Remarks) | Microtopographic F | | |
| Sparsely Vegetated Concave Surface (B8) | , | FAC-Neutral Test (| | |
| Field Observations: | | | · · | |
| Surface Water Present? Yes No Depth (ii | nches): | | | |
| Water Table Present? Yes No Depth (ii | nches): | | | |
| Saturation Present? Yes No _v Depth (i | nches): W | /etland Hydrology Present? Y | Yes No <u></u> | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial | photos, previous inspection | ns), if available: | | |
| gg.,g | p, p | | | |
| | | | | |
| Remarks: No indicators of wetland hydrology were ol | hsarvad | | | |
| Two indicators of wetland flydrology were of | JSEIVEU. | | | |
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VEGETATION – Use scientific names of plants.

| • | | | | 9 | . 1 5 | | 1032_ι |
|-------------------------------------|---------------------|-------------------|---------------------|--|----------------|--------------|----------|
| Tree Stratum (Plot size:30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksho | | | |
| Pinus resinosa | | | | Number of Dominant Spec That Are OBL, FACW, or F | | 2 | (A) |
| | | | | Total Number of Dominant Species Across All Strata: | | 4 | (B) |
| | | | | Percent of Dominant Spec | | | (2) |
| k | | | | That Are OBL, FACW, or F | | 50 | (A/B |
| · | | | | Prevalence Index worksh | neet: | | |
| | | | | Total % Cover of: | | Itiply by: | |
| | 60 | = Total Co | ver | OBL species0 | | | |
| Sapling/Shrub Stratum (Plot size:) | | | | FACW species15 | | | _ |
| . Rhamnus cathartica | 30 | Y | FAC | FAC species30 | | | _ |
| | | | | FACU species90 | | | |
| | | | | UPL species0 | | | |
| | | | | Column Totals: <u>135</u> | (A) _ | 480 | (B) |
| | | | | Prevalence Index = | B/A = 3.555 | 55555555555 | 54_ |
| | | | | Hydrophytic Vegetation | ndicators: | | |
| | | | | 1 - Rapid Test for Hyd | rophytic Ve | getation | |
| • | | = Total Co | | 2 - Dominance Test is | >50% | | |
| _ | | = Total Co | ver | 3 - Prevalence Index i | s ≤3.0¹ | | |
| Herb Stratum (Plot size: 5 | | | E4 01 1 | 4 - Morphological Ada | | | |
| . <u>Poa pratensis</u> | | <u>Y</u> | <u>FACU</u> | data in Remarks or | | | |
| Bromus cf ciliatus | 15 | <u>Y</u> | <u>FACW</u> | Problematic Hydrophy | tic Vegetat | ion' (Expla | iin) |
| 3. <u>Fragaria virginiana</u> | 5 | N | <u>FACU</u> | 1 malia atawa at buahia aail aw | المصطلحين المح | ا مسامر دا | 4 |
| . <u>Taraxacum officinale</u> | 5 | N | <u>FACU</u> | ¹ Indicators of hydric soil ar be present, unless disturbe | | | must |
| 5 | | | | Definitions of Vegetation | Strata: | | |
| 5 | | - | | Tree – Woody plants 3 in. | (7.6 cm) or | more in di | ametei |
| 7 | | | | at breast height (DBH), rec | | | |
| 3 | | | · | Sapling/shrub – Woody p | | | вн |
|) | | | · · | and greater than or equal | | | |
| 10 11 | | | | Herb – All herbaceous (no of size, and woody plants | | | ırdless |
| 12. | | | | Woody vines – All woody | vines great | ter than 3.2 | 28 ft in |
| | 45 | = Total Co | ver | height. | | | |
| Noody Vine Stratum (Plot size: 30) | | | | | | | |
| | | | | | | | |
| 2. | | | | | | | |
| 3 | | | | Hydrophytic | | | |
| | | | | Hydrophytic Vegetation | | | |
| *- | | = Total Co | ver | Present? Yes _ | No | <u> </u> | |
| | sheet.) | - 10(a) 00 | VCI | | | | |

SOIL Sampling Point: wasa1032_u

| Profile Desc | cription: (Describe t | o the dep | th needed to docum | ent the | indicator | or confirm | n the absence of indicators.) |
|------------------------|--|--------------|-----------------------------------|-----------|-------------------|------------------|---|
| Depth | Matrix | | Redox | (Feature | <u>s</u> | | |
| (inches) | Color (moist) | <u></u> % | Color (moist) | <u>%</u> | Type ¹ | Loc ² | Texture Remarks |
| _0-16_ | 7.5YR 2.5/2 | <u>100</u> | | 0_ | | | _SICL_ |
| 16-20 | 5YR 3/4 | 100 | | 0 | | | |
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| | | | | | - | | - |
| ¹ Type: C=C | oncentration, D=Depl | etion RM= | Reduced Matrix MS | =Maske | d Sand G | ains | ² Location: PL=Pore Lining, M=Matrix. |
| Hydric Soil | | Ction, rtivi | Treadoca Matrix, Me | WIGORG | a cana ci | airio. | Indicators for Problematic Hydric Soils ³ : |
| Histosol | (A1) | | Polyvalue Below | / Surface | (S8) (LR | R R, | 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| | oipedon (A2) | | MLRA 149B) | | | | Coast Prairie Redox (A16) (LRR K, L, R) |
| | istic (A3) en Sulfide (A4) | | Thin Dark Surface Loamy Mucky M | | | |) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L) |
| | d Layers (A5) | | Loamy Gleyed N | | | ., ∟) | Polyvalue Below Surface (S8) (LRR K, L) |
| | d Below Dark Surface | e (A11) | Depleted Matrix | | , | | Thin Dark Surface (S9) (LRR K, L) |
| | ark Surface (A12) | | Redox Dark Sur | • | | | Iron-Manganese Masses (F12) (LRR K, L, R) |
| - | Mucky Mineral (S1) | | Depleted Dark S | | | | Piedmont Floodplain Soils (F19) (MLRA 149B) |
| | Gleyed Matrix (S4) Redox (S5) | | Redox Depressi | ons (Fo) | | | Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) |
| - | Matrix (S6) | | | | | | Very Shallow Dark Surface (TF12) |
| Dark Su | rface (S7) (LRR R, M | LRA 149E | 3) | | | | Other (Explain in Remarks) |
| 31 | £ la., .al.a., .al.a., .ki.a.,a., a. a. 4. a. 4. | | the seal boundary to some seasons | | 4 | l:-4dd | l ou problementie |
| | f hydrophytic vegetati Layer (if observed): | on and we | tiand nydrology musi | t be pres | ent, unies | s disturbed | or problematic. |
| Type: | Layer (ii observed). | | | | | | |
| | ches): | | | | | | Hydric Soil Present? Yes No _ ✓ |
| Remarks: | | | | | | | |
| | n soil with no r | edox o | hserved | | | | |
| / Todalo | Toon with the t | ouch o | 00011041 | | | | |
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wasa1032_u_N



wasa1032_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project City/ | County: <u>Ashland</u> Sampling Date: <u>2020-05-22</u> |
|---|--|
| Applicant/Owner: Enbridge | State: Wisconsin Sampling Point: wasa1029e_wr |
| Investigator(s): SBR/DGL Sect | tion, Township, Range: <u>Sec 20 T047N R004W</u> |
| | elief (concave, convex, none): Concave Slope (%): 0-2% |
| | Long: <u>-90.894904</u> Datum: <u>WGS84</u> |
| Soil Map Unit Name: Sanborg-Badriver complex, 0 to 6 per | |
| Are climatic / hydrologic conditions on the site typical for this time of year? | · |
| Are Vegetation, Soil, or Hydrology significantly distu | |
| Are Vegetation, Soil, or Hydrology naturally problem | |
| | mpling 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.) | If yes, optional Wetland Site ID: |
| The wetland is a large wet meadow located within | a red pine plantation. The feature encompasses a |
| large area of the plantation but without a large cov | ver percentage of the red pines. It is likely that the |
| wetter soils are not conducive to growing the red p | pine and any pine planted in these wetter areas did |
| not survive. The wetland feature itself is within the | open areas and thus it is considered a wet |
| meadow and not a forested swamp. | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | Surface Soil Cracks (B6) |
| Surface Water (A1) Water-Stained Leav | res (B9) Drainage Patterns (B10) |
| <u>✓</u> High Water Table (A2) Aquatic Fauna (B13 | |
| Saturation (A3) Marl Deposits (B15) | |
| Water Marks (B1) Hydrogen Sulfide Oc | |
| | eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) ed Iron (C4) Stunted or Stressed Plants (D1) |
| Drift Deposits (B3) Presence of Reduce Algal Mat or Crust (B4) Recent Iron Reducti | |
| Iron Deposits (B5) Thin Muck Surface (| |
| Inundation Visible on Aerial Imagery (B7) Other (Explain in Re | |
| Sparsely Vegetated Concave Surface (B8) | FAC-Neutral Test (D5) |
| Field Observations: | |
| Surface Water Present? Yes No Depth (inches): | |
| Water Table Present? Yes _ v No Depth (inches): 10 |) |
| Saturation Present? Yes _ v No Depth (inches): 8 | Wetland Hydrology Present? Yesv_ No |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr | revious inspections), if available: |
| | |
| Daniela | |
| Remarks: The hydrologic regime is saturated. Saturation wa | as observed at 8 inches |
| The flydrologic regime to datarated. Cataration wa | lo obootvou ut o monoc. |
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VEGETATION – Use scientific names of plants.

| VEGETATION – Use scientific names of plants. | | | | Sampling Point: wasa1029e_w1 |
|---|---------------------|----------------------|----------|---|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC:1 (A) |
| 2 | | | | Total Number of Dominant Species Across All Strata: 1 (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: |
| | 0 | = Total Co | /er | OBL species5 x 1 =5 |
| Sapling/Shrub Stratum (Plot size: 15 | | | | FACW species <u>82</u> x 2 = <u>164</u> |
| 1 | | | | FAC species x 3 = 0 |
| 2 | | | | FACU species 0 x 4 = 0 |
| 3 | | | | UPL species $0 \times 5 = 0$ Column Totals: $87 \times (A) \times 169 \times (B)$ |
| 4 | | | | Column Totals. 87 (A) 109 (B) |
| 5 | | | | Prevalence Index = B/A = 1.9425287356321839 |
| 6. | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | _ | = Total Cov | | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:5) | | - 10tai 00 | 701 | 3 - Prevalence Index is ≤3.0¹ |
| 1. Phalaris arundinacea | 80 | Y | FACW | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. Scirpus cf atrovirens | | N | OBL | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Solidago gigantea</u> | | | FACW | |
| 4 | | | <u> </u> | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. | | | | |
| 6. | | | | Definitions of Vegetation Strata: |
| 7 | | | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in height. |
| | 87 | = Total Co | /er | neight. |
| $\underline{\text{Woody Vine Stratum}} (\text{Plot size:} \underline{\hspace{1cm} 30} \hspace{1cm})$ | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic |
| 4 | | | | Vegetation |
| | | = Total Cov | /er | Present? Yes <u>✓</u> No |
| Remarks: (Include photo numbers here or on a separate s | | | | |
| The sample point is only somewhat repentire wetland. Other sections of the we | | | | _ |
| cattails. The vegetation is still emerging | | | | |
| remnant biomass. | a. 1116 | uiiie Oi (| aic suiv | oy and ground is covered with |

US Army Corps of Engineers

SOIL Sampling Point: wasa1029e_w1

| Depth | | Matrix | | | Redo | x Features | 3 | | the absence of | • |
|---|---|--|-----------|---------------------------------------|--|---|---------------------------|------------------|---|--|
| (inches) | Color (| | <u>%</u> | Color (| | <u>%</u> | Type ¹ | Loc ² | <u>Texture</u> | Remarks |
| <u>0-10</u> | <u>5YR</u> | 3/2 | | <u>5YR</u> | 4/4 | 5 | <u> </u> | _PL_ | SICL_ | |
| <u>10-20</u> | <u>5YR</u> | 4/1 | 90 | <u>5YR</u> | 4/4 | | C | _M_ | _SICL | |
| | | | | | | · —— | | | | |
| | | | | | | | | | | |
| ¹Type: C=Co | oncentratio | n. D=Depl | etion. RM | =Reduced | Matrix. MS | S=Masked | Sand Gr | ains. | ² Location: | PL=Pore Lining, M=Matrix. |
| Black Hi Hydroge Stratified Depleted Thick Da Sandy M Sandy R Stripped Dark Sul | (A1) pipedon (A2 stic (A3) n Sulfide (A d Layers (A d Below Da ark Surface flucky Mine eldeyed Matr eledox (S5) Matrix (S6 fface (S7) (| 2) A4) 5) rk Surface (A12) ral (S1) ix (S4)) LRR R, M | ILRA 1491 | ML Thin I Loam Loam Deple Redox Redox | RA 149B) Dark Surfa y Mucky N y Gleyed I ted Matrix x Dark Su ted Dark S x Depress | ice (S9) (L Mineral (F1 Matrix (F2) (F3) rface (F6) Surface (F6) Sinface (F8) | .RR R, M) (LRR K) | LRA 149B) | 2 cm Mu Coast Pr 5 cm Mu Dark Sur Polyvalu Thin Dar Iron-Mar Piedmon Mesic Sp Red Pare Very Sha | or Problematic Hydric Soils ³ : ck (A10) (LRR K, L, MLRA 149B) rairie Redox (A16) (LRR K, L, R) ricky Peat or Peat (S3) (LRR K, L, R) riface (S7) (LRR K, L) re Below Surface (S8) (LRR K, L) re Below Surface (S9) (LRR K, L) re ganese Masses (F12) (LRR K, L, R) re Floodplain Soils (F19) (MLRA 149B) redic (TA6) (MLRA 144A, 145, 149B) rent Material (F21) allow Dark Surface (TF12) rexplain in Remarks) |
| Restrictive I | _ayer (if ob | served): | | | | | | | | |
| Type: Depth (inc | shoe): | | | | | | | | Hydric Soil P | resent? Yes 🗸 No |
| Remarks: | | soil wi | ith redo | ox conc | entratio | ons thr | ougho | ut the s | oil profile. | · · · · · · · · · · · · · · · · · · · |
| | | | | | | | | | | |



wasa1029e_w1_E



wasa1029e_w1_SE

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Proj | iect City/0 | County: Ashland | Sampling Dat | ite: <u>2020-05-22</u> |
|--|--|--|---------------------------------|------------------------|
| Applicant/Owner: Enbridge | • | | | |
| Investigator(s): SBR/DGL | | | | |
| Landform (hillslope, terrace, etc.): Depres | | | | |
| Subregion (LRR or MLRA): Northcentral For | | | | |
| Soil Map Unit Name: Sanborg-Badrive | | | | |
| Are climatic / hydrologic conditions on the site | • | • | | |
| Are Vegetation, Soil, or Hydro | | | | No |
| | | | | |
| Are Vegetation, Soil, or Hydro | | | | |
| SUMMARY OF FINDINGS – Attach | h site map showing sar | npling point locatio | ns, transects, important | t features, etc. |
| Hydric Soil Present? Ye | es No es No | | Yes <u>/</u> No | |
| Wetland Hydrology Present? Ye Remarks: (Explain alternative procedures h | es No | If yes, optional Wetland | Site ID: | |
| The wetland is a depression in canary grass. | Tan open area or a p | omo piamationi i | | 34 2y 1864 |
| HYDROLOGY | | | | |
| Wetland Hydrology Indicators: | | | Secondary Indicators (minimum | 1 of two required) |
| Primary Indicators (minimum of one is requir | | | Surface Soil Cracks (B6) | |
| Surface Water (A1) High Water Table (A2) | Water-Stained Leave Aquatic Fauna (B13) | ater-Stained Leaves (B9) Drainage Patterns (B10) uatic Fauna (B13) Moss Trim Lines (B16) | | |
| ✓ Saturation (A3) | Marl Deposits (B15) | | Dry-Season Water Table (0 | C2) |
| Water Marks (B1) | Hydrogen Sulfide Oc | | Crayfish Burrows (C8) | 32) |
| Sediment Deposits (B2) | Oxidized Rhizospher | | Saturation Visible on Aerial | I Imagery (C9) |
| Drift Deposits (B3) | Presence of Reduce | = | Stunted or Stressed Plants | |
| ✓ Algal Mat or Crust (B4) | Recent Iron Reduction | | Geomorphic Position (D2) | , , |
| Iron Deposits (B5) | Thin Muck Surface (| C7) | Shallow Aquitard (D3) | |
| Inundation Visible on Aerial Imagery (B7 | 7) Other (Explain in Re | marks) | Microtopographic Relief (De | 4) |
| Sparsely Vegetated Concave Surface (E | B8) | | FAC-Neutral Test (D5) | |
| Field Observations: | | | | |
| | No _ v Depth (inches): | | | |
| | No Depth (inches): 4 | | | |
| Saturation Present? Yes ! (includes capillary fringe) | No Depth (inches): 2_ | Wetland H | lydrology Present? Yes <u>v</u> | No |
| Describe Recorded Data (stream gauge, mo | onitoring well, aerial photos, pre | evious inspections), if avai | ilable: | |
| | | | | |
| Remarks: | | | | |
| The hydrologic regime is satur | rated for this feature | . There is a small | section with an algal | crust |
| present on the remnant vegeta | ation . | | | |
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| VEGETATION – Use scientific names of plants |
|--|
|--|

| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | | Dominance Test worksheet: |
|--|---------------------|----------------------|-------------|---|
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A) |
| 2. | | | | 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: |
| | 0 | = Total Cov | /er | OBL species5 x 1 =5 |
| Sapling/Shrub Stratum (Plot size:) | | | | FACW species <u>88</u> x 2 = <u>176</u> |
| 1. <u>Salix petiolaris</u> | 5 | <u>Y</u> | <u>FACW</u> | FAC species5 x 3 =15 FACU species0 x 4 =0 |
| 2. <u>Spiraea alba</u> | 3 | <u>Y</u> | <u>FACW</u> | UPL species |
| 3 | <u> </u> | | - | Column Totals: 98 (A) 196 (B) |
| 4 | | | | Prevalence Index = B/A = 2.0 |
| 5 | | | | |
| 6 | | | | Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation |
| 7 | | | | _v_ 2 - Dominance Test is >50% |
| _ | 8 | = Total Cov | /er | 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5) 1. Phalaris arundinacea | 75 | V | FACW | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. <u>Equisetum arvense</u> | | | FAC | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. Impatiens capensis | | | FACW | |
| 4. <u>Scirpus cyperinus</u> | | | OBL | ¹Indicators of hydric soil and wetland hydrology must |
| 5 | | | | be present, unless disturbed or problematic. |
| 6 | | | | Definitions of Vegetation Strata: |
| 7 | | | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | 90 | = Total Cov | ver | height. |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic |
| 4 | | | | Vegetation Present? Yes <u>✓</u> No |
| | 0 | = Total Cov | er er | |
| Remarks: (Include photo numbers here or on a separate see The sample point is fairly representative reed canary grass. | | small w | etland f | eature. The wetland is dominated by |
| | | | | |
| | | | | |

Sampling Point: wasa1029e_w2

SOIL Sampling Point: wasa1029e_w2

| Profile Desc | cription: (Describe t | o the de | oth needed | to docun | nent the i | ndicator | or confirm | the absence of | f indicators.) |
|---------------------------|--|-----------|--------------|--------------------------------|----------------------------|-------------------|------------------|-----------------|--|
| Depth | Matrix | | | | x Features | 31 | | | |
| (inches) | Color (moist) | <u>%</u> | Color (m | - | | Type ¹ | Loc ² | Texture | Remarks |
| 0-16 | 7.5YR 3/1 | 90 | 7.5YR | | 10 | <u>C</u> | _M_ | SICL | |
| <u>16-20</u> | 7.5R 2.5/1 | 90 | <u>7.5YR</u> | 3/4 | _10_ | _C | _M_ | SICL | |
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| | oncentration, D=Deple | etion, RM | =Reduced N | latrix, MS | S=Masked | Sand Gr | ains. | | PL=Pore Lining, M=Matrix. |
| Hydric Soil | | | Dahasa | lua Dalau | Cf | (CO) (LD | D D | | or Problematic Hydric Soils ³ : |
| Histosol Histic E | oipedon (A2) | | - | iue Belov R A 149B) | v Surface | (58) (LK | кк, | · | ck (A10) (LRR K, L, MLRA 149B) rairie Redox (A16) (LRR K, L, R) |
| Black Hi | stic (A3) | | | | | | LRA 149B) |) 5 cm Mu | cky Peat or Peat (S3) (LRR K, L, R) |
| | en Sulfide (A4) d Layers (A5) | | | - | /lineral (F1 Matrix (F2 | | (, L) | | face (S7) (LRR K, L) e Below Surface (S8) (LRR K, L) |
| | d Layers (A5) d Below Dark Surface | (A11) | - | ed Matrix | |) | | | k Surface (S9) (LRR K, L) |
| | ark Surface (A12) | ` , | Redox | Dark Su | rface (F6) | | | Iron-Man | nganese Masses (F12) (LRR K, L, R) |
| | Mucky Mineral (S1) Gleyed Matrix (S4) | | | | Surface (F ions (F8) | 7) | | | nt Floodplain Soils (F19) (MLRA 149B) |
| | Redox (S5) | | Redux | Depress | ions (Fo) | | | | podic (TA6) (MLRA 144A, 145, 149B) ent Material (F21) |
| Stripped | l Matrix (S6) | | | | | | | Very Sha | allow Dark Surface (TF12) |
| Dark Su | rface (S7) (LRR R, M | LRA 149 | B) | | | | | Other (E | xplain in Remarks) |
| ³ Indicators o | f hydrophytic vegetati | on and w | etland hydro | logy mus | t be prese | ent, unles | s disturbed | or problematic. | |
| Restrictive | Layer (if observed): | | | | | | | | |
| Type: | | | <u></u> | | | | | | |
| | ches): | | | | | | | Hydric Soil P | resent? Yes <u>/</u> No |
| Remarks: | Ity clay loam w | ith ro | lov foati | iroc th | rough | out the | nrofilo | was obsor | wod |
| A uaik si | ity ciay ioairi w | /IIII 160 | iox icall | 11 CO III | irougric | Jul lile | prome | was observ | vea. |
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wasa1029e_w2_NW



wasa1029e_w2_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | |
|---|---|---|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | |
| File #: wasa1029 | Date of visit(s): 2020-05-22 | |
| Location: PLSS: sec 20 T047N R004W | Ecological Landsca Lake Superior Clay Plair | • |
| Lat: 46.539752 Long: -90.894846 County: Ashland Town/City/Village: Gingles town | Watershed: LS09, Lower Bad River | |
| SITE DESCRIPTION | | |
| Soils: Mapped Type(s): Sanborg-Badriver complex, 0 to 6 percent slopes Field Verified: | WWI Class: N/A Wetland Type(s): PEM/ wet meade | ow |
| The soils were not field verified. | Wetland Size: 3.9366 | Wetland Area Impacted 3.9366 |
| Hydrology: The hydrologic regime is saturated with inundation likely in the spring. The major source of hydrology is from surface water runoff. | | Description(s): I wet meadow located within a and dominated by reed canary |

| SITE MAP | | |
|----------|--|--|
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SECTION 1: Functional Value Assessment

| | | | Functional Value Assessment |
|----|-----|-----------|--|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | N | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | Ν | N | Used for educational or scientific purposes |
| 3 | Ν | N | Visually or physically accessible to public |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| _ | | | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | | ., | Wildlife Habitat |
| 1 | N | Υ | Wetland and contiguous habitat >10 acres |
| 2 | Y | Y | 3 or more strata present (>10% cover) |
| 3 | N | N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | N | Y | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | Occurs in a Joint Venture priority township |
| 6 | Y | Y | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| | Y | Y | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| 7 | Ν | N | |
| | | | plans |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | N | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | Ν | Ν | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | Ν | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | N | N | Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable |
| | | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| 2 | Ν | N | water levels or high flows – if no, not applicable |
| 3 | N | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | N | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | Y | Y | Water flow through wetland is NOT channelized |
| 3 | Ý | Ϋ́ | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | N | N N | Within a watershed with <10% wetland |
| 8 | N | N N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | IN | IN | Water Quality Protection |
| 1 | N.I | N1 | Provides substantial storage of storm and floodwater based on previous section |
| | N | N N | Basin wetland or constricted outlet |
| 2 | N | N | |
| 3 | Y | Y | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Y | Y | Dense, persistent vegetation |
| 6 | N | N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | Υ | Y | Stormwater or surface water from agricultural land is major hydrology source |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | N | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | N | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | N | N | Wetland is within a wellhead protection area |
| | IN | I N | 1 Trouville to Within a Womineda proteotion and |

Section 1 Comments (Refer to Section 1 numbers) WH -2 three strata are present at greater than 10% each. WH-6 There is an upland island within the wetland feature. WH-10/FA-2/4 inundation is likely after heavy water events and would then be able to provide habitat for aquatic organisms. ST-3/WQ-5 at the time of the survey, the vegetation is not dense. As the growing season progresses, the vegetation will fully emerge and be more dense. ST-5/WQ-7 the wetland is fed primarily by surface water. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Avian Small mammals Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% 🔽 | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 | S2 🗌 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of C | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-----------------------|-------------|-----------|-------------------|---|
| Barbarea vulgaris | | | Pem | Barren |
| Carex castanea | | | Pem | Rare |
| Carex lacustris* | | | Pem | Patchy |
| Cicuta maculata | | | Pem | Barren |
| Equisetum arvense | | | Pem | Barren |
| Geum canadense | | | Pem | Barren |
| Impatiens capensis | | | Pem | Barren |
| Impatiens capensis | | | Pem | Barren |
| Juncus effusus | | | Pem | Rare |
| Persicaria hydropiper | | | Pem | Barren |
| Phalaris arundinacea* | | | Pem | Patchy |
| Pinus resinosa* | | | Pem | Rare |
| Poa pratensis | | | Pem | Rare |
| Prunus serotina | | | Pem | Rare |
| Rhamnus cathartica | | | Pem | Barren |
| Rubus idaeus | | | Pem | Barren |
| Salix petiolaris | | | Pem | Rare |
| Scirpus cf atrovirens | | | Pem | Rare |
| Scirpus cyperinus | | | Pem | Rare |
| Solidago gigantea | | | Pem | Barren |
| Taraxacum officinale | | | Pem | Barren |
| Thalictrum dasycarpum | | | Pem | Barren |
| Typha sp.* | | | Pem | Rare |
| Valeriana edulis | | | Pem | Barren |
| | | | | |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is average due to the relative abundance of the plant community, the presence of invasives species, and having 3 strata represented (though the tree layer is a monoculture red pine plantation).

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| X | Х | | L | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | | | | | Roads or railroad |
| | Х | | L | С | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | | | | | Removal of herbaceous stratum – mowing, |
| | | | | | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Х | Х | | М | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | , |
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| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is located in an open area within a pine plantation and next to a planted hay field. The feature's main |
|---|
| source of hydrology is from stormwater or polluted runoff from the nearby field. There is an existing utility corridor in |
| the buffer zone. Invasive species are present in the herbaceous layer and shrub layer. |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | SIGNIFICANCE | | | | |
|-------------------------------|--------------|----------|----------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | | ' | _ | | |
| Human Use Values | | / | | | |
| Wildlife Habitat | | / | | | |
| Fish and Aquatic Life Habitat | V | | | | |
| Shoreline Protection | | | | | ' |
| Flood and Stormwater Storage | | | ✓ | | |
| Water Quality Protection | | | ✓ | | |
| Groundwater Processes | / | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | The floristic integrity is medium due to amount of species present, the presence of invasive species and their total coverage, the presence of 3 strata |
| Human Use Values | The area is used as a pine plantation. |
| Wildlife Habitat | The area has three strata present and an upland island, but the overstory is dominated by planted red pine. |
| Fish and Aquatic Life Habitat | There is potential for habitat for aquatic organisms during times of inundation. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The feature is relatively large but very shallow, somewhat limiting its holding capacity. |
| Water Quality Protection | The feature is relatively large and can likely filter a large amount of water. |
| Groundwater Processes | The feature does not appear to influence ground water processes. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

| Project/Site: Line 5 Relocat | tion Project | City/C | County: Ashland | Sam | oling Date: <u>2020-05-22</u> | | |
|--|----------------------|---|--------------------------------|---|-------------------------------|--|--|
| Applicant/Owner: Enbridge | • | | | | | | |
| Investigator(s): SBR/DGL | | Section Section | on, Township, Range: <u>\$</u> | sec 20 T047N R0 | 04W | | |
| Landform (hillslope, terrace, etc.): | | | | | | | |
| Subregion (LRR or MLRA): North | | | | | | | |
| Soil Map Unit Name: Sanborg | | | | | | | |
| Are climatic / hydrologic conditions | | | | | | | |
| Are Vegetation, Soil | | - | | | | | |
| Are Vegetation, Soil | | | | | | | |
| | | | | | | | |
| SUMMARY OF FINDINGS | - Attach site ı | map showing san | npling point locati | ons, transects, imp | ortant features, etc. | | |
| Hydrophytic Vegetation Present? | Yes | No | Is the Sampled Area | | | | |
| Hydric Soil Present? | | No | within a Wetland? | Yes N | lo <u> </u> | | |
| Wetland Hydrology Present? | | No | If yes, optional Wetlan | d Site ID: | _ | | |
| Remarks: (Explain alternative pr | | | tland within a ro | d nine plantation | The vegetation | | |
| The upland is located a | • . | • | uanu witiiin a re | u pine piantation. | The vegetation | | |
| is relatively sparse in t | ne undersion | у. | | | | | |
| | | | | | | | |
| | | | | | | | |
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| HYDROLOGY | | | | | | | |
| Wetland Hydrology Indicators: | | | | Secondary Indicators (r | minimum of two required) | | |
| Primary Indicators (minimum of c | one is required; che | ck all that apply) | | Surface Soil Crack | s (B6) | | |
| Surface Water (A1) | | _ Water-Stained Leave | | Drainage Patterns | | | |
| High Water Table (A2) | | _ Aquatic Fauna (B13) | | Moss Trim Lines (B16) | | | |
| Saturation (A3) | | _ Marl Deposits (B15) | | Dry-Season Water Table (C2) | | | |
| Water Marks (B1) | | _ Hydrogen Sulfide Od | | Crayfish Burrows (| · | | |
| Sediment Deposits (B2) | | | - | Saturation Visible of | | | |
| Drift Deposits (B3) | | Presence of Reduced | ` ' | Stunted or Stresse | | | |
| Algal Mat or Crust (B4) Iron Deposits (B5) | | Recent Iron ReductionThin Muck Surface (0) | | Geomorphic Position Shallow Aquitard (I | | | |
| Inundation Visible on Aerial I | | _ Other (Explain in Rer | | Microtopographic F | | | |
| Sparsely Vegetated Concave | | _ Other (Explain in Nei | ilaiks) | FAC-Neutral Test (| ` ' | | |
| Field Observations: | 5 Guriace (BO) | | | TAO-Neutral Test (| | | |
| | ′es No ✔ | Depth (inches): | | | | | |
| | | Depth (inches): | | | | | |
| | | Depth (inches): | | Hydrology Present? Y | ′es No <u> </u> | | |
| (includes capillary fringe) | | all assistantes and | viewe incompations) if a | -:I-bl-: | | | |
| Describe Recorded Data (stream | gauge, monitoring | weii, aeriai priotos, pre | vious inspections), if av | allable: | | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| No indicators of wetlar | nd hydrology | were observed | • | | | | |
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| VEGETATION - | Use scientific names | of plants |
|--------------|----------------------|------------|
| VEGETATION - | use scientific names | oi biants. |

| /EGETATION – Use scientific names of plants | | | | Sampling Point: wasa1029e_u1 |
|---|---------------------|---------------------|-----------------------|--|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominan Species? | t Indicator Status | Dominance Test worksheet: |
| 1. <u>Pinus resinosa</u> | 75 | Y | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC: (A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata:5(B) |
| 4 | | | | Percent of Dominant Species |
| 5 | | | | That Are OBL, FACW, or FAC:40 (A/B) |
| 6 | _ | | | Prevalence Index worksheet: |
| 7 | _ | | | Total % Cover of: Multiply by: |
| | 75 | = Total Co | ver | OBL species 0 x 1 = 0 |
| Sapling/Shrub Stratum (Plot size:) | | | | FACW species |
| 1. Rhamnus cathartica | 15 | <u> </u> | FAC | FAC species 20 x 3 = 60 FACU species 87 x 4 = 348 |
| 2 | | | | UPL species |
| 3 | | | | Column Totals: 107 (A) 408 (B) |
| 4 | | | · | Drawala a a la day DIA a 0.0000 M40M05007 |
| 5 | | | | Prevalence Index = B/A = <u>3.8130841121495327</u> |
| 6 | _ | | · —— | Hydrophytic Vegetation Indicators: |
| 7 | | | · | 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% |
| | 15 | = Total Co | ver | 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5) | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| 1. <u>Tanacetum vulgare</u> | | <u>Y</u> | <u>FACU</u> | data in Remarks or on a separate sheet) |
| 2. <u>Fragaria virginiana</u> | | <u>Y</u> | <u>FACU</u> | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Rubus idaeus</u> | | | <u>FAC</u> | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. <u>Geranium cf bicknellii</u> | | | | be present, unless disturbed or problematic. |
| 5. <u>Taraxacum officinale</u> | | | <u>FACU</u> | Definitions of Vegetation Strata: |
| 6. <u>Solidago sp.</u> | | | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7 | | | | at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 11 | _ | | | |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in height. |
| 20 | | = Total Co | ver | |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | | |
| 2. | | | | |
| 3 | | | | Hydrophytic Vegetation |
| 4 | | = Total Co | wor. | Present? Yes No |
| Remarks: (Include photo numbers here or on a separate The upland is within a pine plantation v fairly representative of the upland area | vhere pi | ne need | dles cov | er the ground. The sample point is |
| | | | | |
| The upland is within a pine plantation v | vhere pi | ne need | dles cov | er the ground. The sample point is |

SOIL Sampling Point: wasa1029e_u1

| Profile Desc | ription: (Describe | to the dep | th needed | to docun | nent the i | ndicator | or confirm | the absence | of indicators.) | | |
|----------------------------|--|-------------|--------------|----------------------|--------------|-------------------|-------------------|---|--|--|--|
| Depth | Matrix | | | | x Features | | | _ | _ | | |
| (inches) | Color (moist) | 400 | Color (r | noist) | O | Type ¹ | Loc ² | Texture | <u>Remarks</u> | | |
| | 5YR 2.5/2 | | | | | | | _SIC_ | | | |
| <u>16-20</u> | 5YR 4/3 | 90 | <u>5YR</u> | 4/6 | _10_ | <u>C</u> | <u> </u> | <u> </u> | | | |
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| ¹Type: C=Cc | ncentration, D=Dep | letion, RM | =Reduced N | Matrix, MS | S=Masked | Sand Gr | ains. | ² Location: | : PL=Pore Lining, M=Matrix. | | |
| Hydric Soil I | | | | | | | | Indicators | for Problematic Hydric Soils ³ : | | |
| Histosol | | | - | | w Surface | (S8) (LRI | R, | | luck (A10) (LRR K, L, MLRA 149B) | | |
| Histic Ep | ipedon (A2) | | | RA 149B) | | DD D M | DA 440B) | | Prairie Redox (A16) (LRR K, L, R) | | |
| | n Sulfide (A4) | | | | /lineral (F1 | | LRA 149B) . L) | | lucky Peat or Peat (S3) (LRR K, L, R) urface (S7) (LRR K, L) | | |
| | Layers (A5) | | | - | Matrix (F2) | | , –, | | lue Below Surface (S8) (LRR K, L) | | |
| | Below Dark Surface | e (A11) | | ed Matrix | | | | | ark Surface (S9) (LRR K, L) | | |
| | rk Surface (A12) | | | | rface (F6) | - \ | | | anganese Masses (F12) (LRR K, L, R) | | |
| - | ucky Mineral (S1) leyed Matrix (S4) | | | ed Dark S Depress | Surface (F | 7) | | Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | | | |
| | edox (S5) | | 11000 | Бергезз | 10113 (1 0) | | | | arent Material (F21) | | |
| - | Matrix (S6) | | | | | | | | hallow Dark Surface (TF12) | | |
| Dark Sur | face (S7) (LRR R, N | /ILRA 149I | 3) | | | | | Other (| Explain in Remarks) | | |
| ³ Indicators of | hydrophytic vegetat | tion and we | etland hydro | ology mus | t be prese | nt, unles | s disturbed o | or problematic | | | |
| | ayer (if observed): | | - | | | | | • | | | |
| Type: | | | | | | | | | | | |
| Depth (inc | thes): | | | | | | | Hydric Soil | Present? Yes No | | |
| Remarks: | 11 141 | | | | | | | | | | |
| | | | concer | ntration | ns pres | ent fui | ther do | wn in the | soil profile but no indicators | | |
| of nyaric | soil were obs | ervea. | | | | | | | | | |
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wasa1029e_u1_S



wasa1029e_u1_W

| Project/Site: Line 5 Relocation Project Ci | ity/County: Ashland Sampling Date: 2020-05-23 |
|--|--|
| Applicant/Owner: Enbridge | State: Wisconsin Sampling Point: wasa1029e_u2 |
| Investigator(s): SBR/DGL S | ection, Township, Range: Sec 20 T047N R004W |
| Landform (hillslope, terrace, etc.): Rise Loca | I relief (concave, convex, none): Convex Slope (%): 3-7% |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46.536320 | Long: <u>-90.894790</u> Datum: <u>WGS84</u> |
| | percent slopes NWI classification: |
| Are climatic / hydrologic conditions on the site typical for this time of year | • |
| | sturbed? Are "Normal Circumstances" present? Yesv No |
| Are Vegetation, Soil, or Hydrology naturally probl | |
| | sampling point locations, transects, important features, etc. |
| Sommart of Findings - Attach site map showing s | |
| 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.) | If yes, optional Wetland Site ID: |
| The upland is located on a rise between two we | tland features. The point is within a red pine |
| plantation, but in a more open section of the plantation | · |
| plantation, but in a more open section of the plan | nadon. |
| | |
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| | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | |
| Surface Water (A1) Water-Stained Le | |
| High Water Table (A2) Aquatic Fauna (B | |
| Saturation (A3) Marl Deposits (B ² | |
| Water Marks (B1) Hydrogen Sulfide | Odor (C1) Crayfish Burrows (C8) |
| | heres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) |
| Drift Deposits (B3) Presence of Redu | |
| | uction in Tilled Soils (C6) Geomorphic Position (D2) |
| Iron Deposits (B5) Thin Muck Surfac | |
| Inundation Visible on Aerial Imagery (B7) Other (Explain in | Remarks) Microtopographic Relief (D4) FAC-Neutral Test (D5) |
| Sparsely Vegetated Concave Surface (B8) Field Observations: | FAC-Neutral Test (D5) |
| Surface Water Present? Yes No Depth (inches): | |
| Water Table Present? Yes No _v Depth (inches): | |
| Saturation Present? Yes No Depth (inches): | |
| (includes capillary fringe) | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, | previous inspections), if available: |
| | |
| Remarks: | |
| No indicators of wetland hydrology were observed | ed. |
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| VEGETATION | Use scientific names | of plants |
|--------------|----------------------|-----------|
| VEGELATION - | use scienilic names | or blants |

| Tree Stratum (Plot size:) | Absolute | Dominant | | Dominance Test worksheet: |
|---|-----------|-------------|------------|---|
| 1. Pinus resinosa | | Species? | | Number of Dominant Species |
| | | | | That Are OBL, FACW, or FAC:1 (A) |
| 2 | | | | Total Number of Dominant Species Across All Strata: 5 (B) |
| 3 | | | | ` ' |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B) |
| 5 | | | | 111dt/110 OBE, 171OV, 01 171O. |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| 4- | 30 | = Total Cov | er/er | OBL species x 1 = 0 |
| Sapling/Shrub Stratum (Plot size: 15) | 40 | V | 540 | FACW species0 x 2 =0 FAC species10 x 3 =30 |
| 1. Rhamnus cathartica | | | | FACU species75 x 4 =300 |
| 2. <u>Crataegus sp</u> | | | | UPL species x 5 = 250 |
| 3 | | | | Column Totals: <u>135</u> (A) <u>580</u> (B) |
| 4 | | | | Prevalence Index = B/A = 4.296296296296297 |
| 5 | | | | |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% |
| <u>_</u> | <u>15</u> | = Total Cov | er er | 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5) 1. Bromus inermis | 50 | Y | UPL | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. <u>Poa pratensis</u> | | Y | FACU | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. <u>Tanacetum vulgare</u> | | — N | FACU | |
| 4. Taraxacum officinale | | N | FACU | ¹Indicators of hydric soil and wetland hydrology must |
| 5 | | · · | | be present, unless disturbed or problematic. |
| | | | | Definitions of Vegetation Strata: |
| 6 | | | | Tree – Woody plants 3 in. (7.6 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 or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11. | | | | of size, and woody plants less than 3.28 ft tall. |
| 12. | | | | Woody vines – All woody vines greater than 3.28 ft in |
| · | | = Total Cov | /er | height. |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | | |
| 2. | | | | |
| 3 | | | | Hydrophytic |
| 4. | | | | Vegetation |
| | _ | = Total Cov | /er | Present? Yes No |
| Remarks: (Include photo numbers here or on a separate. The upland point is within a pine planta smooth brome in the herbaceous layer. | tion whe | ere the o | overstor | ry is dominated by red pine and and |
| | | | | |
| | | | | |

Sampling Point: wasa1029e_u2

SOIL Sampling Point: wasa1029e_u2

| Profile Desc | cription: (Describe t | o the dep | th needed to docum | ent the | indicator | or confirm | the absence of indicators.) | |
|-------------------------|---|------------|-----------------------------------|------------|-------------------|------------------|---|----|
| Depth | Matrix | | | Feature | S | 2 | | |
| (inches) | Color (moist) | 400 | Color (moist) | | Type ¹ | Loc ² | Texture Remarks | — |
| 0-14 | 7.5YR 2.5/2 | | | 0 | | | SICL | — |
| <u> 14-20</u> | 7.5YR 4/3 | 100 | | 0 | | | SICL | — |
| | | | | | | | | |
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| | | | | | | | | |
| ¹ Type: C=Ce | oncentration, D=Depl | etion, RM= | Reduced Matrix, MS | =Masked | d Sand Gr | ains. | ² Location: PL=Pore Lining, M=Matrix. | |
| Hydric Soil | | , | , | | | | Indicators for Problematic Hydric Soils ³ : | |
| Histosol | | | Polyvalue Below | / Surface | (S8) (LRI | RR, | 2 cm Muck (A10) (LRR K, L, MLRA 149B) | |
| | pipedon (A2) stic (A3) | | MLRA 149B) Thin Dark Surface | ce (S9) (I | LRR R. M | LRA 149B) | Coast Prairie Redox (A16) (LRR K, L, R)5 cm Mucky Peat or Peat (S3) (LRR K, L, I | R) |
| | en Sulfide (A4) | | Loamy Mucky M | | | | Dark Surface (S7) (LRR K, L) | •, |
| | d Layers (A5) | | Loamy Gleyed N | | 2) | | Polyvalue Below Surface (S8) (LRR K, L) | |
| | d Below Dark Surface ark Surface (A12) | e (A11) | Depleted Matrix Redox Dark Sur | | | | Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, | D) |
| | Mucky Mineral (S1) | | Depleted Dark S | , , | | | Piedmont Floodplain Soils (F19) (MLRA 14 | - |
| | Gleyed Matrix (S4) | | Redox Depressi | | , | | Mesic Spodic (TA6) (MLRA 144A, 145, 14 5 | |
| - | Redox (S5) | | | | | | Red Parent Material (F21) | |
| | l Matrix (S6) rface (S7) (LRR R, M | I RA 149F | 1) | | | | Very Shallow Dark Surface (TF12) Other (Explain in Remarks) | |
| | | | | | | | | |
| | f hydrophytic vegetati Layer (if observed): | on and we | tland hydrology must | be pres | ent, unless | s disturbed | or problematic. | |
| Type: | Layer (II Observed). | | | | | | | |
| Depth (in | ches). | | | | | | Hydric Soil Present? Yes No | |
| Remarks: | | | | | | | | |
| | at is silty clay lo | oam in | texture but wi | th no i | edox c | concent | rations observed and not meeting | |
| any hydr | ic indicators. | | | | | | _ | |
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wasa1029e_u2_E



wasa1029e_u2_W

| Project/Site: Line 5 Relo | cation Project | t | City/C | ounty: Ash | land | Sai | mpling Date: 2 | <u>2020-05-23</u> |
|--|---------------------------------|------------------|---|---------------|---------------|---|-------------------------|---------------------|
| Applicant/Owner: Enbridge | • | | | | | | | |
| Investigator(s): SBR/DGL | | | | | | | | |
| Landform (hillslope, terrace, et | | | | | | | | e (%): <u>0-2%</u> |
| Subregion (LRR or MLRA): No. | | | | | | | | |
| Soil Map Unit Name: Sanbo | | | | | | | | |
| Are climatic / hydrologic condit | • | • | • | • | | | | |
| Are Vegetation, Soil | | | | | | | | , No |
| Are Vegetation, Soil | | | - | | | | | 110 |
| | | | | | | | | |
| SUMMARY OF FINDING | 3S – Attach Sit | te ma | ap snowing sam | ipling poli | nt locatio | ns, transects, in | iportant fea | itures, etc. |
| Hydrophytic Vegetation Pres | ent? Yes _ | v | No | Is the Samp | | | | |
| Hydric Soil Present? | | | No | within a We | etland? | Yes | No | |
| Wetland Hydrology Present? | | | No | If yes, optio | nal Wetland | Site ID: | | |
| Remarks: (Explain alternative The wetland a shall | e procedures here on depression | or in a vo wi | separate report.) | orridor w | hich is I | ikely mowed o | ccasionall [,] | v There |
| are ATV tracks goin | • | | - | | | - | - | - |
| and reed canary gra | • | , ,,, | liaria. Trio ioa | taro io a | Wot mot | adow dominate | a by lake | ooago |
| and rood danary gre | 200. | | | | | | | |
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| HYDROLOGY | | | | | | 0 | (i-i | |
| Wetland Hydrology Indicat | | باعجماء | all that are by | | | Secondary Indicators | | <u>vo requirea)</u> |
| Primary Indicators (minimum | of one is required; | | | | · | | | |
| Surface Water (A1) | | | | | | Drainage Patterns (B10) Moss Trim Lines (B16) | | |
| High Water Table (A2) Saturation (A3) | | | Marl Deposits (B15) | | | Dry-Season Wate | | |
| Water Marks (B1) | | | Hydrogen Sulfide Odd | or (C1) | | Crayfish Burrows | | |
| Sediment Deposits (B2) | | | Dxidized Rhizosphere | | Roots (C3) | Saturation Visible | | gery (C9) |
| Drift Deposits (B3) | | | Presence of Reduced | _ | 10010 (00) | Stunted or Stress | | |
| Algal Mat or Crust (B4) | | | Recent Iron Reduction | . , | ils (C6) | ✓ Geomorphic Posi | | |
| Iron Deposits (B5) | | | Thin Muck Surface (C | | | Shallow Aquitard | | |
| Inundation Visible on Ae | rial Imagery (B7) | | Other (Explain in Rem | | | Microtopographic | | |
| Sparsely Vegetated Con | , | · <u></u> | | , | | ✓ FAC-Neutral Tes | | |
| Field Observations: | | | | | | | | |
| Surface Water Present? | Yes No _ | <u> </u> | Depth (inches): | | | | | |
| Water Table Present? | | | Depth (inches): | | | | | |
| Saturation Present? | Yes No _ | <u> </u> | Depth (inches): | | Wetland H | lydrology Present? | Yes | No |
| (includes capillary fringe) Describe Recorded Data (str | eam gauge, monitor | ring we | ell, aerial photos, pre | vious inspect | ions), if ava | ilable: | | |
| (** | J. J. J. | 5 | , | | /, | | | |
| _ | | | | | | | | |
| Remarks: The hydrologic regin | ma is saturat | ad w | ith inundation | likaly in | enrina | | | |
| Trie Hydrologic regii | ille is salurali | cu w | illi illullualion | iikeiy iii | spinig. | | | |
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| VEGETATION – Use scientific names of plant |
|---|
|---|

| /EGETATION – Use scientific names of plants | | | | Sampling Point: wasa1034e_w |
|--|---------------------|-------------------|-----------------------|---|
| Tree Stratum (Plot size:30) | Absolute % Cover | Dominant Species? | t Indicator Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC: (A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata: (B) |
| 4 | | | | Percent of Dominant Species |
| 5 | | | | That Are OBL, FACW, or FAC: (A/B) |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | 0 | _ = Total Co | ver | OBL species <u>42</u> x 1 = <u>42</u> |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species <u>49</u> x 2 = <u>98</u> |
| 1 | | | | FAC species 2 x 3 = 6 |
| 2 | | | | FACU species 2 x 4 = 8 |
| 3 | | | | UPL species 0 x 5 = 0 |
| 4. | | | | Column Totals: <u>95</u> (A) <u>154</u> (B) |
| 5 | | | | Prevalence Index = B/A = 1.6210526315789473 |
| 6 | | _ | | Hydrophytic Vegetation Indicators: |
| 7 | | _ | | 1 - Rapid Test for Hydrophytic Vegetation |
| | 0 | _ = Total Co | ver | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:) | | | | 3 - Prevalence Index is ≤3.0¹ |
| 1. Carex lacustris | 40_ | <u>Y</u> | OBL | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. <u>Phalaris arundinacea</u> | 40 | Y | <u>FACW</u> | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. <u>Impatiens capensis</u> | | N | FACW | 1 |
| 4. <u>Tanacetum vulgare</u> | | N | FACU | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. Persicaria hydropiperoides | | <u>N</u> | OBL | Definitions of Vegetation Strata: |
| 6. <u>Barbarea vulgaris</u> | 2 | N | FAC | |
| 7. <u>Solidago gigantea</u> | 2 | N | <u>FACW</u> | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8. <u>Lysimachia ciliata</u> | | | <u>FACW</u> | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | 95_ | _ = Total Co | ver | height. |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | | |
| 2 | | | . <u> </u> | |
| 3 | | | <u> </u> | Hydrophytic |
| 4 | | _ | | Vegetation Present? |
| | 0 | _ = Total Co | ver | 100 <u>100</u> |
| Remarks: (Include photo numbers here or on a separate The sample point is fairly representativ dominated by reed canary grass and la | e of the | | d. Both t | the point and the entire feature are |
| | | | | |
| | | | | |
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SOIL Sampling Point: wasa1034e_w

| Profile Desc | ription: (Describe to | o the de | pth needed | to docun | nent the i | ndicator | or confirm | the absence | of indicators.) | | |
|---------------------------|---|-----------|-------------------|-----------------------|-------------------------|--------------------|------------------|---|--|--|--|
| Depth | Matrix | | | | x Features | | . 2 | | | | |
| (inches) | Color (moist) 7.5YR 3/2 | <u>%</u> | Color (n 7.5YR | | 10 | Type ¹ | Loc ² | Texture SICL | <u>Remarks</u> | | |
| | | | • | | | | | · | | | |
| 6-20 | 7.5YR 2.5/2 | 90 | <u> 7.5YR</u> | 4/4 | <u>10</u> | | _M_ | SIC | | | |
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| ¹ Type: C=Ce | oncentration, D=Deple | etion, RM | 1=Reduced N | /latrix, MS | S=Masked | Sand Gr | ains. | ² Location: | PL=Pore Lining, M=Matrix. | | |
| Hydric Soil | | | | | | | | Indicators | for Problematic Hydric Soils ³ : | | |
| Histosol | • • | | | | v Surface | (S8) (LR I | RR, | | luck (A10) (LRR K, L, MLRA 149B) | | |
| | oipedon (A2) stic (A3) | | | RA 149B) ark Surfa | | RRR M | LRA 149B) | | Prairie Redox (A16) (LRR K, L, R) lucky Peat or Peat (S3) (LRR K, L, R) | | |
| | en Sulfide (A4) | | | | lineral (F1 | | | | urface (S7) (LRR K, L) | | |
| | d Layers (A5) | | Loamy | Gleyed I | Matrix (F2) | | | Polyval | ue Below Surface (S8) (LRR K, L) | | |
| | d Below Dark Surface | (A11) | | ed Matrix | | | | | ark Surface (S9) (LRR K, L) | | |
| | ark Surface (A12) Nucky Mineral (S1) | | _∠ Redox | | face (F6) Surface (F | 7 \ | | Iron-Manganese Masses (F12) (LRR K, L, R) | | | |
| - | Gleyed Matrix (S4) | | | Depress | | ") | | Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | | | |
| | Redox (S5) | | | _ op. ooo | .0 (. 0) | | | Red Parent Material (F21) | | | |
| | Matrix (S6) | | | | | | | Very Shallow Dark Surface (TF12) | | | |
| Dark Su | rface (S7) (LRR R, M | LRA 149 | B) | | | | | Other (| Explain in Remarks) | | |
| ³ Indicators o | f hydrophytic vegetati | on and w | etland hydro | logy mus | t be prese | nt, unles | s disturbed | or problematic | | | |
| Restrictive I | Layer (if observed): | | | | | | | | | | |
| Type: | | | | | | | | | | | |
| Depth (in | ches): | | | | | | | Hydric Soil | Present? Yes <u>/</u> No | | |
| Remarks: | avav aail with n | odov. | aanaantr | otiono | throug | ıba.ıt | | | | | |
| A SIIIy Cia | ayey soil with r | edox | concenti | alions | inroug | jnout. | | | | | |
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wasa1034e_w_N



wasa1034e_w_SE

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | |
|---|-------------------------------------|------------------------------|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | |
| File #: | Date of visit(s): | |
| wasa1034 | 2020-05-23 | |
| Location: | Ecological Landsca | ape: |
| PLSS: sec 20 T047N R004W | Lake Superior Clay Plair | 1 |
| Lat. 40 500000 Laws 00 005050 | . , | |
| Lat: <u>46.536238</u> Long: <u>-90.895858</u> | Watershed: LS09, Lower Bad River | |
| County: Ashland Town/City/Village: Gingles town | , | |
| | | |
| SITE DESCRIPTION | | |
| Soils: | WWI Class: | |
| Mapped Type(s): | N/A | |
| Sanborg-Badriver complex, 0 to 6 percent slopes | Wetland Type(s): | |
| Field Medical. | PEM wet meado | DW . |
| Field Verified: | | |
| The soils were not field verified. | Wetland Size: 0.0369 | Wetland Area Impacted 0.0369 |
| | Vegetation: | |
| I budaa la au u | Plant Community D | . , , |
| Hydrology: | The wetland is a | wet meadow primarily |
| The hydrologic regime is saturated with surface | dominated by re | ed canary grass and lake |
| water runoff as the major source of hydrology. | sedge. | |
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| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| HU Y/N Potential Human Usa Values: recreation, culture, education, science, natural scenic beauty 1 | | | ECTION 1: | Functional Value Assessment |
|--|----|------|-----------|--|
| 2 N N Used for educational or scientific purposes 3 N N Visually or physically accessible to public 4 N N A Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation 5 N N List 6 N N Supports or provides habitat for endangered, threatened or special concern species 7 N N In or adjacent to archaeological or cultural resource site WH W Wildliff Habitat 1 N Y Wetland and contiguous habitat 10 acres 3 N N Within or adjacent to habitat comidor or established wildlife habitat 4 N N 100 m buffer – natural land cover \$50% (south) 75% (north) inlact 5 N N Occurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex,etc.) 8 N N Port of a large habitat 10 acres 8 N N Part of a large habitat to SGCN or birds listed in the WI All-Bird Cons, Plan, or other plans 8 N N Part of a large habitat to SGCN or birds listed in the WI All-Bird Cons, Plan, or other plans 9 N N Ephermeral pond with water present \$45 days 110 N Y Standing water provides habitat for amphibians and aquatic invertebrates 111 N N Seasonally exposed mudflats present 112 N N Portides habitat scarce in the area (urban, agricultural, etc.) 113 N N Vetland is connected or contiguous with perennial stream or lake 114 N N V Standing water provides habitat for amphibians and aquatic invertebrates 115 N N N Return Habitat 116 N N N Return Habitat 117 N N V Standing water provides habitat for amphibians and aquatic invertebrates 118 N N N N Halural Heritage Inventory (NHI) listed aquatic species within aquatic system 119 N N Seasonally exposed mudflats present 110 N N N Return Habitat Habitat 110 N N Return Habitat 111 N N N Return Habitat Habitat Habitat 111 N N N Return Habitat Habitat 112 N N N Return Habitat Habitat 113 N N N Return Habitat Present Habitat 114 N N N Return Habitat Habitat Habitat Habitat 115 N N N Return Habitat Habitat Habitat 116 N N N Return Habitat H | HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 3 | 1 | Υ | Υ | Used for recreation (hunting, birding, hiking, etc.). List: atv trail |
| 3 | 2 | N | N | Used for educational or scientific purposes |
| A | 3 | N | N | Visually or physically accessible to public |
| Social Provides habitat for endangered, threatened or special concern species | 4 | | | |
| S | _ | | | |
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| 3 Y Y Dense, persistent vegetation 4 N N Evidence of flashy hydrology 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with ≤10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 N N Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N <td>1</td> <td>Ν</td> <td>N</td> <td>Basin wetland, constricted outlet, has through-flow or is adjacent to a stream</td> | 1 | Ν | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 4 N N Evidence of flashy hydrology 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with ≤10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 N N Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% | 2 | Υ | Υ | Water flow through wetland is NOT channelized |
| 4 N N Evidence of flashy hydrology 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with ≤10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 N N Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% | 3 | Υ | Υ | Dense, persistent vegetation |
| 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with ≤10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 N N Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N N Natural land cover in 100m buffer area < 50% | 4 | N | N | |
| 6 N N N Impervious surfaces cover >10% of land surface within the watershed 7 N N N Within a watershed with ≤10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 N N Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | 5 | | | |
| 7 N N Within a watershed with ≤10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 N N Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% | - | | | |
| 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 N N Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% | - | | | |
| WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 N N Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% | | | | |
| 1 N N Provides substantial storage of storm and floodwater based on previous section 2 N N Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% | | | ., | |
| 2 N N Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | N | N | |
| 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
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| 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
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| 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 4 N N Wetland soils are organic | | | | |
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| 5 N N Wetland is within a wellhead protection area | | | | |
| | 5 | N | N | Wetland is within a wellhead protection area |

| Section 1 Comments (Refer to Section 1 numbers) | | | | |
|--|------------------|---|--|--|
| HU-1 there is a ATV trail though the wetland. W-10/FA-2/4 there is potential for the wetland to be inundated after heavy rains and provide habitat for aquatic organisms. ST-3/WQ-5 there is still emerging vegetation at the time of the survey, but it already consists of a relatively dense layer of reed canary grass and lake sedge. WQ-7 stormwater is a major source of hydrology. | | | | |
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| \A/* | 9. H'C. 11.1.14. | of an I On arise Ol associate (for the Post and History and I see that (Heat) | | |
| | | at and Species Observation (including amphibians and reptiles) oservation, tracks, scat, other sign; type of habitat: nesting, migratory, | | |
| | nter, etc. | oservation, tracks, scat, other sign, type or habitat. Hesting, migratory, | | |
| | • | , | | |
| Observed | Potential | Species/Habitat/Comments | | |
| Y | Y | White tailed deer Avian | | |
| <u>I</u> | Y | Small mammals | | |
| | • | On all manimals | | |
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| Fig | sh and Agua | atic Life Habitat and Species Observations | | |
| Lis | st: direct of | oservation, other sign; type of habitat: nesting, spawning, nursery areas, etc. | | |
| | | | | |
| Observed | Potential | Species/Habitat | | |
| | Y | Aquatic invertebrates | | |
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SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 | S2 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|----------------------------|-------------|------|-------------------|---|
| Carex lacustris* | | | Pem | Patchy |
| Phalaris arundinacea* | | | Pem | Patchy |
| Persicaria hydropiperoides | | | Pem | Barren |
| Tanacetum vulgare | | | Pem | Barren |
| Barbarea vulgaris | | | Pem | Barren |
| Galeopsis tetrahit | | | Pem | Barren |
| Impatiens capensis | | | Pem | Barren |
| Lilium michiganense | | | Pem | Barren |
| Lysimachia ciliata | | | Pem | Barren |
| Solidago gigantea | | | Pem | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low due to absence of multiple strata, the occurrence of invasive specie, and the common plant community.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| X | Х | | М | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | | | | | Roads or railroad |
| Χ | Х | | Н | С | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | | | | _ | Removal of herbaceous stratum – mowing, |
| Χ | X | | M | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| Х | Х | | L | С | Human trails – paved |
| | | | | | Removal of large woody debris |
| Х | Х | | Н | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | , |
| | | | | | |
| | | | | | |
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^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is located within a mowed utility corridor and with an ATV trail going through the wetland. Almost half the |
|---|
| wetland is covered by invasives. Stormwater and potential polluted runoff from the corridor are the main sources of |
| hydrology. |
| |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|--------|-------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | / | | | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | V | | | | |
| Fish and Aquatic Life Habitat | / | | | | |
| Shoreline Protection | | | | | / |
| Flood and Stormwater Storage | / | | | | |
| Water Quality Protection | ✓ | | | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | The floristic integrity is low based on the near half wetland coverage of invasives and lack of multiple strata. |
| Human Use Values | The area is a utility corridor with an atv track. |
| Wildlife Habitat | The wetland is only a single strata which is dominated by two main species which limits it use by wildlife species. |
| Fish and Aquatic Life Habitat | There is potential for inundation and aquatic habitat but only after large storm water events. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The shallow nature and small size of the wetland limit the amount of water it can hold. |
| Water Quality Protection | The vegetation is dense but the small wetland size limits its filtering capability. |
| Groundwater Processes | The wetland does not seem to be influenced groundwater processes. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

| Project/Site: Line 5 Relocation Project | City/C | ounty: Ashland | Sampling Date: <u>2020-05-23</u> | |
|--|--|---------------------------|--|--|
| - | | | State: <u>Wisconsin</u> Sampling Point: <u>wasa1033e_w</u> | |
| Investigator(s): SBR/DGL Section, Township, Range: sec 20 T047N R004W | | | | |
| | | | ne): <u>Concave</u> Slope (%): <u>0-2%</u> | |
| | | | 0.895165 Datum: WGS84 | |
| | | | NWI classification: | |
| Are climatic / hydrologic conditions on the site typic | • | • | | |
| | | | Il Circumstances" present? Yes No | |
| | - | | | |
| Are Vegetation, Soil, or Hydrology _ | | | explain any answers in Remarks.) | |
| SUMMARY OF FINDINGS – Attach site | e map showing sam | pling point location | ons, transects, important features, etc. | |
| Hydric Soil Present? Yes | <u>∨</u> No | | Yes | |
| Wetland Hydrology Present? Yes Remarks: (Explain alternative procedures here or | ✓ No | If yes, optional Wetlan | d Site ID: | |
| pine plantation and extends out in wetland likely from historic plantin | • | | are ruts running through the | |
| HYDROLOGY | | | Opposed and beginning to the state of the st | |
| Wetland Hydrology Indicators: | hook all that apply) | | Secondary Indicators (minimum of two required) | |
| Primary Indicators (minimum of one is required; cl | | | | |
| | Water-Stained Leaves Aquatic Fauna (B13) | | Drainage Patterns (B10) Moss Trim Lines (B16) | |
| | Marl Deposits (B15) | | Moss Thin Ellies (BTo) Dry-Season Water Table (C2) | |
| | Hydrogen Sulfide Odd | or (C1) | Crayfish Burrows (C8) | |
| | Oxidized Rhizosphere | | | |
| | Presence of Reduced | - | Stunted or Stressed Plants (D1) | |
| | Recent Iron Reduction | | ✓ Geomorphic Position (D2) | |
| Iron Deposits (B5) | Thin Muck Surface (C | (7) | Shallow Aquitard (D3) | |
| Inundation Visible on Aerial Imagery (B7) | Other (Explain in Ren | narks) | Microtopographic Relief (D4) | |
| Sparsely Vegetated Concave Surface (B8) | | | <u>∨</u> FAC-Neutral Test (D5) | |
| Field Observations: | | | | |
| | Depth (inches): | | | |
| | Depth (inches): 6 | | Underland Present Vac. | |
| Saturation Present? Yes _ (includes capillary fringe) | Depth (inches): 4 | wetiand | Hydrology Present? Yes <u>v</u> No | |
| Describe Recorded Data (stream gauge, monitori | ng well, aerial photos, pre | vious inspections), if av | ailable: | |
| | | | | |
| Remarks: | | | | |
| The hydrologic regime is saturate | d. Saturation was | observed at 4 i | nches. | |
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| VEGETATION | Use scientific names | of plants |
|--------------|----------------------|-----------|
| VEGELATION - | Use scientific names | or blants |

| EGETATION – Use scientific names of plants. | | | | Sampling Point: wasa1033e_w |
|---|---------------------|-------------------|---------------------------------------|--|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | | Dominance Test worksheet: |
| 1. <u>Pinus resinosa</u> | | | | Number of Dominant Species That Are OBL, FACW, or FAC: (A) |
| 2 | | | | Total Number of Dominant Species Across All Strata: (B) |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | 10 | = Total Cov | ver | OBL species0 x 1 =0 |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species75 x 2 =150 |
| 1. Salix petiolaris | 5 | Υ | FACW | FAC species15 x 3 =45 |
| 2. Spiraea alba | | | | FACU species13 x 4 =52 |
| 3. | | | | UPL species0 x 5 =0 |
| 4 | | | | Column Totals:103 (A)247 (B) |
| 5. | | | | Prevalence Index = B/A = |
| 6. | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | | = Total Cov | · · · · · · · · · · · · · · · · · · · | ∠ 2 - Dominance Test is >50% |
| Herb Stratum (Plot size: 5 | | - Total Co | VCI | 3 - Prevalence Index is ≤3.0¹ |
| 1. Phalaris arundinacea | 60 | V | FACW | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| | | N | FAC | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. Equisetum arvense | | | | residing riyarephytic vegetation (Explain) |
| 3. Solidago gigantea | | _N_ | FACW | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. <u>Matteuccia struthiopteris</u> | | | <u>FAC</u> | be present, unless disturbed or problematic. |
| 5. <u>Valeriana officinalis</u> | | <u>N</u> | | Definitions of Vegetation Strata: |
| 6. <u>Fragaria virginiana</u> | | | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7. <u>Barbarea vulgaris</u> | | | | at breast height (DBH), regardless of height. |
| 8. <u>Geum canadense</u> | 2 | <u>N</u> | <u>FAC</u> | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | , | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | 86 | = Total Cov | ver | height. |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3. | | | | Hydrophytic |
| 4. | | | | Vegetation |
| | _ | = Total Cov | ver | Present? Yes No |
| Remarks: (Include photo numbers here or on a separate s | | . 5101 001 | | |
| The sample point is fairly representative | e of the | | | |
| a utility corridor and has less of a prese | nce of s | shrubs a | and tree | S. |

SOIL Sampling Point: wasa1033e_w

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | | |
|---|---|-------------|--------------|---------------|----------------------|------------------|--------------------|----------------|--|
| Depth | Matrix | | | | x Feature: | 1 | . 2 | | |
| (inches) | Color (moist) 5YR 4/2 | <u> %</u> | Color (r | • | <u>%</u> 10 | Type' | Loc² | Texture | Remarks |
| 0-10 | | | <u>5YR</u> | 4/6 | | <u> </u> | _M_ | SIL | |
| 10-20 | 5YR 2.5/1 | 95 | <u> 51R</u> | 4/6 | 5 | <u> </u> | <u> </u> | SICL | |
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| 1 0 0 | | | | | | | | 21 11 | |
| Hydric Soil | oncentration, D=Deple Indicators: | etion, Rivi | =Reduced I | viatrix, ivis | s=iviasked | i Sand Gr | ains. | Indicators | : PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : |
| Histosol | (A1) | | Polyva | alue Belov | v Surface | (S8) (LR | R R, | | fluck (A10) (LRR K, L, MLRA 149B) |
| | oipedon (A2) | | | RA 149B) | | DD D M | I DA 440B\ | | Prairie Redox (A16) (LRR K, L, R) |
| Black Hi Hydroge | en Sulfide (A4) | | | | /lineral (F | | LRA 149B) (, L) | | flucky Peat or Peat (S3) (LRR K, L, R) urface (S7) (LRR K, L) |
| Stratified | d Layers (A5) | | Loam | Gleyed I | Matrix (F2 | | | Polyva | lue Below Surface (S8) (LRR K, L) |
| - | d Below Dark Surface ark Surface (A12) | (A11) | | ted Matrix | : (F3) rface (F6) | | | | ark Surface (S9) (LRR K, L) anganese Masses (F12) (LRR K, L, R) |
| | Mucky Mineral (S1) | | | | Surface (F6) | | | | ont Floodplain Soils (F19) (MLRA 149B) |
| Sandy G | Gleyed Matrix (S4) | | | Depress | | , | | Mesic | Spodic (TA6) (MLRA 144A, 145, 149B) |
| - | Redox (S5) | | | | | | | | arent Material (F21) |
| | l Matrix (S6) rface (S7) (LRR R, M | LRA 149 | В) | | | | | | hallow Dark Surface (TF12) Explain in Remarks) |
| | f hydrophytic vegetati | on and w | etland hydro | ology mus | t be prese | ent, unles | s disturbed | or problematio |) . |
| | Layer (if observed): | | | | | | | | |
| Type: | -h \. | | | | | | | Hydric Soil | Present? Yes No |
| Remarks: | ches): | | | | | | | Tiyano con | 1103cm: 103 <u></u> 110 <u></u> |
| | n soil atop a da | arker s | oil in the | e profil | e, both | n with i | edox co | oncentrati | ons observed. |
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wasa1033e_w_NW



wasa1033e_w_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | |
|---|--|-----------------------|--|
| Project name: | Evaluator(s): | | |
| Line 5 Relocation Project | SBR/DGL | | |
| File #: | Date of visit(s): | | |
| wasa1033 | 2020-05-23 | | |
| Location: | Ecological Landsca | ape: | |
| PLSS: <u>sec 20 T047N R004W</u> | Lake Superior Clay Plair | | |
| | Lake Superior Clay Flair | I | |
| Lat: <u>46.536115</u> Long: <u>-90.895141</u> | Watershed: | | |
| | LS09, Lower Bad River | | |
| County: Ashland Town/City/Village: Gingles town | | | |
| , , , , , | | | |
| SITE DESCRIPTION | | | |
| Soils: | WWI Class: | | |
| Mapped Type(s): | N/A | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes | Wetland Type(s): | | |
| | PEM Wet Meadow | | |
| Field Verified: | . In the mean | · · · | |
| The soils were not field verified. | Wetland Size: | Wetland Area Impacted | |
| | 0.2498 | 0.2498 | |
| | Vegetation: | 10-2-10-0 | |
| | | Description(s): | |
| Hydrology: | Plant Community Description(s): | | |
| The hydrologic regime is saturated and the major source | The wetland is a wet meadow on the edge of | | |
| of hydrology is from surface water. A shallow water table | a pine plantation and an open utility corridor | | |
| was observed at 6 inches with saturation occurring at 4. | and is dominated by reed canary grass. | | |
| was observed at o inches with saturation occurring at 4. | | , , , | |
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| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| HU Y/N Potential Human Usa Values: recreation, culture, education, science, natural scenic beauty 1 | | | ECTION 1: | Functional Value Assessment |
|--|----|------|-----------|--|
| 2 N N Used for educational or scientific purposes 3 N N Visually or physically accessible to public 4 N N A Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation 5 N N List 6 N N Supports or provides habitat for endangered, threatened or special concern species 7 N N In or adjacent to archaeological or cultural resource site WH W Wildliff Habitat 1 N Y Wetland and contiguous habitat 10 acres 3 N N Within or adjacent to habitat comidor or established wildlife habitat 4 N N 100 m buffer – natural land cover \$50% (south) 75% (north) inlact 5 N N Occurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex,etc.) 8 N N Port of a large habitat 10 acres 8 N N Part of a large habitat to SGCN or birds listed in the WI All-Bird Cons, Plan, or other plans 8 N N Part of a large habitat to SGCN or birds listed in the WI All-Bird Cons, Plan, or other plans 9 N N Ephermeral pond with water present \$45 days 110 N Y Standing water provides habitat for amphibians and aquatic invertebrates 111 N N Seasonally exposed mudflats present 112 N N Portides habitat scarce in the area (urban, agricultural, etc.) 113 N N Vetland is connected or contiguous with perennial stream or lake 114 N N V Standing water provides habitat for amphibians and aquatic invertebrates 115 N N N Return Habitat 116 N N N Return Habitat 117 N N V Standing water provides habitat for amphibians and aquatic invertebrates 118 N N N N Halural Heritage Inventory (NHI) listed aquatic species within aquatic system 119 N N Seasonally exposed mudflats present 110 N N N Return Habitat Habitat 110 N N Return Habitat 111 N N N Return Habitat Habitat Habitat 111 N N N Return Habitat Habitat 112 N N N Return Habitat Habitat 113 N N N Return Habitat Present Habitat 114 N N N Return Habitat Habitat Habitat Habitat 115 N N N Return Habitat Habitat Habitat 116 N N N Return Habitat H | HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 3 | 1 | Υ | Υ | Used for recreation (hunting, birding, hiking, etc.). List: atv trail |
| 3 | 2 | N | N | Used for educational or scientific purposes |
| A | 3 | N | N | Visually or physically accessible to public |
| Social Provides habitat for endangered, threatened or special concern species | 4 | | | |
| S | _ | | | |
| 6 N N Supports or provides habitat for endangered, threatened or special concern species 7 N N N In or adjacent to archaeological or cultural resource site WH 1 N Y Welland and contiguous habitat >10 acres 2 N N N 3 or more strata present (>10% cover) 3 N N Within or adjacent to habitat corridor or established wildlife habitat area 4 N N 100 m buffer - natural land cover ≤50% (south) 75% (north) intact 5 N N Occurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex.etc.) 7 N N Supports or provides habitat for SGCN or birds listed in the WI Ali-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Standing water provides habitat for amphibians and aquatic invertebrates 110 N Y Standing water provides habitat for amphibians and aquatic invertebrates 111 N N Seasonally exposed mudiflats present 112 N N Porvides habitat scarce in the area (urban, agricultural, etc.) 118 | 5 | N | N | |
| N | 6 | N | N | |
| Wildlife Habitat | | | | |
| 1 N Y Wetland and contiguous habitat >10 acres 2 N N N 3 or more strata present (>10% cover) 3 N N Within or adjacent to habitat corridor or established wildlife habitat area 4 N N 100 m buffer – natural land cover ≥00% (south) 75% (north) intact 5 N N Cocurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex.etc.) 7 N N Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Provides habitat scarce in the area (urban, agricultural, etc.) Fish and Aquatic Life Habitat 1 N N Wetland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 2 N N Posential for errosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable 3 N N Densely rooted emergent or woody vegetation 5 Storm and Floodwater Storage 1 N N Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 Y Y Dense, persistent vegetation 4 N N Potential for enables of the stream, lake, pond or open water area (≥1 acre) - if no, not applicable year flow through wetland is NOT channelized 1 N N Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 Y Y Dense, persistent vegetation 5 Y Y Point or non-point source inflow 6 N N N Residence of flashy hydrology 5 Y Y Point or non-point source inflow 6 N N N Wetland sessoitated with a lake or stream 7 N N N Serving Secone Point Secone Point Secone | | - 13 | 14 | |
| 2 N N O Seasonally exposed mudifate present (>10% cover) 3 N N Within or adjacent to habitat corridor or established wildlife habitat area 4 N N Occurs in a Joint Verture priority (browship 6 N N N Interspersion of habitat structure (nemi-marsh, shrub/emergent, wetland/upland complex, etc.) 7 N N Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present >45 days 10 N Y Standing water provides habitat for amphiblans and aquatic invertebrates 11 N N Seasonally exposed mudifats present 11 N N Seasonally exposed mudifats present 11 N N Seasonally exposed mudifats present 11 N N N Wetland is connected or configuous with perennial stream or lake 12 N Y Standing water provides habitat for amphibians and aquatic invertebrates 13 N N N Metland is connected or configuous with perennial stream or lake 14 N Y Sequetation is inundated in spring 15 N N Adural Heritage Inventory (NHI) listed aquatic species within aquatic system 16 N Y Standing water provides habitat for amphibians and aquatic invertebrates 17 N N Adural Heritage Inventory (NHI) listed aquatic species within aquatic system 18 N N Adural Heritage Inventory (NHI) listed aquatic species within aquatic system 19 Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable 2 N N Densely rooted emergent or woody vegetation 2 N N Densely rooted emergent or woody vegetation 3 N N Densely rooted emergent or woody vegetation 3 N N Densely rooted emergent or woody vegetation 4 N N Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 Y Y Water flow through wetland is NOT channelized 3 Y Y Dense, persistent vegetation 4 N N Densely rooted emergent or woody vegetation 5 N N Densely protection 6 N N Impervious surfaces cover > 10% of land surface within the watershed 7 N N Wetland sois asonated with a lake or s | | N | ~ | |
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| 5 N N Wetland is within a wellhead protection area | | | | |
| | 5 | N | N | Wetland is within a wellhead protection area |

Section 1 Comments (Refer to Section 1 numbers) HU-1 there is a ATV trail through part of the wetland. W-10/FA-2/4 there is potential for some sections of the wetland within the utility corridor to be inundated after heavy rains and provide habitat for aquatic organisms. ST-3/WQ-5 there is still emerging vegetation at the time of the survey, but it already consists of a relatively dense layer of reed canary grass. WQ-7 stormwater is a major source of hydrology. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Avian Υ Small mammals (shrew) Υ White tailed deer Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat Υ Aquatic invertebrate

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 | S2 🗌 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|----------------------------|-------------|------|-------------------|---|
| Phalaris arundinacea* | | | Pem | Interrupted |
| Pinus resinosa | | | Pem | Rare |
| Matteuccia struthiopteris | | | Pem | Rare |
| Persicaria hydropiperoides | | | Pem | Rare |
| Salix petiolaris | | | Pem | Rare |
| Solidago gigantea | | | Pem | Rare |
| Spiraea alba | | | Pen | Rare |
| Fragaria virginiana | | | Pem | Barren |
| Rubus idaeus | | | Pem | Barren |
| Barbarea vulgaris | | | Pem | Barren |
| Equisetum arvense | | | Pem | Barren |
| Geum canadense | | | Pem | Barren |
| Valeriana edulis | | | Pem | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The florisitc integrity is low due to the dominance of reed canary grass and the limited strata within the wetland.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| Х | Х | | М | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | | | | | Roads or railroad |
| X | Х | | Н | С | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| V | V | | N.4 | 0 | Removal of herbaceous stratum – mowing, |
| X | X | | M | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| Χ | Х | | L | С | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Χ | Х | | Н | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| Х | Х | | М | UC | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is located on the edge of a pine plantation and a mowed utility corridor. There are atv tracks going through the wetland section in the utility corridor and deep ruts in the wetland section in the pine plantation. Invasive species are present. Storm water is a major source of input for this wetland feature.

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|--------|-------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | / | | | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | V | | | | |
| Fish and Aquatic Life Habitat | / | | | | |
| Shoreline Protection | | | | | / |
| Flood and Stormwater Storage | / | | | | |
| Water Quality Protection | ✓ | | | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | The floristic integrity is low due to the dominance of reed canary grass in the herbaceous layer and missing strata within the feature. |
| Human Use Values | The wetland is in a pine planatation and a utility corridor with atv tracks. |
| Wildlife Habitat | The wetland is mostly monotypic in the herbaceous layer and the small tree layer, which limits wildlife use. |
| Fish and Aquatic Life Habitat | There is potential for aquatic habitat to be present after inundation events. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is small is size which limits its water holding capacity. |
| Water Quality Protection | The wetland has dense vegetation but is small which limits the amount of water it can filter. |
| Groundwater Processes | The major hydrologic input for this feature is from surface water. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

| Project/Site: Line 5 Relo | cation Projec | t | City/0 | County: Ash | nland | Sam | pling Date: 2 | <u>:020-05-23</u> |
|---|--|-------------|---|--------------------------|-----------------------------|------------------------------|----------------|-------------------|
| Project/Site: <u>Line 5 Relocation Project</u> City/County: <u>Ashland</u> Sampling Date: <u>2020</u> Applicant/Owner: <u>Enbridge</u> State: <u>Wisconsin</u> Sampling Point: <u>was</u> | | | | | | | | |
| • | Section, Township, Range: Sec 20 T047N R004W | | | | | | | |
| Landform (hillslope, terrace, et | | | | | | : (%): 0-2% | | |
| Subregion (LRR or MLRA): No | · 46 536233 | (55.152.15, | Long: -90 | 895539 | Datum: | WGS84 | | |
| Soil Map Unit Name: Sanbo | | | | | | | | |
| Are climatic / hydrologic condit | • | | • • | | • | | | |
| , , | | | • | <u> </u> | | · | • | NI- |
| Are Vegetation, Soil | | | | | | | | NO |
| Are Vegetation, Soil | , or Hydrolog | y | naturally problem | natic? | (If needed, ex | plain any answers in F | Remarks.) | |
| SUMMARY OF FINDING | GS - Attach s | ite m | nap showing sar | npling poi | nt location | ns, transects, imp | ortant fea | tures, etc. |
| Hydrophytic Vegetation Pres | ent? Ves | | No ✓ | Is the Sam | pled Area | | | |
| Hydric Soil Present? | | | No | | etland? | Yes N | 10 <u>~</u> | |
| Wetland Hydrology Present? | | | No 🗸 | If yes, option | onal Wetland S | Site ID: | | |
| Remarks: (Explain alternativ | e procedures here | or in | a separate report.) | • | | | | |
| The upland is locate | | | | • | • | • | | • |
| needles carpeting the | • | | • | rowth. Th | nis sample | e is a shared u _l | pland poi | nt for |
| wetlands wasa1033 | se and wasa | 1034 | 4e. | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| HYDROLOGY | | | | | | | | |
| Wetland Hydrology Indicate | ors: | | | | | Secondary Indicators (i | minimum of tv | vo required) |
| | | chec | k all that apply) | Surface Soil Cracks (B6) | | | | <u> </u> |
| Surface Water (A1) | | | Water-Stained Leave | | | Drainage Patterns (B10) | | |
| High Water Table (A2) | | | Aquatic Fauna (B13) | | | Moss Trim Lines (B16) | | |
| Saturation (A3) | | | Marl Deposits (B15) | | Dry-Season Water Table (C2) | | | |
| Water Marks (B1) | | | Hydrogen Sulfide Od | | | Crayfish Burrows (| | |
| Sediment Deposits (B2) | | | Oxidized Rhizosphe | | | Saturation Visible | | gery (C9) |
| Drift Deposits (B3) | | | Presence of Reduce | ed Iron (C4) | · · · · <u>-</u> | Stunted or Stresse | ed Plants (D1) | |
| Algal Mat or Crust (B4) | | | Recent Iron Reduction | on in Tilled So | | Geomorphic Positi | | |
| Iron Deposits (B5) | Thin Muck Surface (| | | | | | | |
| Inundation Visible on Ae | Other (Explain in Re | | | | | | | |
| Sparsely Vegetated Con | icave Surface (B8) | | | | _ | FAC-Neutral Test | | |
| Field Observations: | | | | | | | | |
| Surface Water Present? | Yes No | ~ | Depth (inches): | | | | | |
| Water Table Present? | | | Depth (inches): | | | | | |
| Saturation Present? | Yes No | ~ | Depth (inches): | | Wetland Hy | drology Present? ۱ | res | No <u>~</u> |
| (includes capillary fringe) Describe Recorded Data (str | eam gauge, monito | orina v | well. aerial photos. pro | evious inspec | tions). if availa | able: | | |
| (** | 3:13:, | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | ,, | | | |
| | | | | | | | | |
| Remarks: No indicators of wet | tland bydrala | ~\ | wara abaarwad | Ī | | | | |
| INO Indicators of we | lianu nyurolo | уу ч | were observed | l. | | | | |
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VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size:30) | Absolute | | | Dominance Test worksheet: |
|--|-----------|-------------|-------------|--|
| 1. Pinus resinosa | | Species? | | Number of Dominant Species |
| | | | | That Are OBL, FACW, or FAC:1 (A) |
| 2 | | | | Total Number of Dominant Species Across All Strata: 3 (B) |
| 3 | | | | Species Across All Strata:3(B) |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B) |
| 5 | | | | That Ale OBL, I ACW, OF I AC (A/B) |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | <u>95</u> | = Total Cov | /er | OBL species <u>0</u> x 1 = <u>0</u> |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species0 x 2 =0 |
| 1 | | | | FAC species5 x 3 =15 FACU species97 x 4 =388 |
| 2 | | | | UPL species |
| 3 | | | | Column Totals: (A) (B) |
| 4 | | | - | |
| 5 | | | | Prevalence Index = B/A =4.0 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | | = Total Cov | | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:5 | | | | 3 - Prevalence Index is ≤3.0¹ |
| 1. Rhamnus cathartica | 5 | Y | FAC | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. Bromus inermis | 5 | Y | UPL | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. Taraxacum officinale | 2 | N | <u>FACU</u> | 1 |
| 4. | - | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5 | | | | |
| 6. | | | | Definitions of Vegetation Strata: |
| 7 | | | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8. | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9. | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12. | | | | Woody vines – All woody vines greater than 3.28 ft in |
| · | 12 | = Total Cov | /er | height. |
| Woody Vine Stratum (Plot size:) | | - Total Cov | /CI | |
| | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic Vegetation |
| 4 | _ | | | Present? Yes No |
| Daniel de | | = Total Cov | /er | |
| Remarks: (Include photo numbers here or on a separate The sample point is representative of the sample point is representative.) | | nd featui | re. The | point is located in a pine plantation |
| with red pine dominating the canopy. | | | | |
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Sampling Point: wasa1033_u

SOIL Sampling Point: wasa1033_u

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---|---------------|---------------------------------|-------------|-------------------|----------------------------------|---|-----|
| Depth | Matrix | | | x Feature | S | | | |
| (inches) | Color (moist) | % | Color (moist) | <u>%</u> | Type ¹ | Loc ² | Texture Remarks | _ |
| 0-8 | <u>5YR 4/3</u> | 100_ | | 0 | | | SIL | _ |
| 8-20 | 5YR 4/6 | 100 | | _ 0 | | | C | |
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| <u> </u> | | | | | | | | |
| | | epletion, RM= | Reduced Matrix, MS | S=Masked | d Sand Gr | ains. | ² Location: PL=Pore Lining, M=Matrix. | |
| Hydric Soil | | | Dobarduo Dolor | v Curfoss | (CO) (LD | D D | Indicators for Problematic Hydric Soils ³ : | |
| Histosol | oipedon (A2) | | Polyvalue Below MLRA 149B) | | (So) (LK | ĸĸ, | 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) | |
| Black Hi | | | Thin Dark Surfa | | LRR R, M | LRA 149B) | |) |
| Hydroge | n Sulfide (A4) | | Loamy Mucky N | /lineral (F | 1) (LRR K | | Dark Surface (S7) (LRR K, L) | , |
| | d Layers (A5) | | Loamy Gleyed I | | 2) | | Polyvalue Below Surface (S8) (LRR K, L) | |
| | d Below Dark Surfa ark Surface (A12) | ace (A11) | Depleted Matrix | | | | Thin Dark Surface (S9) (LRR K, L) | • \ |
| | lucky Mineral (S1) | | Redox Dark Suit Depleted Dark S | ` ' | | | Iron-Manganese Masses (F12) (LRR K, L, F Piedmont Floodplain Soils (F19) (MLRA 149) | |
| | Gleyed Matrix (S4) | | Redox Depress | | ') | | Nesic Spodic (TA6) (MLRA 144A, 145, 149 | |
| Sandy Redox (S5) | | | | | | Red Parent Material (F21) | , | |
| Stripped Matrix (S6) | | | | | | Very Shallow Dark Surface (TF12) | | |
| Dark Su | rface (S7) (LRR R | , MLRA 149E | 3) | | | | Other (Explain in Remarks) | |
| 3Indicators of | f hydronhytic yeae | tation and we | tland hydrology mus | t he nres | ent unles | e dieturhed | or problematic | |
| | Layer (if observed | | tiana nyarology mas | t be pies | ent, unies | s disturbed | To problematic. | |
| Type: | ., | , | | | | | | |
| | ches): | | | | | | Hydric Soil Present? Yes No | |
| Remarks: | | | | | | | | |
| | are reddish | with no | redox concen | tration | s obse | rved | | |
| 1110 00110 | a.o.roudion | | 040% 00110011 | | 0 0000 | | | |
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wasa1033_u_E



wasa1033_u_S

| Project/Site: Line 5 Relocation Project | City/Co | ounty: Ashland | Sampling Date: <u>2020-05-23</u> | | | |
|--|---|--|---|--|--|--|
| Applicant/Owner: Enbridge | | | | | | |
| _ | Section, Township, Range: Sec 20 T047N R004W | | | | | |
| | | Local relief (concave, convex, none): Concave Slope (%): 0-2 | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: | | | | | | |
| Soil Map Unit Name: Sanborg-Badriver com | | | | | | |
| Are climatic / hydrologic conditions on the site typical for | | • | | | | |
| | - | | | | | |
| Are Vegetation, Soil, or Hydrology | | | | | | |
| Are Vegetation, Soil, or Hydrology | | | explain any answers in Remarks.) | | | |
| SUMMARY OF FINDINGS – Attach site m | nap showing sam | pling point location | ons, transects, important features, etc. | | | |
| Hydric Soil Present? Yes | No _ No | Is the Sampled Area within a Wetland? | Yes <u> </u> | | | |
| Wetland Hydrology Present? Yes Remarks: (Explain alternative procedures here or in | No | If yes, optional Wetland | Site ID: | | | |
| The wetland is somewhat large and sections of the red pine plantation. Wetland that creates somewhat high tansy and Virginia strawberry to occ | There is some s her areas which | slightly rolling top | pography present within the | | | |
| HYDROLOGY | | | | | | |
| Wetland Hydrology Indicators: | L II 4b - 4 b -) | | Secondary Indicators (minimum of two required) | | | |
| Primary Indicators (minimum of one is required; chec | | | | | | |
| | Water-Stained Leaves | s (B9) | Drainage Patterns (B10) Moss Trim Lines (B16) | | | |
| | High Water Table (A2)Saturation (A3)Marl Deposits (B15) | | | | | |
| | Hydrogen Sulfide Odd | or (C1) | Dry-Season Water Table (C2) Crayfish Burrows (C8) | | | |
| | | | Saturation Visible on Aerial Imagery (C9) | | | |
| | | sence of Reduced Iron (C4) Stunted or Stressed Plants (D1) | | | | |
| Algal Mat or Crust (B4) | Recent Iron Reduction | n in Tilled Soils (C6) | ✓ Geomorphic Position (D2) | | | |
| Iron Deposits (B5) | Thin Muck Surface (C | 7) | Shallow Aquitard (D3) | | | |
| Inundation Visible on Aerial Imagery (B7) | Other (Explain in Rem | narks) | Microtopographic Relief (D4) | | | |
| Sparsely Vegetated Concave Surface (B8) | | | ✓ FAC-Neutral Test (D5) | | | |
| Field Observations: | | | | | | |
| | Depth (inches): | | | | | |
| | Depth (inches): | | | | | |
| Saturation Present? Yes _ \(\nu\) No | Depth (inches): 15 | Wetland F | Hydrology Present? Yes \(\nu\) No | | | |
| Describe Recorded Data (stream gauge, monitoring v | well, aerial photos, prev | vious inspections), if ava | ilable: | | | |
| | | | | | | |
| Remarks: | | | | | | |
| The hydrologic regime for this wetla | nd feature is sa | iturated. Saturat | ion was observed at 15 inches. | | | |
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VEGETATION – Use scientific names of plants.

| /EGETATION – Use scientific names of plants | | | | Sampling Point: wasa1039e_w |
|---|----------|----------------------|-------------|---|
| Tree Stratum (Plot size:30) | Absolute | Dominant Species? | | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC:4 (A) |
| 2 | | | | Total Number of Dominant Species Across All Strata:4 (B) |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B) |
| 5 | | | | , , , |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| Ozalia z/Obach Obachura / Olat since 15 | | = Total Cov | /er | OBL species 38 x1 = 38 FACW species 50 x2 = 100 |
| Sapling/Shrub Stratum (Plot size: 15) | 40 | V | E 4 0 \ 4 \ | FAC species 10 x3 = 30 |
| 1. <u>Spiraea alba</u> | | | FACW | FACU species10 x 4 =40 |
| 2. <u>Rhamnus cathartica</u> | | | | UPL species x 5 = 0 |
| 3 | | | | Column Totals: 108 (A) 208 (B) |
| 4 | | | | Prevalence Index = B/A = 1.9259259259259258 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| 7 | | = Total Cov | | 2 - Dominance Test is >50% |
| | 15 | = Total Cov | /er | v 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5) 1. Carex stipata | 35 | Υ | OBL | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| Phalaris arundinacea | | Y | FACW | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. <u>Tanacetum vulgare</u> | | N | FACU | |
| 4. Fragaria virginiana | | | FACU | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. <u>Rubus idaeus</u> | _ | N | FAC | |
| 6. Solidago gigantea | | | FACW | Definitions of Vegetation Strata: |
| 7. <u>Cicuta maculata</u> | | | OBL | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 11 12. | | | | Woody vines – All woody vines greater than 3.28 ft in |
| 12. | | = Total Cov | | height. |
| Woody Vine Stratum (Plot size:) | _ 33 | = Total Cov | /ei | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic |
| 4 | | | | Vegetation |
| | _ | = Total Cov | /er | Present? Yes <u>✓</u> No |
| Remarks: (Include photo numbers here or on a separate | sheet.) | | | |
| | | | | eature. The wetland is large in size with |
| some parts having slightly more shrub | cover, s | ome pa | rts with | more reed canary grass present, and |
| other parts with more native sedges. | | | | |

SOIL Sampling Point: wasa1039e_w

| Profile Desc | cription: (D | escribe | to the dep | th needed | to docun | nent the i | ndicator | or confirm | the absence | of indicators.) |
|---|---|----------|------------|-----------|----------|-----------------|-------------------|--|-------------|-----------------------|
| Depth (inches) | Color (r | Matrix | % | Color (n | | x Features % | Type ¹ | Loc ² | Texture | Remarks |
| 0-5 | 7.5YR | | 100 | | 10131) | 0 | Турс | <u> </u> | SICL | Kemana |
| 5-15 | 7.5YR | 3/2 | | 7.5YR | 3/4 | 5 | C | M | SICL | |
| 15-20 | | | | 5YR | | 10 | C | M | С | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Hydric Soil Histosol Histic E Black H Hydroge Stratifiee Deplete Thick De Sandy M Sandy F Stripped Dark Su | ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Alexandrate Matrix (B4) Stratified Layers (A5) Depleted Dark Surface (A12) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Alexandrate Matrix (F3) Black Histic (A3) MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Matrix (F2) Depleted Below Dark Surface (S7) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Mesic Spodic (TA6) (MLRA 144B, 145, 149B) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Alexandrate Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) | | | | | | | for Problematic Hydric Soils ³ : fluck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) flucky Peat or Peat (S3) (LRR K, L, R) flucky Peat or Peat (S3) (LRR K, L, R) flucky Peat or Peat (S8) (LRR K, L, R) flucky Peat or Peat (S8) (LRR K, L, R) flucky Peat or Peat (S3) (LRR K, L, R) flucky Peat or Peat (S3) (LRR K, L, R) flucky Peat or Peat (S8) (LRR K, L) flucky Peat (S8) (LRR K, L) flucky Peat or Peat (S8) (LRR | | |
| Type: | Layer (IT OD | servea): | | | | | | | | |
| Depth (in | ches): | | | | | | | | Hydric Soil | Present? Yes <u> </u> |
| Remarks: A clayey | soil with | n redo | x conc | entratior | ns star | ting be | low 5 | inches. | | |



wasa1039e_w_N



wasa1039e_w_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | |
|---|--|---|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | | |
| File #: wasa1039 | Date of visit(s): 2020-05-23 | | |
| Location: PLSS: sec 20 T047N R004W | Ecological Landsca Lake Superior Clay Plair | | |
| Lat: 46.535902 Long: -90.894756 | Watershed: LS09, Lower Bad River | | |
| County: Ashland Town/City/Village: Gingles town | | | |
| SITE DESCRIPTION Soils: | WWI Class: | | |
| Mapped Type(s): | N/A | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes, 548A Pickford-Badriver complex, 0 to 3 percent slopes Field Verified: | Wetland Type(s): PEM wet meadow/shrub-carr | | |
| The soils were not field verified. | Mattered Cine. | Matter d Anna Irona stad | |
| The soils were not held vermed. | Wetland Size: 0.5732 | Wetland Area Impacted 0.5732 | |
| | Vegetation: Plant Community D | Description(s): | |
| Hydrology: The hydrologic regime for the wetland is saturated. The major source of hydrology is from surface water. | The wetland is a complex that incluoutside of the survey area, thus the community which is dominated by sedge. Common buckthorn and whomprising more than 30% of the won the edges of the wetland feature. | udes wet meadow and shrub carr. The shrub carr is located be information in this form only pertains to the wet meadow reed canary grass and and other sedge species, such as lake itle meadowsweet are common shrub species but not vetland feature within the survey area. There are some red pine be. The wetland extends from beneath a pine plantation in the as over the corridor, and spreads into the west side of the utility | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | | Functional Value Assessment |
|----|-----|-----------|--|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | N | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | Ν | N | Used for educational or scientific purposes |
| 3 | Ν | N | Visually or physically accessible to public |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| _ | | | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | | ., | Wildlife Habitat |
| 1 | N | Υ | Wetland and contiguous habitat >10 acres |
| 2 | Y | Y | 3 or more strata present (>10% cover) |
| 3 | N | N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | N | N | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | Occurs in a Joint Venture priority township |
| 6 | Y | Y | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| | Y | Y | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| 7 | Ν | N | |
| | | | plans |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | N | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | Ν | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | Ν | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | N | N | Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable |
| | | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| 2 | N | N | water levels or high flows – if no, not applicable |
| 3 | N | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | Ν | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | Y | Y | Water flow through wetland is NOT channelized |
| 3 | Y | Ý | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | N | N N | Within a watershed with <10% wetland |
| 8 | N | N N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | IN | IN | Water Quality Protection |
| 1 | N.I | NI | Provides substantial storage of storm and floodwater based on previous section |
| | N | N N | Basin wetland or constricted outlet |
| 2 | N | N | |
| 3 | Y | Y | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Y | Y | Dense, persistent vegetation |
| 6 | N | N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | Υ | Y | Stormwater or surface water from agricultural land is major hydrology source |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | N | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | N | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | N | N | Wetland is within a wellhead protection area |
| | IN | I IN | Troduction within a womeda protocitor area |

Section 1 Comments (Refer to Section 1 numbers)

WH-2 there is at least 10% cover of the herbaceous layer, a shrub layer, and a tree layer within the wetland feature. WH-6 this feature is part of a shrub Carr/wet meadow complex with some upland island features creating a variety of cover options for wildlife species. W-10/FA-2/4 There is potential in some of the lower depressed parts of the wetland to hold water after heavy rains and provide habitat for aquatic organisms. ST-3/WQ-5 there is still emerging vegetation at the time of the survey, but it already consists of a relatively dense layer. WQ-7 stormwater is a major source of hydrology for this wetland feature.

Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc.

| Observed | Potential | Species/Habitat/Comments |
|----------|-----------|--------------------------|
| Υ | Y | Avian |
| | Y | White tailed deer |
| | Y | Small mammals |
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Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

| Observed | Potential | Species/Habitat |
|----------|-----------|-------------------|
| | Υ | Aquatic organisms |
| | | |
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SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 🗌 | S2 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗾 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|------------------------|-------------|------|-------------------|---|
| Carex stipata* | | | PEM | Rare |
| Phalaris arundinacea* | | | PEM | Rare |
| Carex lacustris* | | | PEM | Rare |
| Pinus resinosa | | | PEM | Rare |
| Salix petiolaris* | | | PEM | Rare |
| Spiraea alba | | | PEM | Rare |
| Rhamnus cathartica | | | PEM | Rare |
| Acer rubrum | | | PEM | Barren |
| Cicuta maculata | | | PEM | Barren |
| Fragaria virginiana | | | PEM | Barren |
| Solidago gigantea | | | PEM | Barren |
| Tanacetum vulgare | | | PEM | Barren |
| Barbarea vulgaris | | | PEM | Barren |
| Equisetum sylvaticum | | | PEM | Barren |
| Luzula acuminata | | | PEM | Barren |
| Prunus pensylvanica | | | PEM | Barren |
| Rubus idaeus | | | PEM | Barren |
| Cardamine pensylvanica | | | PEM | Barren |
| Viola sororia | | | PEM | Barren |
| | | | | |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is moderate due to the relatively diverse herbaceous community, relatively low abundance of invasive species, and presence of 3 strata within the wetland feature.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| . , | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| | | | | | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| X | Х | | М | С | Agriculture – pasture |
| | | | | | Roads or railroad |
| X | Х | | М | С | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| V | | | | 0 | Removal of herbaceous stratum – mowing, |
| X | Х | | M | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Χ | Х | | М | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| Х | Х | | М | С | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is a large wet meadow that spans from beneath a red pine plantation, through a mowed utility corridor |
|---|
| with an atv trail, and into a pasture occupied by cattle. The wetland receives a majority of its water from stormwater. |
| There are invasive species present in the wetland in multiple strata. |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|----------|-------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | | V | _ | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | | | V | | |
| Fish and Aquatic Life Habitat | V | | | | |
| Shoreline Protection | | | | | V |
| Flood and Stormwater Storage | | ✓ | | | |
| Water Quality Protection | | | ✓ | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|--|
| Floristic Integrity | The florisitc integrity is moderate due to the presence of a herbaceous, shrub, and tree layer though at limited species in the overstory. The plant community type is relatively abundant within the area, which limits the rating. |
| Human Use Values | The area is within a pine plantation and a utility corridor. |
| Wildlife Habitat | The wetland is relatively large in size, has theee strata present, and has upland islands all providing different habitat for various species use. |
| Fish and Aquatic Life Habitat | There is some potential for aquatic habitat after inundation |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is large but relatively shallow which limits it stormwater holding capacity. |
| Water Quality Protection | The wetland is large with dense persistent vegetation that can filter large amounts of water. |
| Groundwater Processes | The wetlands main source of hydrology is from surface water and not ground water. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relo | cation Project | t | City/C | ounty: Ash | land | Samp | pling Date: 2 | 020-05-30 |
|--|---------------------|--------|---|-----------------|----------------|--|---------------|---------------------|
| Applicant/Owner: Enbridge | - | | | | | | | |
| Investigator(s): SBR/DGL | | | | | | | | |
| Landform (hillslope, terrace, e | | | | | | | | (%): 0-2% |
| Subregion (LRR or MLRA): N | | | | | | | | |
| Soil Map Unit Name: Sanb | | | | | | | | |
| Are climatic / hydrologic condi | • | | • | • | | | | |
| Are Vegetation, Soil | | | - | | | | | No |
| | | | | | | | | NO |
| Are Vegetation, Soil | | | | | | | | |
| SUMMARY OF FINDING | GS – Attach si | te m | ap showing sam | pling poir | nt locatio | ns, transects, imp | ortant feat | tures, etc. |
| Hydrophytic Vegetation Pres Hydric Soil Present? | Yes | ~ | _ No | | etland? | Yes <u> </u> | | |
| Wetland Hydrology Present? Remarks: (Explain alternative) | | | _ No | If yes, optior | nal Wetland | Site ID: | | |
| shrub-carr feature is the herbaceous laye | | оу с | common bucktr | norn in the | e shrub | layer and reed (| canary gr | ass in |
| HYDROLOGY | | | | | | | | |
| Wetland Hydrology Indicat | | | | | | Secondary Indicators (r | | <u>/o required)</u> |
| Primary Indicators (minimum | of one is required; | | | | | Surface Soil Cracks | | |
| Surface Water (A1)High Water Table (A2) | | | Water-Stained Leaves Aquatic Fauna (B13) | | | Drainage Patterns Moss Trim Lines (E | | |
| Saturation (A3) | | | Marl Deposits (B15) | | | Dry-Season Water | | |
| Water Marks (B1) | | | Hydrogen Sulfide Odd | or (C1) | | Crayfish Burrows (6 | | |
| Sediment Deposits (B2) | | | Oxidized Rhizosphere | | | Saturation Visible of | | jery (C9) |
| Drift Deposits (B3) | | | Presence of Reduced | _ | ` , | Stunted or Stresse | _ | |
| Algal Mat or Crust (B4) | | | Recent Iron Reduction | n in Tilled Soi | ils (C6) | ✓ Geomorphic Position | | |
| Iron Deposits (B5) | | | Thin Muck Surface (C | 27) | | Shallow Aquitard (I | D3) | |
| Inundation Visible on Ae | rial Imagery (B7) | | Other (Explain in Ren | narks) | | Microtopographic F | Relief (D4) | |
| Sparsely Vegetated Cor | ncave Surface (B8) | | | | | FAC-Neutral Test (| (D5) | |
| Field Observations: | | | | | | | | |
| Surface Water Present? | | | Depth (inches): | | | | | |
| Water Table Present? Saturation Present? | | | Depth (inches): | | Watland U | lydrology Present? Y | /aa/ | No |
| (includes capillary fringe) | res NO_ | | Depth (inches): | | wetiand n | iyarology Present? | es <u>v</u> | NO |
| Describe Recorded Data (str | eam gauge, monito | ring w | vell, aerial photos, pre | vious inspecti | ions), if avai | ilable: | | |
| | | | | | | | | |
| Remarks: | | | | | | | | |
| The hydrologic regi | me is saturate | ed. | | | | | | |
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| VEGETATION – Use scientific names of plants. | | | | Sampling Point: wasa112s_xw |
|--|---------------------|-------------------|-------------|--|
| Tree Stratum (Plot size:30) | Absolute % Cover | Dominant Species? | | Dominance Test worksheet: |
| 1. <u>Pinus resinosa</u> | | | | Number of Dominant Species That Are OBL, FACW, or FAC: (A) |
| 2. 3. | | | | Total Number of Dominant Species Across All Strata:3 (B) |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC:67 (A/B) |
| 5 | | | | |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | = Total Cov | | Total % Cover of: Multiply by: |
| Continue/Charle Charles (Diet sine) 15 | | = Total Cov | vei | OBL species x 1 = 0 FACW species 85 |
| Sapling/Shrub Stratum (Plot size: 15) | 20 | V | E | FAC species 34 x3 = 102 |
| 1. Rhamnus cathartica | | | | FACU species |
| 2. <u>Salix interior</u> | | | | UPL species x 5 = 0 |
| 3 | | | | Column Totals:136 (A)340 (B) |
| 4 | | | | Prevalence Index = B/A = |
| 5 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| ··- | | = Total Cov | | ∠ 2 - Dominance Test is >50% |
| Hart Objetime (District) | | - Total Cov | vei | 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5) 1. <i>Phalaris arundinacea</i> | 65 | Υ | FACW | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. <u>Solidago gigantea</u> | | | FACW | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. Carex gracillima | | N | FACU | |
| _ | | | | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. <u>Spiraea alba</u> | | | FACU | be present, unless disturbed or problematic. |
| 5. <u>Fragaria virginiana</u> | | | <u>FACU</u> | Definitions of Vegetation Strata: |
| 6. <u>Hieracium aurantiacum</u> | | | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7. <u>Barbarea vulgaris</u> | | | | at breast height (DBH), regardless of height. |
| 8. <u>Rubus idaeus</u> | | _N_ | FAC | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in height. |
| | 98 | = Total Cov | ver | noight. |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic |
| 4. | | | | Vegetation |
| | _ | = Total Cov | ver | Present? Yes <u> </u> |
| Remarks: (Include photo numbers here or on a separate s | | | | |
| The sample point is representative of the | ne wetla | nd featu | ure. | |
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SOIL Sampling Point: wasa112s_xw

| Profile Desc | cription: (D | escribe t | o the dep | th needed | to docun | nent the i | ndicator | or confirm | the absence | of indicators.) | | |
|---------------------------|-----------------------------|------------|-------------|--------------|------------------------|----------------------|--------------------|-------------|--|--|--|--|
| Depth | | Matrix | | | | x Features | | . 2 | | | | |
| (inches) | Color (r | | | Color (r | | 5 | Type ¹ | Loc² | <u>Texture</u> | Remarks | | |
| 0-10 | 7.5YR | | | | 4/4 | | <u>C</u> | _M_ | | | | |
| 10-20 | DIK | 4/4 | 85 | <u> 51R</u> | 4/6 | <u>15</u> | <u> </u> | <u> </u> | | | | |
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| ¹ Type: C=C | oncontration | D=Dopl | otion DM | -Dodugod I | Motrix MC | | L Cond Cr | | 2l coation | : PL=Pore Lining, M=Matrix. | | |
| Hydric Soil | | i, D-Depi | elion, Kivi | -Reduced i | viauix, ivič | 5-IVIASKEC | i Saliu Gi | ali i5. | | for Problematic Hydric Soils ³ : | | |
| Histosol | | | | - | | v Surface | (S8) (LR I | R R, | | luck (A10) (LRR K, L, MLRA 149B) | | |
| | pipedon (A2 istic (A3) |) | | | RA 149B) Jark Surfa | | RRR M | LRA 149B) | | Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) | | |
| | en Sulfide (A | 4) | | | | /lineral (F | | | | surface (S7) (LRR K, L) | | |
| | d Layers (A5 | | (8.4.4) | | - | Matrix (F2 |) | | - | lue Below Surface (S8) (LRR K, L) | | |
| - | d Below Dar ark Surface | | e (A11) | | ted Matrix Dark Su | : (F3) rface (F6) | | | | ark Surface (S9) (LRR K, L) anganese Masses (F12) (LRR K, L, R) | | |
| | /lucky Miner | | | | | Surface (F | | | | ont Floodplain Soils (F19) (MLRA 149B) | | |
| - | Sleyed Matri | x (S4) | | Redox | Depress | ions (F8) | | | | Spodic (TA6) (MLRA 144A, 145, 149B) | | |
| - | Redox (S5) I Matrix (S6) | | | | | | | | Red Parent Material (F21) Very Shallow Dark Surface (TF12) | | | |
| | rface (S7) (I | | ILRA 149 | 3) | | | | | | (Explain in Remarks) | | |
| ³ Indicators o | f hydrophytic | c vegetati | ion and w | etland hydro | ology mus | t be prese | ent, unles | s disturbed | or problemation |). | | |
| Restrictive | Layer (if ob | served): | | | | | | | | | | |
| Type: | | | | | | | | | | | | |
| Depth (in | ches): | | | | | | | | Hydric Soil | Present? Yes <u>v</u> No | | |
| Remarks: A red cla | wew soil | with r | edov n | resent | | | | | | | | |
| / Tod Gla | iyey son | vvitii i | cuox p | resent. | | | | | | | | |
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WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | ct City/C | ounty: Ashland | Samplin | g Date: <u>2020-05-30</u> | | | |
|--|--------------------------------|----------------------------|---------------------------------|---------------------------|--|--|--|
| Applicant/Owner: Enbridge | | | | | | | |
| Investigator(s): SBR/DGL | | | | | | | |
| Landform (hillslope, terrace, etc.): Depression | | | | | | | |
| Subregion (LRR or MLRA): Northcentral Forest | | | | | | | |
| Soil Map Unit Name: Sanborg-Badriver | | | | | | | |
| Are climatic / hydrologic conditions on the site type | • • | • | | | | | |
| Are Vegetation, Soil, or Hydrolog | | | | | | | |
| Are Vegetation, Soil, or Hydrolog | | | | | | | |
| | | | | | | | |
| SUMMARY OF FINDINGS – Attach s | ite map showing sam | pling point location | ons, transects, impor | tant features, etc. | | | |
| Hydric Soil Present? Yes _ | ∨ No ∨ No | | Yes <u> </u> | | | | |
| Wetland Hydrology Present? Yes _ Remarks: (Explain alternative procedures here | <u>✓</u> No | If yes, optional Wetland | d Site ID: | | | | |
| by lake sedge with some meado | ow willow present in | n the shrub layer | ·. | | | | |
| HYDROLOGY Wetland Hydrology Indicators: | | | Secondary Indicators (min | imum of two required) | | | |
| Primary Indicators (minimum of one is required: | check all that annly) | | | | | | |
| Surface Water (A1) | Water-Stained Leave | | Oralinage Patterns (B10) | | | | |
| ✓ High Water Table (A2) | Aquatic Fauna (B13) | | Moss Trim Lines (B16) | | | | |
| Saturation (A3) | Marl Deposits (B15) | | Dry-Season Water Ta | | | | |
| Water Marks (B1) | Hydrogen Sulfide Ode | or (C1) | Crayfish Burrows (C8) |) | | | |
| Sediment Deposits (B2) | Oxidized Rhizosphere | es on Living Roots (C3) | Saturation Visible on A | Aerial Imagery (C9) | | | |
| Drift Deposits (B3) | Presence of Reduced | | Stunted or Stressed P | | | | |
| Algal Mat or Crust (B4) | Recent Iron Reductio | | <u> ✓</u> Geomorphic Position (| | | | |
| Iron Deposits (B5) | Thin Muck Surface (C | | Shallow Aquitard (D3) | | | | |
| Inundation Visible on Aerial Imagery (B7) | Other (Explain in Ren | narks) | Microtopographic Reli | | | | |
| Sparsely Vegetated Concave Surface (B8) | | | <u> ✓ FAC-Neutral Test (D5</u> |) | | | |
| Field Observations: Surface Water Present? Yes No | ✓ Depth (inches): | | | | | | |
| | Depth (inches): 1 | | | | | | |
| | Depth (inches): 0 | | Hydrology Present? Yes | √ No | | | |
| (includes capillary fringe) | | | | | | | |
| Describe Recorded Data (stream gauge, monitor | oring well, aerial photos, pre | vious inspections), if ava | ailable: | | | | |
| | | | | | | | |
| Remarks: The hydrologic regime is saturate | ted. | | | | | | |
| | | | | | | | |
| | | | | | | | |
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| VEGETATION – Use | scientific names | of plants. |
|-------------------------|------------------|------------|
|-------------------------|------------------|------------|

| | | | | Sampling Point: wasa112e_xw | | | | |
|--|----|-------------------|-------------|--|--|--|--|--|
| Tree Stratum (Plot size: 30) | | Dominant Species? | | Dominance Test worksheet: | | | | |
| | | | - | Number of Dominant Species That Are OBL, FACW, or FAC: (A) | | | | |
| | | - | | Total Number of Dominant | | | | |
| | | | | Species Across All Strata: 2 (B) | | | | |
| · | | - | | Percent of Dominant Species | | | | |
| i | | | | That Are OBL, FACW, or FAC:100 (A/B | | | | |
| i | | | | Prevalence Index worksheet: | | | | |
| | | | | Total % Cover of: Multiply by: | | | | |
| | 0 | = Total Co | ver | OBL species <u>80</u> x 1 = <u>80</u> | | | | |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species 30 x 2 = 60 FAC species 0 x 3 = 0 | | | | |
| Salix petiolaris | | | | FACU species 0 x 4 = 0 | | | | |
|) | | | | UPL species | | | | |
| i | | | | Column Totals: <u>110</u> (A) <u>140</u> (B) | | | | |
| • | | | | Prevalence Index = B/A = 1.272727272727272727 | | | | |
| i | | | | | | | | |
| | | | | Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation | | | | |
| ; <u> </u> | | | | 2 - Dominance Test is >50% | | | | |
| | 15 | = Total Co | ver | 3 - Prevalence Index is ≤3.0¹ | | | | |
| Herb Stratum (Plot size: 5) | 00 | V | ODI | 4 - Morphological Adaptations ¹ (Provide supporting | | | | |
| . Carex lacustris | 80 | Y | OBL | data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) | | | | |
| 2. <u>Spiraea alba</u> | | N | FACW | Problematic Hydrophytic Vegetation (Explain) | | | | |
| 3. <u>Phalaris arundinacea</u> | | | <u>FACW</u> | ¹ Indicators of hydric soil and wetland hydrology must | | | | |
| 4 - | | | | be present, unless disturbed or problematic. | | | | |
| 5 | | | | Definitions of Vegetation Strata: | | | | |
| S | | | | Tree – Woody plants 3 in. (7.6 cm) or more in diamete | | | | |
| 7 | | | | 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. | | | | |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless | | | | |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. | | | | |
| 2. | | - | | Woody vines – All woody vines greater than 3.28 ft in | | | | |
| | 95 | = Total Co | ver | height. | | | | |
| Voody Vine Stratum (Plot size:) | | | | | | | | |
| · | | | | | | | | |
| | | | | | | | | |
| 3. | | | | Hydrophytic | | | | |
| | | | | Vegetation | | | | |
| | 0 | = Total Co | ver | Present? Yes _ v No | | | | |

SOIL Sampling Point: wasa112e_xw1

| Profile Desc | cription: (Describe to | o the dep | oth needed | to docur | nent the i | indicator | or confirm | n the absence | of indicators.) |
|---------------------------|--|-----------|--------------|--------------------------------|---------------------------|-------------------|------------------|----------------|--|
| Depth | Depth Matrix Redox Features | | | | | | | | |
| (inches) | Color (moist) | <u>%</u> | Color (r | | <u>%</u> | Type ¹ | Loc ² | Texture | Remarks |
| 0-8 | 7.5YR 2.5/1 | | <u>5YR</u> | 4/4 | 5 | _ <u>C</u> _ | _M_ | SICL | |
| 8-20 | 7.5YR 4/1 | 85 | <u>5YR</u> | 4/4 | _15 | _C_ | _M_ | <u> </u> | |
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| | | | | | | | | | |
| | oncentration, D=Deple | etion, RM | =Reduced I | Matrix, MS | S=Masked | d Sand Gr | ains. | | PL=Pore Lining, M=Matrix. |
| Hydric Soil | | | Dahan | des Deles | | (00) (LD | | | for Problematic Hydric Soils ³ : |
| Histosol Histic E | oipedon (A2) | | | alue Belo\ RA 149B) | w Surface | (58) (LK | кк, | | luck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) |
| Black Hi | stic (A3) | | | | | | LRA 149B) |) 5 cm M | ucky Peat or Peat (S3) (LRR K, L, R) |
| | en Sulfide (A4) d Layers (A5) | | | - | /lineral (F Matrix (F2 | | (, L) | | urface (S7) (LRR K, L) ue Below Surface (S8) (LRR K, L) |
| | d Below Dark Surface | (A11) | | ted Matrix | | .) | | | ark Surface (S9) (LRR K, L) |
| Thick Da | ark Surface (A12) | , , | Redox | Dark Su | rface (F6) | | | Iron-Ma | anganese Masses (F12) (LRR K, L, R) |
| | Mucky Mineral (S1) Bleyed Matrix (S4) | | | ted Dark s Depress | Surface (F | 7) | | | ont Floodplain Soils (F19) (MLRA 149B) |
| | Redox (S5) | | | Depiess | 10115 (1 0) | | | | Spodic (TA6) (MLRA 144A, 145, 149B) rent Material (F21) |
| Stripped | l Matrix (S6) | | | | | | | Very Sh | nallow Dark Surface (TF12) |
| Dark Su | rface (S7) (LRR R, M | LRA 149 | B) | | | | | Other (| Explain in Remarks) |
| ³ Indicators o | f hydrophytic vegetati | on and w | etland hydro | ology mus | t be prese | ent, unles | s disturbed | or problematic | |
| Restrictive | Layer (if observed): | | | | | | | | |
| Type: | | | | | | | | | |
| | ches): | | | | | | | Hydric Soil | Present? Yes <u>/</u> No |
| Remarks: | oils with redox | conce | ntration | e nrae | ant thr | ouaho | ut the r | orofila | |
| Clayey | ons with redox | COLICE | mualion | is pies | CIII IIII | ougno | ut the p | oronie. | |
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wasa112e_xw1_SW



wasa112e_xw1_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: As | nland | Sampling Date: <u>2020-05-23</u> | | |
|---|--|------------------------------|---------------------------------------|--|--|
| Applicant/Owner: Enbridge | | | | | |
| Investigator(s): SBR/DGL | Section, Township | o, Range: sec 20 T047 | 'N R004W | | |
| Landform (hillslope, terrace, etc.): Depression | | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: | | | | | |
| Soil Map Unit Name: Sanborg-Badriver comp | | | | | |
| Are climatic / hydrologic conditions on the site typical for | · | • | | | |
| | | | | | |
| Are Vegetation, Soil, or Hydrology | | | | | |
| Are Vegetation, Soil, or Hydrology | | (If needed, explain any answ | , | | |
| SUMMARY OF FINDINGS – Attach site ma | p showing sampling poi | nt locations, transect | ts, important features, etc. | | |
| Hydrophytic Vegetation Present? Yes | No Is the Sam | ıpled Area | | | |
| Hydric Soil Present? Yes | | /etland? Yes <u> </u> | No | | |
| Wetland Hydrology Present? Yes | | onal Wetland Site ID: | | | |
| Remarks: (Explain alternative procedures here or in a | separate report.) | | | | |
| The wetland is a shallow depression | _ | - | - | | |
| of the survey. Sample point is located wetland feature includes wet meadow | <u> </u> | dominated by lake | seage, but the larger | | |
| Welland realure includes well incadov | V as well. | | | | |
| | | | | | |
| | | | | | |
| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | | cators (minimum of two required) | | |
| Primary Indicators (minimum of one is required; check | | | Surface Soil Cracks (B6) | | |
| | Water-Stained Leaves (B9) | | Drainage Patterns (B10) | | |
| | Aquatic Fauna (B13) | | Moss Trim Lines (B16) | | |
| | Marl Deposits (B15) | | n Water Table (C2) | | |
| | Hydrogen Sulfide Odor (C1) | | urrows (C8) | | |
| | Oxidized Rhizospheres on Living | | Visible on Aerial Imagery (C9) | | |
| | Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So | | Stressed Plants (D1) ic Position (D2) | | |
| | Thin Muck Surface (C7) | Shallow Ac | | | |
| - | Other (Explain in Remarks) | | graphic Relief (D4) | | |
| Sparsely Vegetated Concave Surface (B8) | yare: (=xp.a remaile) | FAC-Neutr | | | |
| Field Observations: | | | , | | |
| Surface Water Present? Yes No | Depth (inches): | | | | |
| Water Table Present? Yes No | Depth (inches): 12 | | | | |
| Saturation Present? Yes _ v No | Depth (inches): 10 | Wetland Hydrology Prese | ent? Yes <u>/</u> No | | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring we | ell aerial nhotos, previous inspec | tions) if available: | | | |
| December Necestada Data (etroam gaage, memering we | m, derial priotos, proviodo mopos | aono,, ii avanabio. | | | |
| | | | | | |
| Remarks: The hydrologic regime is saturated. The hydrologic regime is saturated. | The water table was of | nsarvad at 12 inche | se with saturation at 10 | | |
| inches. | The water table was or | Joerved at 12 mone | s with saturation at 10 | | |
| indies. | | | | | |
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| I . | | | | | |

VEGETATION – Use scientific names of plants.

| Absolute % Cover 5 | Species? | | Dominance Test worksheet: Number of Dominant Species |
|--------------------|------------|-------------|---|
| | <u>Y</u> | | Number of Dominant Species |
| | | FACU | That Are OBL, FACW, or FAC:(A) |
| | | | Total Number of Dominant Species Across All Strata: 2 (B) |
| | | | Percent of Dominant Species |
| | | | That Are OBL, FACW, or FAC:50 (A/B) |
| | | | Prevalence Index worksheet: |
| | | | Total % Cover of: Multiply by: |
| 5 | = Total Co | ver | OBL species <u>80</u> x 1 = <u>80</u> FACW species <u>8</u> x 2 = <u>16</u> |
| | | | FAC species x 2 = 16 FAC species 2 x 3 = 6 |
| | | | FACU species |
| | | <u>FACW</u> | UPL species |
| 2 | <u>N</u> | <u>FACW</u> | Column Totals: 95 (A) 122 (B) |
| 2 | _N_ | FAC | (, (, |
| 2 | _N_ | FACW | Prevalence Index = B/A = 1.2842105263157895 |
| | | | Hydrophytic Vegetation Indicators: |
| | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | = Total Co | ver | 2 - Dominance Test is >50% |
| | • | | 3 - Prevalence Index is ≤3.0¹ |
| | | | 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: |
| | | <u> </u> | 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 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 |
| 0 | = Total Co | ver | height. |
| | | | |
| | | | |
| | | | |
| | | | Hydrophytic |
| | | | Vegetation |
| | | ver | Present? Yes No |
| | howeve | er, the la | rger wetland includes more grasses |
| | | | |

SOIL Sampling Point: wasa112e_xw2

| (inches) | N | <i>M</i> atrix | | | Redox | x Features | 3 | | | |
|--|---|--|-----------|--|---|--|--------------------------|-------------------|--|---|
| | Color (m | | % | Color (n | - | <u>%</u> | Type ¹ | Loc ² | Texture | Remarks |
| <u> </u> | <u>7.5YR</u> | <u>4/2</u> | 90 | 7.5YR | | _10_ | <u>C</u> | _M_ | SICL | |
| 8-20 | <u>7.5YR</u> | <u>4/1</u> | 90 | <u>7.5YR</u> | 4/6 | _10_ | _C_ | _M_ | <u> </u> | |
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| | | | | | | | | | | |
| ¹ Type: C=Co | oncentration, | D=Deple | etion, RM | =Reduced N | Matrix, MS | S=Masked | Sand Gr | ains. | | PL=Pore Lining, M=Matrix. or Problematic Hydric Soils ³ : |
| Black Hi Hydroge Stratified Depleted Thick Da Sandy M Sandy F Stripped Dark Su | pipedon (A2) stic (A3) en Sulfide (A4 d Layers (A5) d Below Dark ark Surface (A ducky Minera Gleyed Matrix Redox (S5) I Matrix (S6) rface (S7) (L | A)) c Surface A12) Il (S1) c (S4) RR R, MI | LRA 149 | MLi Thin D Loamy Loamy Deplet Redox Deplet Redox | RA 149B) park Surfa Mucky M Gleyed M ed Matrix Dark Sur ed Dark S Depressi | ce (S9) (L Mineral (F1 Matrix (F2) (F3) face (F6) Surface (F ions (F8) | RR R, M) (LRR K) | LRA 149B) , L) | Coast Pr 5 cm Mu Dark Sur Polyvalu Thin Dar Iron-Mar Piedmor Mesic Sp Red Par Very Sha | ick (A10) (LRR K, L, MLRA 149B) rairie Redox (A16) (LRR K, L, R) ricky Peat or Peat (S3) (LRR K, L, R) riace (S7) (LRR K, L) ie Below Surface (S8) (LRR K, L) irk Surface (S9) (LRR K, L) inganese Masses (F12) (LRR K, L, R) int Floodplain Soils (F19) (MLRA 149B) podic (TA6) (MLRA 144A, 145, 149B) ient Material (F21) allow Dark Surface (TF12) ixplain in Remarks) |
| Type: | Luyer (II obe | oci vedj. | | | | | | | | |
| Depth (in | ches): | | | | | | | | Hydric Soil P | resent? Yes <u> </u> |
| Remarks: | | | | | s were | | | | | |



wasa112e_xw2_N



wasa112e_xw2_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation P | roiect | City/C | County: Ash | land | Sampli | ing Date: 2020-05-30 | | |
|---|---------------|---|----------------|---------------|--|------------------------|--|--|
| Applicant/Owner: Enbridge | - | | | | | | | |
| Investigator(s): SBR/DGL | | | | | | | | |
| Landform (hillslope, terrace, etc.): Depre | | | | | | | | |
| Subregion (LRR or MLRA): Northcentral | | | | | | | | |
| Soil Map Unit Name: Sanborg-Badı | | | | | | | | |
| • | | • | • | | | | | |
| Are climatic / hydrologic conditions on the | | | | | | | | |
| Are Vegetation, Soil, or Hy | | | | | | | | |
| Are Vegetation, Soil, or Hy | drology | naturally problema | atic? (I | if needed, e | xplain any answers in Rei | marks.) | | |
| SUMMARY OF FINDINGS – Atta | ach site m | nap showing sam | npling poir | nt locatio | ns, transects, impo | rtant features, etc. | | |
| Hydric Soil Present? | Yes <u></u> ✓ | No No | Is the Samp | | Yes <u> </u> | | | |
| Wetland Hydrology Present? Remarks: (Explain alternative procedure | | No | If yes, option | nal Wetland | Site ID: | | | |
| lake sedge and secondarily HYDROLOGY | domina | ted by reed car | nary gras: | S. | | | | |
| Wetland Hydrology Indicators: | | | | | Secondary Indicators (mi | nimum of two required) | | |
| Primary Indicators (minimum of one is re | auired: chec | k all that apply) | | | Surface Soil Cracks | | | |
| Surface Water (A1) | | Water-Stained Leave | | | Drainage Patterns (B10) | | | |
| High Water Table (A2) ∠ High Water Table (A2) | | Aquatic Fauna (B13) | | | Moss Trim Lines (B16) | | | |
| Saturation (A3) | | Marl Deposits (B15) | | | Dry-Season Water Ta | | | |
| Water Marks (B1) | _ | Hydrogen Sulfide Ode | or (C1) | | Crayfish Burrows (C8 | 3) | | |
| Sediment Deposits (B2) | | Oxidized Rhizosphere | _ | | Saturation Visible on | | | |
| Drift Deposits (B3) | | Presence of Reduced | . , | | Stunted or Stressed | | | |
| Algal Mat or Crust (B4) | | Recent Iron Reductio | | | ✓ Geomorphic Position | | | |
| Iron Deposits (B5) Inundation Visible on Aerial Imagery | | Thin Muck Surface (C Other (Explain in Ren | | | Shallow Aquitard (D3Microtopographic Re | | | |
| Sparsely Vegetated Concave Surface | | Other (Explain in Nei | nano) | | FAC-Neutral Test (D | | | |
| Field Observations: | (20) | | | | <u> </u> | <u> </u> | | |
| Surface Water Present? Yes | No | Depth (inches): 2 | | | | | | |
| Water Table Present? Yes | No | Depth (inches): 0 | | | | | | |
| | No | Depth (inches): 0 | | Wetland H | ydrology Present? Yes | s <u>/</u> No | | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, | monitoring v | well, aerial photos, pre | vious inspecti | ons), if avai | ilable: | | | |
| 33., | 3 | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | // | | | | |
| | | | | | | | | |
| Remarks: The hydrologic regime is sa | turated v | with some stan | ding wate | er prese | nt at the time of t | he survey. | | |
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| VEGETATION - | Use scientific names | of plants |
|--------------|----------------------|-----------|
| VEGELATION - | Use sciening names | OI DIAMIS |

| | Absolute | Dominant | Indicator | Dominance Test worksheet: |
|---|----------|------------|--------------|--|
| Tree Stratum (Plot size: 30) | | Species? | | Number of Dominant Species |
| 1 | | | | That Are OBL, FACW, or FAC: (A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | - | Species Across All Strata: (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: |
| | 0 | = Total Co | ver | OBL species60 x 1 =60 |
| Sapling/Shrub Stratum (Plot size:) | | | | FACW species35 x 2 =70 |
| 1 | | | | FAC species5 x 3 =15 |
| 2. | | | | FACU species0 x 4 =0 |
| 3. | | | | UPL species 0 x 5 = 0 |
| 4 | | | | Column Totals:100 (A)145 (B) |
| 5 | | | | Prevalence Index = B/A =1_45 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| | | | | |
| 7 | | = Total Co | | ∠ 2 - Dominance Test is >50% |
| Harl Otratura (Distrains | | = Total Co | vei | 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5) 1. Carex lacustris | 60 | Υ | OBL | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. Phalaris arundinacea | | Y | FACW | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. Equisetum arvense | | N | FAC | |
| 4. Onoclea sensibilis | _ | | FACW | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5 | | | | |
| | | | | Definitions of Vegetation Strata: |
| 6 | | | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7 | | | | at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. |
| 9 | | | | |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 11 | | | | Woody vines – All woody vines greater than 3.28 ft in |
| 12 | | | | height. |
| 00 | 100 | = Total Co | ver | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | - | | |
| 2 | | | | |
| 3 | | | | Hydrophytic |
| 4 | | | | Vegetation Present? Yes ✓ No |
| | | = Total Co | ver | |
| Remarks: (Include photo numbers here or on a separate The wetland sample point is fairly reprepresence of common buckthorn. | | e of the | e wetlan | d feature. Other areas have a |
| | | | | |

Sampling Point: wasa112e_xw3

SOIL Sampling Point: wasa112e_xw3

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | | |
|---|-----------------------|--------------------------|--------------------|--|---------------------------|-------------------|---|--|--|
| Depth | Matrix | | | <u>Features</u> | 1 | . 2 | | | |
| (inches) | Color (moist) | <u>%</u> _ | Color (moist) | <u></u> % | Type' | Loc ² | Texture | Remarks | |
| | | | | | | | | | |
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| | | | | | | | | | |
| | oncentration, D=Deple | etion, RM= | Reduced Matrix, MS | =Masked | Sand Gra | ains. | | PL=Pore Lining, M=Matrix. | |
| Black Hi Hydroge Stratified Depleted Thick Da Sandy M Sandy R Stripped Dark Sui | (A1) pipedon (A2) | _ - - LRA 149B) | | ce (S9) (L lineral (F1 Matrix (F2) (F3) face (F6) Surface (F' ons (F8) | RR R, MI) (LRR K) | .RA 149B) , L) | 2 cm Mu Coast Pr 5 cm Mu Dark Sur Polyvalue Thin Dari Iron-Man Piedmon Mesic Sp Red Pare Very Sha | or Problematic Hydric Soils ³ : ck (A10) (LRR K, L, MLRA 149B) airie Redox (A16) (LRR K, L, R) cky Peat or Peat (S3) (LRR K, L, R) face (S7) (LRR K, L) e Below Surface (S8) (LRR K, L) k Surface (S9) (LRR K, L) ganese Masses (F12) (LRR K, L, R) t Floodplain Soils (F19) (MLRA 149B) bodic (TA6) (MLRA 144A, 145, 149B) ent Material (F21) allow Dark Surface (TF12) xplain in Remarks) | |
| Restrictive I | _ayer (if observed): | | | <u></u> | | | | | |
| Depth (inc | ches): | | <u> </u> | | | | Hydric Soil P | resent? Yesv_ No | |
| | | | | | | | | dside ditch. The soils are d hydrologic indicators. | |
| | | | | | | | | | |
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wasa112e_xw3_E



wasa112e_xw3_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | |
|--|---|------------------------------|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | | |
| File #: wasa112_x | Date of visit(s): 2020-05-30 | | |
| Location: PLSS: sec 20 T047N R004W | Ecological Landsca Lake Superior Clay Plair | • | |
| Lat: 46.535334 Long: -90.894831 County: Ashland Town/City/Village: Gingles town | Watershed: LS09, Lower Bad River | | |
| SITE DESCRIPTION | | | |
| Soils: Mapped Type(s): Sanborg-Badriver complex, 0 to 6 percent slopes. Pickford-Badriver | WWI Class: N/A Wetland Type(s): | | |
| complex, 0 to 3 percent slopes. Field Verified: | PEM/PSS - sedge meadow/shrub-carr complex | | |
| The soils were not field verified. In the shrub component, soils were a clay loam over clay and were reduced throughout. In | Wetland Size: 3.2703 | Wetland Area Impacted 3.2703 | |
| the emergent component soils were a silty clay loam over clay, and similarly were reduced throughout the profile. | Vegetation: Plant Community Description(s): | | |
| Hydrology: The hydrologic regime is saturated. The major source of hydrology is from surface water. A portion of the feature to the south occupies a roadside ditch. | The sedge meadow component is dominated by near-continuous cover of lake sedge. The shrub-carr is dominated by common buckthorn, with some meadow willow present as well. | | |

| SITE MAP | |
|--------------|--|
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SECTION 1: Functional Value Assessment

| | SECTION 1: Functional Value Assessment | | | | | | |
|----|--|-----------|---|--|--|--|--|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty | | | | |
| 1 | N | N | Used for recreation (hunting, birding, hiking, etc.). List: | | | | |
| 2 | Ν | N | Used for educational or scientific purposes | | | | |
| 3 | Ν | Υ | Visually or physically accessible to public | | | | |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation | | | | |
| _ | | | In or adjacent to RED FLAG areas | | | | |
| 5 | N | N | List: | | | | |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species | | | | |
| 7 | N | N | In or adjacent to archaeological or cultural resource site | | | | |
| WH | | ., | Wildlife Habitat | | | | |
| 1 | Υ | Υ | Wetland and contiguous habitat >10 acres | | | | |
| 2 | N | N | 3 or more strata present (>10% cover) | | | | |
| 3 | N | N | Within or adjacent to habitat corridor or established wildlife habitat area | | | | |
| 4 | N | Y | 100 m buffer – natural land cover >50%(south) 75% (north) intact | | | | |
| 5 | N | N | Occurs in a Joint Venture priority township | | | | |
| 6 | Y | Y | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) | | | | |
| | Ť | T | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other | | | | |
| 7 | Υ | Υ | plans | | | | |
| 0 | N 1 | N.I. | | | | | |
| 8 | N | N | Part of a large habitat block that supports area sensitive species | | | | |
| 9 | N | N | Ephemeral pond with water present > 45 days | | | | |
| 10 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates | | | | |
| 11 | N | N | Seasonally exposed mudflats present | | | | |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) | | | | |
| FA | | | Fish and Aquatic Life Habitat | | | | |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake | | | | |
| 2 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates | | | | |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system | | | | |
| 4 | N | Υ | Vegetation is inundated in spring | | | | |
| SP | | | Shoreline Protection | | | | |
| 1 | Ν | N | Along shoreline of a stream, lake, pond or open water area (<a>2 1 acre) - if no, not applicable | | | | |
| 2 | N.I | N. | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating | | | | |
| | N | N | water levels or high flows – if no, not applicable | | | | |
| 3 | Ν | N | Densely rooted emergent or woody vegetation | | | | |
| ST | | | Storm and Floodwater Storage | | | | |
| 1 | Ν | Υ | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream | | | | |
| 2 | Υ | Υ | Water flow through wetland is NOT channelized | | | | |
| 3 | Υ | Y | Dense, persistent vegetation | | | | |
| 4 | Ν | N | Evidence of flashy hydrology | | | | |
| 5 | Y | Y | Point or non-point source inflow | | | | |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed | | | | |
| 7 | N | N | Within a watershed with <10% wetland | | | | |
| 8 | Y | Y | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event | | | | |
| WQ | • | | Water Quality Protection | | | | |
| 1 | Υ | Υ | Provides substantial storage of storm and floodwater based on previous section | | | | |
| 2 | N | N | Basin wetland or constricted outlet | | | | |
| 3 | Y | Y | Water flow through wetland is NOT channelized | | | | |
| 4 | Y | Y | Vegetated wetland associated with a lake or stream | | | | |
| 5 | Y | Y | Dense, persistent vegetation | | | | |
| 6 | | | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth | | | | |
| 7 | N | N | Stormwater or surface water from agricultural land is major hydrology source | | | | |
| | Y | Y | | | | | |
| 8 | N | N | Discharge to surface water | | | | |
| 9 | N | N | Natural land cover in 100m buffer area < 50% | | | | |
| GW | | | Groundwater Processes | | | | |
| 1 | Ν | N | Springs, seeps or indicators of groundwater present | | | | |
| 2 | N | N | Location near a groundwater divide or a headwater wetland | | | | |
| 3 | N | N | Wetland remains saturated for an extended time period with no additional water inputs | | | | |
| 4 | N | N | Wetland soils are organic | | | | |
| 5 | Ν | N | Wetland is within a wellhead protection area | | | | |
| | | | | | | | |

Section 1 Comments (Refer to Section 1 numbers) WH-6: The wetland is a sedge meadow/shrub-carr complex. WH-10/FA-2/4: The wetland feature is likely inundated during the spring, and has some pockets of standing water present at the time of the survey. ST-3/WQ-5: The wetland has a dense herbaceous layer of mostly of lake sedge and shrub layer of common buckthorn. ST-5: Surface water the most likely source of hydrology. WQ-7: The feature is partially located in/around an actively grazed cattle pasture. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments White-tailed deer scat Υ Small mammals Υ Avian Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

| Observed | Potential | Species/Habitat |
|----------|-----------|-----------------------|
| | Y | Aquatic invertebrates |
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SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% 🔽 | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4 | S3 🗸 | S2 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant [| Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-----------------------|-------------|------|-------------------|---|
| Carex lacustris* | | | PEM | Continuous |
| Rhamnus cathartica* | | | PSS | Patchy |
| Salix petiolaris | | | PEM | Rare |
| Salix petiolaris | | | PSS | Rare |
| Carex gracillima | | | PSS | Rare |
| Phalaris arundinacea | | | PEM | Rare |
| Pinus resinosa | | | PSS | Rare |
| Poa pratensis | | | PSS | Rare |
| Spiraea alba | | | PEM | Rare |
| Carex castanea | | | PEM | Barren |
| Acer rubrum | | | PEM | Barren |
| Barbarea vulgaris | | | PSS | Barren |
| Cirsium arvense | | | PEM | Barren |
| Equisetum sylvaticum | | | PEM | Barren |
| Fragaria virginiana | | | PSS | Barren |
| Galium mollugo | | | PEM | Barren |
| Hieracium aurantiacum | | | PSS | Barren |
| Iris versicolor | | | PEM | Barren |
| Lilium michiganense | | | PEM | Barren |
| Lysimachia ciliata | | | PEM | Barren |
| Onoclea sensibilis | | | PEM | Barren |
| Prunus pensylvanica | | | PEM | Barren |
| Rubus idaeus | | | PEM | Barren |
| Rubus idaeus | | | PSS | Barren |
| Solidago gigantea | | | PEM | Barren |
| Ulmus americana | | | PEM | Barren |
| | | | | |

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low due to the high prevalence of invasive species and low species diversity, as well as the disturbed nature of the feature.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| - | | | | | Filling, berms (non-impounding) |
| Х | Х | | Н | С | Drainage – tiles, ditches |
| Х | Х | | М | С | Hydrologic changes - high capacity wells, impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| Χ | Χ | | M | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| Χ | Х | | M | С | Agriculture – pasture |
| | Х | | M | С | Roads or railroad |
| | Х | | M | С | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | V | | | 0 | Removal of herbaceous stratum – mowing, |
| | Х | | L | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| X | Х | | Н | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | Х | | L | UC | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
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^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is within an open area of a pine plantation. There is a mowed utility corridor in the buffer area with ATV |
|--|
| tracks. The feature is also located in/around an actively grazed pasture, and to the south abuts a gravel road and is |
| part of the roadside ditch. |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|----------|-------------|-------------|----------|
| Γ | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | | V | _ | | |
| Human Use Values | / | | | | |
| Wildlife Habitat | | / | | | |
| Fish and Aquatic Life Habitat | V | | | | |
| Shoreline Protection | | | | | ' |
| Flood and Stormwater Storage | | | ✓ | | |
| Water Quality Protection | | | V | | |
| Groundwater Processes | | ✓ | | | |

| FUNCTION | RATIONALE | | | | |
|----------------------------------|--|--|--|--|--|
| Floristic Integrity | The florisitc integrity of the wetland is considered to be low based on the presence of invasive species and the common plant communities. | | | | |
| Human Use Values | The wetland is within a pine plantation and a pasture. | | | | |
| Wildlife Habitat | The wetland is part of a fairly large complex, and so offers a diversity of habitat options. However, the feature could also be considered isolated due to the location within a larger landscape-level pine plantation and a pasture. | | | | |
| Fish and Aquatic Life Habitat | There is potential for aquatic invertebrates to inhabit the emergent portion of the complex after periods of heavy rain or spring inundation. | | | | |
| Shoreline Protection | N/A | | | | |
| Flood and Stormwater Storage | The wetland complex is a large feature that has dense overall vegetative cover, and obtains increased runoff from several sources. | | | | |
| Water Quality Protection | See above. | | | | |
| Groundwater Processes | The wetland does not seem to influence groundwater processes, although the feature is large and may have more complex interactions in places | | | | |

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Medium |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Medium |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project Cit | ty/County: Ashland Sampling Date: 2020-05-23 | | | | |
|---|--|--|--|--|--|
| • | State: Wisconsin Sampling Point: wasa112e_xu | | | | |
| Investigator(s): SBR/DGL Se | ection, Township, Range: Sec 20 T047N R004W | | | | |
| | relief (concave, convex, none): Convex Slope (%): 3-7% | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46.534802 | Long: <u>-90.895520</u> Datum: <u>WGS84</u> | | | | |
| Soil Man Unit Name: Sanborg-Badriver complex 0 to 6 r | percent slopes NWI classification: | | | | |
| Are climatic / hydrologic conditions on the site typical for this time of year' | | | | | |
| | sturbed? Are "Normal Circumstances" present? Yes No | | | | |
| Are Vegetation, Soil, or Hydrology naturally proble | | | | | |
| | | | | | |
| SUMMARY OF FINDINGS – Attach site map showing s | ampling point locations, transects, important features, etc. | | | | |
| Hydrophytic Vegetation Present? Yes No | Is the Sampled Area | | | | |
| Hydric Soil Present? Yes No | within a Wetland? Yes No | | | | |
| Wetland Hydrology Present? Yes No | If yes, optional Wetland Site ID: | | | | |
| Remarks: (Explain alternative procedures here or in a separate report.) | wetland feature and is within a pine plantation. The | | | | |
| overstory is almost continuous cover of red pine. | | | | | |
| oversiony is aimost continuous cover or rea pine. | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | Secondary Indicators (minimum of two required) | | | | |
| Primary Indicators (minimum of one is required; check all that apply) | | | | | |
| Surface Water (A1) Water-Stained Le: | | | | | |
| High Water Table (A2) Aquatic Fauna (B) Seturation (A2) And Deposite (B1) | | | | | |
| Saturation (A3) Marl Deposits (B1 Water Marks (B1) Hydrogen Sulfide | | | | | |
| | Odor (C1) Crayfish Burrows (C8) heres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) | | | | |
| | | | | | |
| <u> </u> | · , , — · , , , | | | | |
| Iron Deposits (B5) Thin Muck Surface | ron Reduction in Tilled Soils (C6) Geomorphic Position (D2) ck Surface (C7) Shallow Aquitard (D3) | | | | |
| Indit Deposits (B3) Thirrivides Surface Inundation Visible on Aerial Imagery (B7) Other (Explain in I | | | | | |
| Sparsely Vegetated Concave Surface (B8) | Microtopographic Relief (D4) FAC-Neutral Test (D5) | | | | |
| Field Observations: | (AO-Neutral Test (D3) | | | | |
| Surface Water Present? Yes No Depth (inches): _ | | | | | |
| Water Table Present? Yes No _ ✓ Depth (inches): _ | | | | | |
| Saturation Present? Yes No Depth (inches): _ | | | | | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, | provious inspections) if available: | | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial priotos, | previous inspections), il avaliable. | | | | |
| | | | | | |
| Remarks: | | | | | |
| No indicators of wetland hydrology were observed | 3 0. | | | | |
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| VECETATION | Llea eciantific names | of plants |
|------------|-----------------------|-----------|

| 'EGETATION – Use scientific names of plants. | | | | Sampling Point: wasa112e_xu1 |
|---|---------------------|-------------------|---------------|---|
| Tree Stratum (Plot size:30) | | Dominant Species? | | Dominance Test worksheet: |
| 1. <u>Pinus resinosa</u> | 95 | <u>Y</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC:1 (A) |
| 2 | | | | Total Number of Dominant Species Across All Strata:4 (B) |
| 4 | | | | Percent of Dominant Species |
| 5 | | | | That Are OBL, FACW, or FAC:25 (A/B) |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | 95 | = Total Cov | er er | OBL species0 x 1 =0 |
| Sapling/Shrub Stratum (Plot size:) | | | | FACW species x 2 =2 |
| 1. Rhamnus cathartica | 15 | <u>Y</u> | <u>FAC</u> | FAC species |
| 2 | | | | UPL species x 5 =0 |
| 3 | | | · | Column Totals: 129 (A) 497 (B) |
| 4 | | | | Prevalence Index = B/A = 3.852713178294574 |
| 5 | | | | |
| 6 | | | | Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation |
| 7 | | | | 2 - Dominance Test is >50% |
| _ | 15 | = Total Cov | /er | 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5 | _ | | 5 4011 | 4 - Morphological Adaptations ¹ (Provide supporting |
| 1. <u>Tanacetum vulgare</u> | | <u>Y</u> | <u>FACU</u> | data in Remarks or on a separate sheet) |
| 2. <u>Taraxacum officinale</u> | | | <u>FACU</u> | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Prunus pensylvanica</u> | | | <u>FACU</u> | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. <u>Trifolium pratense</u> | | | <u>FACU</u> | be present, unless disturbed or problematic. |
| 5. <u>Fragaria virginiana</u> | | | <u>FACU</u> | Definitions of Vegetation Strata: |
| 6. <u>Barbarea vulgaris</u> | | | _FAC_ | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7. <u>Bromus ciliatus</u> | _1 | N | <u>FACW</u> | at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 11 | | | | |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in height. |
| | <u>19</u> | = Total Cov | er er | |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | - | Hydrophytic Vegetation |
| 4 | | | - | Present? Yes No 🗸 |
| | | = Total Cov | /er | |
| Remarks: (Include photo numbers here or on a separate s The sample point is representative of th dominates the overstory and its needles understory. | sheet.) ne uplar | nd area. | The po | |

SOIL Sampling Point: wasa112e_xu1

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | | | |
|---|---------------------------------------|------------|--------------------------------|------------|-------------------|------------------|---|--|--|--|
| Depth | Depth Matrix Redox Features | | | . 2 | | | | | | |
| (inches) 0-14 | Color (moist) 10YR 3/3 | 100 | Color (moist) | 0 | Type ¹ | Loc ² | SICL | Remarks | | |
| | | 100 | | | | | | | | |
| <u>14-20</u> | 5YR 4/3 | _0_ | | 0 | | | SICL_ | | | |
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| | oncentration, D=Depl | etion, RM= | Reduced Matrix, MS | =Masked | Sand Grai | ns. | | _=Pore Lining, M=Matrix. | | |
| Hydric Soil I Histosol | | | Polyvalue Below | , Surface | (S8) (I DD | D | | Problematic Hydric Soils ³ : (A10) (LRR K, L, MLRA 149B) | | |
| | oipedon (A2) | | MLRA 149B) | Juliace | (30) (LKK | κ, | | rie Redox (A16) (LRR K, L, R) | | |
| Black His | | | Thin Dark Surface | | | | | y Peat or Peat (S3) (LRR K, L, R) | | |
| | n Sulfide (A4) | | Loamy Mucky M | | | L) | | ce (S7) (LRR K, L) | | |
| | l Layers (A5) l Below Dark Surface | Δ (Δ11) | Loamy Gleyed N Depleted Matrix | | (1) | | | Below Surface (S8) (LRR K, L) Surface (S9) (LRR K, L) | | |
| | ark Surface (A12) | (A11) | Redox Dark Sur | | | | | anese Masses (F12) (LRR K, L, R) | | |
| | lucky Mineral (S1) | | Depleted Dark S | | | | Piedmont Floodplain Soils (F19) (MLRA 149B) | | | |
| - | sleyed Matrix (S4) | | Redox Depressi | ons (F8) | | | Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | | | |
| - | edox (S5) Matrix (S6) | | | | | | Red Parent Material (F21) | | | |
| | face (S7) (LRR R, M | ILRA 149B | 3) | | | | Very Shallow Dark Surface (TF12) Other (Explain in Remarks) | | | |
| ³ Indicators of | hydrophytic vegetati | ion and we | tland hydrology mus | t be prese | ent, unless | disturbed | or problematic. | | | |
| Restrictive L | ayer (if observed): | | | · · | | | | | | |
| Type: | | | | | | | | | | |
| Depth (inc | ches): | | | | | | Hydric Soil Pres | sent? Yes No | | |
| Remarks: | w loom ooil th | at ia da | rkar in tha tan | nortic | n of the | n rofil | o and mara | rad in the bottom parties | | |
| | ay loam son m was observe | | rker in the top | portic | on or the | e prome | e and more i | red in the bottom portion. | | |
| no redox | was observe | u. | | | | | | | | |
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wasa112e_xu1_E



wasa112e_xu1_S

| Project/Site: Line 5 Relo | cation Proied | ct | City/ | County: Ash | nland | Sar | npling Date: 2020- | 05-23 |
|--|---------------------|--|---|---------------|--|---|------------------------|----------|
| | - | | State: Wisconsin Sampling Point: wasa112e | | | | | |
| • | | Section, Township, Range: Sec 20 T047N R004W | | | | | | |
| Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%): | | | | | | |)-2% | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46.531879 Long: -90.896154 Datum: WG | | | | | | | S84 | |
| Soil Map Unit Name: Sanborg-Badriver complex, 0 to 6 percent slopes NWI classification: | | | | | | | | |
| Are climatic / hydrologic condi | • | | • | | | | | |
| Are Vegetation, Soil | | | | | | | | |
| Are Vegetation, Soil _ | | | | | | | | |
| | | | | | | | | -4- |
| SUMMARY OF FINDING | GS – Attach s | ite m | nap snowing sa | mpling poi | nt location | is, transects, im | portant features | , etc. |
| Hydrophytic Vegetation Pres | | | No | Is the Sam | | | | |
| Hydric Soil Present? | Yes_ | | No | | etland? | | | |
| Wetland Hydrology Present? | | | No If yes, optional Wetland Site ID: | | | | | |
| Remarks: (Explain alternative procedures here or in a separate report.) The upland is located slightly upslope from the wetland within a cow pasture. The upland is dominated by smooth brome and weedy pasture forbs such as dandelion and red clover. Upland sample point is shared with wetlands wasa1035e and wasa1036e. | | | | | | | | |
| oumpie point to one | rea with weth | aria | 15 W454 1000C | ana wase | 110000. | | | |
| HYDROLOGY | | | | | | | | |
| Wetland Hydrology Indicat | ors: | | | | <u>S</u> | Secondary Indicators | (minimum of two requ | ired) |
| Primary Indicators (minimum | of one is required; | chec | ck all that apply) | | | Surface Soil Crac | ks (B6) | |
| Surface Water (A1) | | | Water-Stained Leav | es (B9) | _ | Drainage Patterns | s (B10) | |
| High Water Table (A2) | | | Aquatic Fauna (B13 | | _ | Moss Trim Lines | | |
| Saturation (A3) | | | Marl Deposits (B15) | | - | Dry-Season Wate | | |
| Water Marks (B1) | | | Hydrogen Sulfide O | | | Crayfish Burrows | | 0) |
| Sediment Deposits (B2) | | | | _ | | | e on Aerial Imagery (C | 9) |
| Drift Deposits (B3) Algal Mat or Crust (B4) | | | Presence of Reduce Recent Iron Reducti | | Stunted or Stressed Plants (D1) oils (C6) Geomorphic Position (D2) | | | |
| Iron Deposits (B5) | | | Thin Muck Surface | | | Shallow Aquitard | | |
| Inundation Visible on Ae | erial Imagery (B7) | | Other (Explain in Re | . , | | Shallow Aquitard Microtopographic | | |
| Sparsely Vegetated Cor | | | Other (Explain in the | inano) | = | FAC-Neutral Test | | |
| Field Observations: | | | | | _ | | . (= 5) | |
| Surface Water Present? | Yes No | ~ | _ Depth (inches): | | | | | |
| Water Table Present? | Yes No | ~ | _ Depth (inches): | | | | | |
| Saturation Present? | Yes No | ~ | _ Depth (inches): | | Wetland Hy | drology Present? | Yes No | <u>~</u> |
| (includes capillary fringe) Describe Recorded Data (str | ream gauge, monito | orina v | well, aerial photos, pr | evious inspec | tions), if availa | able: | | |
| (** | 3:13:, | . 3 | - , , - | | / / | | | |
| | | | | | | | | |
| Remarks: No indicators of we | tland hydrolc | .av. 1 | were observed | 1 | | | | |
| INO Indicators of we | tiaria riyarolo | уу ч | were observed | 4. | | | | |
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| VEGETATION - | Use scientific names | of plants. |
|---------------------|----------------------|------------|
| | | |

| VEGETATION – Use scientific names of plants. | | | | Sampling Point: wasa112e_xu2 |
|---|---------------------|----------------------|---------------------|---|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1. <u>Pinus strobus</u> | | | | Number of Dominant Species That Are OBL, FACW, or FAC:(A) |
| 2. <u>Pinus resinosa</u> | | Y | | |
| 3. <u>Populus tremuloides</u> | | | | Total Number of Dominant Species Across All Strata:5(B) |
| 4 | | | | Percent of Dominant Species |
| 5. | | | | That Are OBL, FACW, or FAC: (A/B) |
| 6. | | | | Providence to decrease to the set |
| 7 | | | | Prevalence Index worksheet: |
| | | = Total Co | | OBL species x1 = 0 |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species0 x 2 =0 |
| 1. Crataegus sp | 5 | Υ | | FAC species5 x 3 =15 |
| 2 | | | | FACU species 52 x 4 = 208 |
| 3. | | | | UPL species <u>65</u> x 5 = <u>325</u> |
| 4 | | | | Column Totals: <u>122</u> (A) <u>548</u> (B) |
| 5 | | | | Prevalence Index = B/A = 4.491803278688525 |
| | | | | Hydrophytic Vegetation Indicators: |
| 6 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| 7 | _ | = Total Co | | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:5) | | - Total Co | vei | 3 - Prevalence Index is ≤3.0¹ |
| 1. Bromus inermis | 65 | Υ | UPL | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. Taraxacum officinale | | N | FACU | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. Poa pratensis | | N | FACU | |
| 4. Trifolium pratense | | N | FACU | ¹ Indicators of hydric soil and wetland hydrology must |
| | _ | | FACU | be present, unless disturbed or problematic. |
| 5. <u>Fragaria virginiana</u>6. <u>Galium cf mollugo</u> | | | FACU | Definitions of Vegetation Strata: |
| 7. <u>Achillea millefolium</u> | | | FACU | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| | | | · • | at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. |
| | | | | |
| 10 11 | | | · —— | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 12. | | | | Woody vines – All woody vines greater than 3.28 ft in |
| 12. | | = Total Co | | height. |
| Woody Vine Stratum (Plot size:30) | | - Total Co | vei | |
| | | | | |
| 1 | | | | |
| 2 | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic Vegetation |
| | | | | 1 |

SOIL Sampling Point: wasa112e_xu2

| Profile Desc | cription: (Desc | ribe to the d | epth needed | to docun | nent the | indicator | or confirm | the absence of in | dicators.) | | |
|---------------------------|------------------------------------|---|--------------|-------------------------|-------------|-------------------|------------------|---------------------------|--|--|--|
| Depth | Mat | | | Redo | x Feature | S1 | _ | | | | |
| (inches) | Color (mois | | Color (| | <u>%</u> | Type ¹ | Loc ² | <u>Texture</u> | Remarks | | |
| 0-12 | 7.5YR 3 | <u>/2 98 </u> | <u>5YR</u> | 4/6 | 2 | _ <u>C</u> _ | _M_ | SIL | | | |
| 12-20 | <u>5YR 4</u> | <u>/4 95</u> | <u>5YR</u> | 4/6 | 5 | _C | _M_ | SIC_ | | | |
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| | oncentration, D | =Depletion, R | M=Reduced | Matrix, MS | S=Masked | d Sand Gr | ains. | | Pore Lining, M=Matrix. | | |
| Hydric Soil | | | | | | | | | roblematic Hydric Soils ³ : | | |
| Histosol | (A1) pipedon (A2) | | - | alue Belov RA 149B) | | (S8) (LR | R R, | | (A10) (LRR K, L, MLRA 149B) e Redox (A16) (LRR K, L, R) | | |
| | stic (A3) | | | , | | LRR R, M | LRA 149B) | | Peat or Peat (S3) (LRR K, L, R) | | |
| Hydroge | en Sulfide (A4) | | Loam | y Mucky N | /lineral (F | 1) (LRR K | | Dark Surfac | e (S7) (LRR K, L) | | |
| | d Layers (A5) | | | y Gleyed I | | 2) | | | elow Surface (S8) (LRR K, L) | | |
| | d Below Dark S ark Surface (A1: | | | ted Matrix x Dark Su | | 1 | | | urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R) | | |
| | Mucky Mineral (| | | ted Dark | ` , | | | - | oodplain Soils (F19) (MLRA 149B) | | |
| | Sleyed Matrix (S | | | x Depress | | , | | | ic (TA6) (MLRA 144A, 145, 149B) | | |
| - | Redox (S5) | | | | | | | Red Parent Material (F21) | | | |
| | Matrix (S6) | D MIDA 4 | OB) | | | | | | w Dark Surface (TF12) ain in Remarks) | | |
| Dark Su | rface (S7) (LRF | K K, WILKA 12 | 90) | | | | | Other (Expire | an in Remarks) | | |
| ³ Indicators o | f hydrophytic ve | egetation and | wetland hydr | ology mus | t be pres | ent, unles | s disturbed | or problematic. | | | |
| Restrictive I | Layer (if obser | ved): | | | | | | | | | |
| Type: | | | | | | | | | | | |
| | ches): | | | | | | | Hydric Soil Pres | ent? Yes No <u>/</u> | | |
| Remarks: | | 20 | 1. | | | | - 1 | • | | | |
| I ne soils | are silty v | vith some | redox c | oncent | rations | s prese | ent. | | | | |
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wasa112e_xu2_S



wasa112e_xu2_W

| Project/Site: Line 5 Relo | cation Proiec | :t | City/C | County: Ash | land | Sam | npling Date: 20 | 020-05-30 |
|--|---------------------|---|---|---------------|------------------|---|-----------------|---------------------------------------|
| | • | | State: Wisconsin Sampling Point: wasa1120 | | | | | |
| Investigator(s): SBR/DGL | | | | | | | | |
| Landform (hillslope, terrace, e | | | | | _ | | | (%): 0-2 % |
| Subregion (LRR or MLRA). N | orthcentral Forest | Sts Lat: 46.531013 Long: -90.896223 Datum: WGS8 | | | | | | WGS84 |
| Soil Map Unit Name: Sanborg-Badriver complex, 0 to 6 percent slopes NWI classification: | | | | | | | | · · · · · · · · · · · · · · · · · · · |
| Are climatic / hydrologic condi | • | • | • | • | | | | |
| Are Vegetation, Soil | | | | | | | | No |
| Are Vegetation, Soil | - | | - | | | | | 140 |
| | | | | | | | | |
| SUMMARY OF FINDING | 3S – Attach si | ite ma | p showing sam | npling poi | nt location | s, transects, im | portant feat | tures, etc. |
| Hydrophytic Vegetation Pres | ent? Yes | | No | Is the Sam | | | | |
| Hydric Soil Present? | | | No 🔽 | within a We | etland? | Yes | No <u> </u> | |
| Wetland Hydrology Present? | | | No <u> </u> | If yes, optio | nal Wetland S | ite ID: | | |
| Remarks: (Explain alternative The upland is located to the control of the control | re procedures here | or in a s | separate report.) | thin a gay | v poeture | The uplend of | acomo to k | 201/0 |
| | | | | | | | | |
| HYDROLOGY | | | | | | | | |
| Wetland Hydrology Indicat | | | | | | econdary Indicators (| | o required) |
| Primary Indicators (minimum | of one is required; | | | | | _ Surface Soil Cracl | | |
| Surface Water (A1) | | | ater-Stained Leave | | | Drainage Patterns | | |
| High Water Table (A2) Saturation (A3) | | | quatic Fauna (B13) arl Deposits (B15) | | _ | Moss Trim Lines (Dry-Season Wate | | |
| Water Marks (B1) | | | ydrogen Sulfide Od | | _ | Crayfish Burrows | | |
| Sediment Deposits (B2) | | | | | · · | _ Saturation Visible | | erv (C9) |
| Drift Deposits (B3) | | | resence of Reduced | _ | | Stunted or Stresse | _ | -) () |
| Algal Mat or Crust (B4) | | | ecent Iron Reductio | | | | | |
| Iron Deposits (B5) | | TI | hin Muck Surface (C | C7) | _ | Shallow Aquitard | (D3) | |
| Inundation Visible on Ae | rial Imagery (B7) | 0 | ther (Explain in Rer | marks) | _ | Microtopographic | Relief (D4) | |
| Sparsely Vegetated Cor | icave Surface (B8) | | | | _ | FAC-Neutral Test | (D5) | |
| Field Observations: | | , - | S 41 (* 1) | | | | | |
| Surface Water Present? | | | Depth (inches): | | | | | |
| Water Table Present? Saturation Present? | | | Depth (inches): Depth (inches): | | Watland Hy | drology Present? | Voc | No 4 |
| (includes capillary fringe) | | | | | - | | 162 | NO |
| Describe Recorded Data (str | eam gauge, monito | oring wel | ll, aerial photos, pre | vious inspect | ions), if availa | ıble: | | |
| | | | | | | | | |
| Remarks: | | | | | | | | |
| No indicators of we | tland hydrolo | gy we | ere observed. | | | | | |
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| VEGETATION – | Use | scientific | names | of | plants |
|---------------------|-----|------------|----------|--------|--------|
| VECEIAIIOII | - | | 11011100 | \sim | piuito |

| Tree Stratum (Plot size: 30) | Absolute | | | Dominance Test worksheet: |
|--|----------|-------------|-------------|---|
| 1. Populus tremuloides | | Species? | | Number of Dominant Species |
| • | | | | That Are OBL, FACW, or FAC: (A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata: (B) |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B) |
| 5 | | | | That Are OBL, FACW, or FAC:40 (A/B) |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | 10 | = Total Cov | er/er | OBL species0 x 1 =0 |
| Sapling/Shrub Stratum (Plot size:) | | | | FACW species0 x 2 =0 |
| 1. Rhamnus cathartica | 15 | <u>Y</u> | FAC | FAC species <u>25</u> x 3 = <u>75</u> |
| 2 | | | | FACU species x4 = |
| 3 | | | | UPL species <u>25</u> x 5 = <u>125</u> Column Totals: <u>125</u> (A) <u>500</u> (B) |
| 4 | | | | Column Totals. 125 (A) 300 (B) |
| 5 | | | | Prevalence Index = B/A =4.0 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7. | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | | = Total Cov | /er | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:5) | | 10141 001 | | 3 - Prevalence Index is ≤3.0¹ |
| 1. Poa pratensis | 30 | Υ | FACU | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. Bromus inermis | | Y | UPL | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. Achillea millefolium | | N | FACU | |
| 4. Lotus corniculatus | | N | FACU | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. <u>Leucanthemum vulgare</u> | | Y | UPL | |
| 6. <i>Taraxacum officinale</i> | | <u>.</u> | FACU | Definitions of Vegetation Strata: |
| | | N | FACU | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7. <u>Solidago altissima</u> | _ | | FACU | at breast height (DBH), regardless of height. |
| 8. <u>Plantago major</u> | | _N_ | | Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. |
| 9. <u>Prunus pensylvanica</u> | | <u>N</u> | <u>FACU</u> | |
| | | | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 11 | | | | Woody vines – All woody vines greater than 3.28 ft in |
| 12 | 100 | | | height. |
| | 100 | = Total Cov | er/ | |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | - | | |
| 2 | | - | | |
| 3 | | | | Hydrophytic |
| 4 | | - | | Vegetation Present? Yes No |
| | | = Total Cov | ver | |
| Remarks: (Include photo numbers here or on a separate s The upland sample point is located in a | sheet.) | octuro o | nd ic ror | procentative of the unland area |
| The upland sample point is located in a | cow pa | isture ar | iu is rep | bresentative of the upland area. |
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Sampling Point: wasa112e_xu3

SOIL Sampling Point: wasa112e_xu3

| Profile Desc | ription: (Describe t | o the dep | th needed to docum | ent the i | ndicator | or confirm | the absence | of indicators.) | | | |
|----------------------------|---|------------|-----------------------------------|--------------------|--------------------|------------------|--|---|--|--|--|
| Depth | <u>Matrix</u> | | | <u>Features</u> | | . 2 | - . | 5 | | | |
| (inches) | Color (moist) | <u>%</u> | Color (moist) | | Type ¹ | Loc ² | <u>Texture</u> | Remarks | | | |
| 0-20 | 2.5YR 4/4 | <u>100</u> | | 0 | | | <u> </u> | | | | |
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| | oncentration, D=Depl | etion, RM= | Reduced Matrix, MS | =Masked | Sand Gr | ains. | | PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil | | | Daharaha Dalam | . Cumfa a a | (CO) (I DI | | | for Problematic Hydric Soils ³ : | | | |
| Histosol | oipedon (A2) | | Polyvalue Below MLRA 149B) | Surface | (S6) (LK I | ΧK, | | luck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) | | | |
| | stic (A3) | | Thin Dark Surface | ce (S9) (L | RR R, M | LRA 149B) | | lucky Peat or Peat (S3) (LRR K, L, R) | | | |
| | en Sulfide (A4) | | Loamy Mucky M | | | | Dark Su | urface (S7) (LRR K, L) | | | |
| | d Layers (A5) | | Loamy Gleyed N | |) | | | ue Below Surface (S8) (LRR K, L) | | | |
| | d Below Dark Surface ark Surface (A12) | e (A11) | Depleted Matrix Redox Dark Sur | | | | | ark Surface (S9) (LRR K, L) anganese Masses (F12) (LRR K, L, R) | | | |
| | Mucky Mineral (S1) | | Redox Dark Sur Depleted Dark S | | 7) | | | ont Floodplain Soils (F19) (MLRA 149B) | | | |
| | Gleyed Matrix (S4) | | Redox Depressi | | ., | | Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | | | | |
| | Redox (S5) | | | | | | | rent Material (F21) | | | |
| | Matrix (S6) | | | | | | | hallow Dark Surface (TF12) | | | |
| Dark Su | rface (S7) (LRR R, M | ILRA 149E | 3) | | | | Other (I | Explain in Remarks) | | | |
| ³ Indicators of | f hydrophytic vegetati | on and we | tland hydrology musi | t be prese | nt. unles | s disturbed | or problematic. | | | | |
| | Layer (if observed): | | | | , | | | · | | | |
| Type: | | | | | | | | | | | |
| Depth (inc | ches): | | | | | | Hydric Soil | Present? Yes No | | | |
| Remarks: | | | | | | | | | | | |
| | y soil through | out the | profile with no | obser | ved re | dox fea | atures. | | | | |
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wasa112e_xu3_E



wasa112e_xu3_W

| Project/Site: Line 5 Relocation Project | City/County: _ | Ashland | Sampling Date: 2020-05-30 | | |
|--|---------------------------------|--|------------------------------------|--|--|
| • | | | onsin Sampling Point: wasa112e_xu4 | | |
| Investigator(s): SBR/DGL | ship, Range: sec 20 T04 | 7N R004W | | | |
| Landform (hillslope, terrace, etc.): Talf | | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: | | | | | |
| Soil Map Unit Name: Sanborg-Badriver comp | | | | | |
| Are climatic / hydrologic conditions on the site typical for | | | | | |
| Are Vegetation, Soil, or Hydrology | | | | | |
| Are Vegetation, Soil, or Hydrology | | | | | |
| | | | | | |
| SUMMARY OF FINDINGS – Attach site ma | p showing sampling | point locations, transed | ts, important features, etc. | | |
| Hydrophytic Vegetation Present? Yes | No V Is the | Sampled Area | | | |
| Hydric Soil Present? Yes | | a Wetland? Yes | No <u> </u> | | |
| Wetland Hydrology Present? Yes | No <u>v</u> If yes, | optional Wetland Site ID: | | | |
| Remarks: (Explain alternative procedures here or in a | separate report.) | rad nine plantation | The ground is severed | | |
| The upland is located underneath the | • | • • | The ground is covered | | |
| with pine needles which limits growth | in the herbaceous | iayei. | | | |
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| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | Secondary Inc | dicators (minimum of two required) | | |
| Primary Indicators (minimum of one is required; check | all that apply) | Surface S | oil Cracks (B6) | | |
| | Vater-Stained Leaves (B9) | | Patterns (B10) | | |
| | quatic Fauna (B13) | Moss Trin | | | |
| | Marl Deposits (B15) | | on Water Table (C2) | | |
| | Hydrogen Sulfide Odor (C1) | | Burrows (C8) | | |
| | | ng Roots (C3) Saturation Visible on Aerial Imagery (C9) | | | |
| | Presence of Reduced Iron (C | | r Stressed Plants (D1) | | |
| | Recent Iron Reduction in Tille | | | | |
| | Thin Muck Surface (C7) | Shallow Aquitard (D3) | | | |
| | Other (Explain in Remarks) | Microtopographic Relief (D4) FAC-Neutral Test (D5) | | | |
| Sparsely Vegetated Concave Surface (B8) Field Observations: | | FAC-Neur | iai Test (D3) | | |
| | Depth (inches): | | | | |
| | Depth (inches): | | | | |
| | Depth (inches): | | sent? Yes No | | |
| (includes capillary fringe) | | | | | |
| Describe Recorded Data (stream gauge, monitoring we | ell, aerial photos, previous in | spections), if available: | | | |
| | | | | | |
| Remarks: | | | | | |
| No indicators of wetland hydrology w | ere observed. | | | | |
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| | ı | | | Sampling Point: wasa112e_xu4 | | |
|--|---------------------|------------|--------------------|--|--|--|
| Tree Stratum (Plot size: 30) | Absolute % Cover | | t Indicator Status | Dominance Test worksheet: | | |
| 1. <u>Pinus resinosa</u> | | | | Number of Dominant Species That Are OBL, FACW, or FAC: (A) | | |
| 2 | | | | Total Number of Dominant | | |
| 3 | | | | Species Across All Strata:6 (B) | | |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B) | | |
| 5 | | | | That Are OBL, FACW, or FAC: 33 (A/B) | | |
| 6 | | | | Prevalence Index worksheet: | | |
| 7 | | | | Total % Cover of: Multiply by: | | |
| | 80 | = Total Co | over | OBL species x 1 =0 | | |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species0 x 2 =0 FAC species36 x 3 =108 | | |
| 1. Rhamnus cathartica | | | | FACU species 100 x 4 = 400 | | |
| 2 | | | | UPL species10 x 5 =50 | | |
| 3 | | | | Column Totals: <u>146</u> (A) <u>558</u> (B) | | |
| 4 | | | | Prevalence Index = B/A = 3.8219178082191783 | | |
| 5 | | | | | | |
| 6 | | | | Hydrophytic Vegetation Indicators: | | |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% | | |
| | 20 | = Total Co | over | 3 - Prevalence Index is ≤3.0¹ | | |
| Herb Stratum (Plot size: 5 | 4.0 | V | | 4 - Morphological Adaptations ¹ (Provide supportin | | |
| 1. Bromus inermis | | Y | UPL | data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) | | |
| 2. Rhamnus cathartica | | Y | <u>FAC</u> | 1 Toblematic Hydrophytic Vegetation (Explain) | | |
| 3. <u>Taraxacum officinale</u> | | N | FACU | ¹ Indicators of hydric soil and wetland hydrology must | | |
| 4. <u>Fragaria virginiana</u> | _ | _N_ | FACU | be present, unless disturbed or problematic. | | |
| 5. <u>Lotus corniculatus</u> | | <u>Y</u> | FACU | Definitions of Vegetation Strata: | | |
| 6. <u>Tanacetum vulgare</u> | | | FACU | Tree – Woody plants 3 in. (7.6 cm) or more in diameter | | |
| 7. <u>Barbarea vulgaris</u> | | N | FAC | at breast height (DBH), regardless of height. | | |
| 8. <u>Equisetum arvense</u> | | | <u>FAC</u> | Sapling/shrub – Woody plants less than 3 in. DBH | | |
| 9. <u>Potentilla recta</u> | | N | | and greater than or equal to 3.28 ft (1 m) tall. | | |
| 10. <u>Valeriana officinalis</u> | | _N_ | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | | |
| 11. <u>Ranunculus acris</u> | 2 | <u>N</u> | <u>FAC</u> | | | |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in height. | | |
| 20 | _50_ | = Total Co | over | | | |
| Woody Vine Stratum (Plot size: 30) | | | | | | |
| | | | | | | |
| 1 | | | | | | |
| 1 2 | | | | | | |
| 1 | | | | Hydrophytic Venetation | | |
| 1 2 | | | | Hydrophytic Vegetation Present? Yes No _ ✓ | | |

SOIL Sampling Point: wasa112e_xu4

| Profile Desc | cription: (Describe t | o the dep | th needed | to docun | nent the i | indicator | or confirm | the absence of indica | tors.) | | |
|---------------------------|---------------------------------------|-----------|--------------|--------------------------------|---------------------|--------------------|------------------|---|---|--|--|
| Depth | Matrix | | | | x Feature | s1 | . 2 | - . | | | |
| (inches) | Color (moist) | <u>%</u> | Color (r | noist) | <u>%</u> | _Type ¹ | Loc ² | Texture | Remarks | | |
| 0-10 | 7.5YR 2.5/2 | | | | 0 | | | _SICL_ | | | |
| 10-20 | 5YR 3/3 | 90 | <u>5YR</u> | 4/6 | <u> 10</u> | <u> </u> | _M_ | | | | |
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| | oncentration, D=Deple | etion, RM | =Reduced I | Matrix, MS | S=Masked | d Sand Gr | ains. | | e Lining, M=Matrix. | | |
| Hydric Soil | | | Б. | | 0 (| (00) (1.5 | | | lematic Hydric Soils ³ : | | |
| Histosol | (A1) pipedon (A2) | | | alue Belov RA 149B) | | (S8) (LR | кк, | |) (LRR K, L, MLRA 149B) edox (A16) (LRR K, L, R) | | |
| Black Hi | stic (A3) | | Thin D | ark Surfa | ice (S9) (I | | LRA 149B) | 5 cm Mucky Pea | at or Peat (S3) (LRR K, L, R) | | |
| | en Sulfide (A4) | | | Mucky N | | | (, L) | Dark Surface (S | | | |
| | d Layers (A5) d Below Dark Surface | (A11) | - | y Gleyed I ted Matrix | | () | | | / Surface (S8) (LRR K, L) ce (S9) (LRR K, L) | | |
| Thick Da | ark Surface (A12) | , | Redox | Dark Su | rface (F6) | | | Iron-Manganese | Masses (F12) (LRR K, L, R) | | |
| - | Mucky Mineral (S1) | | | ted Dark S Depress | | - 7) | | Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | | | |
| | Gleyed Matrix (S4) Redox (S5) | | | Depress | 10115 (1 0) | | | Red Parent Material (F21) | | | |
| Stripped | l Matrix (S6) | | | | | | | Very Shallow Da | ark Surface (TF12) | | |
| Dark Su | rface (S7) (LRR R, M | LRA 1491 | 3) | | | | | Other (Explain i | n Remarks) | | |
| ³ Indicators o | f hydrophytic vegetati | on and we | etland hydro | ology mus | t be prese | ent, unles | s disturbed | or problematic. | | | |
| Restrictive | Layer (if observed): | | | | | | | | | | |
| Type: | | | | | | | | | | | |
| | ches): | | | | | | | Hydric Soil Present? | ? Yes No <u>/</u> | | |
| Remarks: | store of budrio | ممنا سر | ro oboc | ruod | | | | | | | |
| INO INGIG | ators of hydric | SOII WE | ere obse | erveu. | | | | | | | |
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wasa112e_xu4_N



wasa112e_xu4_W

| Project/Site: Line 5 Relocation Project City. | County: Ashland Sampling Date: 2020-05-23 | | | | | |
|---|---|--|--|--|--|--|
| Applicant/Owner: Enbridge | | | | | | |
| Investigator(s): SBR/DGL Sec | tion, Township, Range: Sec 20 T047N R004W | | | | | |
| Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (| | | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46.531898 Long: -90.896547 Datum: W | | | | | | |
| Soil Map Unit Name: Sanborg-Badriver complex, 0 to 6 percent slopes NWI classification: | | | | | | |
| Are climatic / hydrologic conditions on the site typical for this time of year? | • | | | | | |
| | urbed? Are "Normal Circumstances" present? Yes _ 🗸 No | | | | | |
| Are Vegetation, Soil, or Hydrology naturally probler | | | | | | |
| | | | | | | |
| SUMMARY OF FINDINGS – Attach site map showing sa | mpling point locations, transects, important features, etc. | | | | | |
| Hydrophytic Vegetation Present? Yes ✓ No | Is the Sampled Area | | | | | |
| Hydric Soil Present? Yes No | within a Wetland? Yes No | | | | | |
| Wetland Hydrology Present? Yes _ ✓ No | If yes, optional Wetland Site ID: | | | | | |
| Remarks: (Explain alternative procedures here or in a separate report.) The wetland is a wet meadow comprised of cattai | ls reed canary grass and sedges. The wetland | | | | | |
| feature is a shallow depression located within a co | | | | | | |
| Treature is a strainow depression located within a co | ow pastare. | | | | | |
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| HYDROLOGY | | | | | | |
| Wetland Hydrology Indicators: | Secondary Indicators (minimum of two required) | | | | | |
| Primary Indicators (minimum of one is required; check all that apply) | | | | | | |
| Surface Water (A1) Water-Stained Leav | | | | | | |
| High Water Table (A2) Aquatic Fauna (B13) | | | | | | |
| Saturation (A3) Marl Deposits (B15 | | | | | | |
| Water Marks (B1) Hydrogen Sulfide C | | | | | | |
| | eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) | | | | | |
| Drift Deposits (B3) Presence of Reduct Algal Mat or Crust (B4) Recent Iron Reduct | • • • | | | | | |
| Algal Mat or Crust (B4) Recent Iron Reduct Iron Deposits (B5) Thin Muck Surface | | | | | | |
| Indit Deposits (B3) Thin Muck Surface Inundation Visible on Aerial Imagery (B7) Other (Explain in Re | | | | | | |
| Sparsely Vegetated Concave Surface (B8) | FAC-Neutral Test (D5) | | | | | |
| Field Observations: | <u></u> 1718 Notation 1881 (28) | | | | | |
| Surface Water Present? Yes No Depth (inches): | | | | | | |
| Water Table Present? Yes No _v Depth (inches): | | | | | | |
| Saturation Present? Yes No Depth (inches): | Wetland Hydrology Present? Yes v No | | | | | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, p. | ravious inspections) if available: | | | | | |
| Describe Necorded Data (Stream gauge, monitoring well, aerial photos, p | evious inspections), ii available. | | | | | |
| | | | | | | |
| Remarks: | 1 | | | | | |
| The hydrologic regime for the wetland is saturated | ٦. | | | | | |
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| VEGETATION – | LISE | scientific | names | of plants |
|---------------------|------|------------|-------|-----------|
| | | | | |

| /EGETATION – Use scientific names of plants | | | | Sampling Point: wasa1035e_w |
|--|---------------------|------------|------------------------|--|
| Tree Stratum (Plot size: 30) | Absolute % Cover | | nt Indicator Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC: (A) |
| 2 | | | | 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: |
| | | = Total Co | | OBL species x1 = 50 |
| Sapling/Shrub Stratum (Plot size:15) | | | | FACW species15 x 2 =30 |
| 1 | | | | FAC species0 x 3 =0 |
| 2. | | | | FACU species0 x 4 =0 |
| 3. | | | | UPL species0 x 5 =0 |
| | | | | Column Totals: <u>65</u> (A) <u>80</u> (B) |
| 4. | | | | Prevalence Index = B/A = 1.2307692307692308 |
| 6. | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | ✓ 1 - Rapid Test for Hydrophytic Vegetation |
| r | _ | = Total Co | | ∠ 2 - Dominance Test is >50% |
| Horb Stratum (Diet size: 5 | | - Total Ct | ovei | 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5) 1. <i>Typha sp.</i> | 15 | <u>Y</u> | OBL | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. <u>Phalaris arundinacea</u> | 15 | Y | FACW | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. Scirpus cyperinus | | Υ | OBL | 4 |
| 4. Juncus effusus | | N | OBL | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. Carex stipata | | N | OBL | Definitions of Vegetation Strata: |
| 6. | | | | |
| 7 | | | | Tree – Woody plants 3 in. (7.6 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 or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11. | | | | of size, and woody plants less than 3.28 ft tall. |
| 12. | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | 65 | = Total Co | over | height. |
| Woody Vine Stratum (Plot size:) | | i otai ot | 3701 | |
| 1 | | | | |
| 2. | | | | |
| 3 | | | | Uhidranhidia |
| 4. | | | | Hydrophytic Vegetation |
| T | | = Total Co | over | Present? Yes <u>✓</u> No |
| Remarks: (Include photo numbers here or on a separate The sample plot is fairly representative | sheet.) | | | Vegetation is starting to emerge at the |
| time of survey and remnant biomass co | | | | |
| • | | _ | • | |
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SOIL Sampling Point: wasa1035e_w

| Depth | Matrix | | | | x Features | | . 2 | the absence | Б |
|--------------------|--|-----------|----------------|------------|-----------------------------|---------------------|------------------|----------------|---|
| (inches) | Color (moist) | <u>%</u> | Color (n | | <u>%</u> 10 | Type ¹ | Loc ² | Texture | Remarks |
| 0-14 | 7.5YR 2.5/1 | 90 | 7.5YR | | | <u> </u> | _M_ | SICL | |
| 14-20 | 7.5YR 3/1 | 90 | <u>7.5YR</u> | 4/4 | _10_ | | <u> </u> | | |
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| | oncentration, D=Deple Indicators: | etion, RM | I=Reduced N | Matrix, MS | S=Masked | Sand Gr | ains. | | PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : |
| Histosol | | | Polyva | lue Belov | w Surface | (S8) (I R I | R.R. | | luck (A10) (LRR K, L, MLRA 149B) |
| | pipedon (A2) | | | RA 149B) | | (OO) (Li tt | ν ιν, | | Prairie Redox (A16) (LRR K, L, R) |
| | stic (A3) | | | | | | LRA 149B) | | lucky Peat or Peat (S3) (LRR K, L, R) |
| | en Sulfide (A4) d Layers (A5) | | | | ⁄lineral (F1 Matrix (F2) | | ., L) | | urface (S7) (LRR K, L) ue Below Surface (S8) (LRR K, L) |
| | d Below Dark Surface | (A11) | | ed Matrix | | | | | ark Surface (S9) (LRR K, L) |
| | ark Surface (A12) | | <u>√</u> Redox | | | - 7\ | | | anganese Masses (F12) (LRR K, L, R) |
| - | Mucky Mineral (S1) Gleyed Matrix (S4) | | | | Surface (Fi ions (F8) | /) | | | ont Floodplain Soils (F19) (MLRA 149B Spodic (TA6) (MLRA 144A, 145, 149B) |
| | Redox (S5) | | | _ op | () | | | | rent Material (F21) |
| | Matrix (S6) | U D A 440 | D \ | | | | | | hallow Dark Surface (TF12) |
| Dark Su | rface (S7) (LRR R, M | LKA 149 | В) | | | | | Other (| Explain in Remarks) |
| | f hydrophytic vegetati | | etland hydro | logy mus | t be prese | nt, unles | s disturbed | or problematic | |
| | Layer (if observed): | | | | | | | | |
| | | | - | | | | | Hardela Call | Dungania Na |
| Depth (in | ches): | | | | | | | Hyaric Soil | Present? Yes V NO |
| Type: Depth (in | | | | | | | | Hydric Soil | Present? Yes <u> </u> |



wasa1035e_w_N



wasa1035e_w_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | |
|---|--------------------------|----------------------------|
| Project name: | Evaluator(s): | |
| Line 5 Relocation Project | SBR/DGL | |
| File #: | Date of visit(s): | |
| wasa1035 | 2020-05-23 | |
| Location: | Ecological Landsca | ape: |
| PLSS: sec 20 T047N R004W | Lake Superior Clay Plair | |
| | Lake Superior Clay Flair | I |
| Lat: <u>46.531940</u> Long: <u>-90.896647</u> | Watershed: | |
| | LS09, Lower Bad River | |
| County: Ashland Town/City/Village: Gingles town | | |
| | | |
| SITE DESCRIPTION | | |
| Soils: | WWI Class: | |
| Mapped Type(s): | N/A | |
| Sanborg-Badriver complex, 0 to 6 percent slopes | Wetland Type(s): | |
| | PEM wet meado | DW . |
| Field Verified: | | |
| The soils were not field verified. | Wetland Size: | Wetland Area Impacted |
| | 0.1152 | 0.1152 |
| | Vegetation: | |
| | Plant Community D | Description(s): |
| Hydrology: | | a wet meadow comprised |
| The hydrologic regime is saturated. The main source | | • |
| of hydrology is from surface water including runoff | • | anary grass, cattails, and |
| from the surrounding cow pasture. | sedges. | |
| mont the surrounding cow pasture. | | |
| | | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | | Functional Value Assessment |
|----|-----|-----------|---|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | N | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | Ν | N | Used for educational or scientific purposes |
| 3 | Υ | Υ | Visually or physically accessible to public |
| 4 | Ζ | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| _ | | | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | | ., | Wildlife Habitat |
| 1 | N | N | Wetland and contiguous habitat >10 acres |
| 2 | N | N | 3 or more strata present (>10% cover) |
| 3 | N | N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | N | N | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | Occurs in a Joint Venture priority township |
| 6 | N | N | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| | IN | IN | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| 7 | Ν | N | plans |
| 0 | | | |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | N | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | Ν | N | Along shoreline of a stream, lake, pond or open water area (<a>2 1 acre) - if no, not applicable |
| 2 | N.I | N. | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| | N | N | water levels or high flows – if no, not applicable |
| 3 | Ν | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | N | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | Υ | Υ | Water flow through wetland is NOT channelized |
| 3 | N | Y | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | N | N | Within a watershed with <10% wetland |
| 8 | N | N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | . • | | Water Quality Protection |
| 1 | N | N | Provides substantial storage of storm and floodwater based on previous section |
| 2 | N | N | Basin wetland or constricted outlet |
| 3 | Y | Y | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | N | Y | Dense, persistent vegetation |
| 6 | | | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | N | N | Stormwater or surface water from agricultural land is major hydrology source |
| | Y | Y | |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | Ν | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | Ν | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | Ν | N | Wetland is within a wellhead protection area |
| | | | |

Section 1 Comments (Refer to Section 1 numbers) HU-3 the wetland is visible from the road and from a personal residence. W-10/FA-2/4 it is likely the wetland will be inundated after heavy rains and provide habitat for aquatic organisms. ST-3/WQ-5 there is still emerging vegetation at the time of survey, but it will become more dense later in the growing season. WQ-7 stormwater is a major source of hydrology. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Avian Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat Υ Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| Tient Community intogrity (onco) | | | | | |
|--|--|---|--|--|--|
| | Low | Medium | High | Exceptional | |
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% | |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented | |
| NHI plant community ranking | S4V | S3 | S2 | S1-S2 (S2 high quality) | |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare | |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 | |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 | |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Abundance) |
|-----------------------|-------------|------|-------------------|------------|
| Typha sp.* | | | Pem | Rare |
| Phalaris arundinacea* | | | Pem | Rare |
| Carex stipata | | | Pem | Rare |
| Juncus effusus | | | Pem | Rare |
| Scirpus cyperinus | | | Pem | Rare |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

Vegetation is still emerging, but invasive species already cover over 25% of the wetland feature and later in the growing season could cover a larger percentage. Only one strata is present and the plant community is common.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| Χ | Χ | | M | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| Χ | Х | | Н | С | Agriculture – pasture |
| | | | | | Roads or railroad |
| | Х | | М | С | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | | | | | Removal of herbaceous stratum – mowing, |
| | | | | | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Х | Х | | Н | С | Cover of non-native and/or invasive species |
| | Х | | M | UC | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is located within an active cow pasture and likely receives polluted runoff from the pasture. The major |
|--|
| source of input for the wetland is stormwater. A personal residence and utility corridor are in the buffer area. The |
| wetland has invasive species present. |
| |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|--------|-------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | / | | | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | V | | | | |
| Fish and Aquatic Life Habitat | / | | | | |
| Shoreline Protection | | | | | / |
| Flood and Stormwater Storage | / | | | | |
| Water Quality Protection | V | | | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | The florisitc integrity is low due the presence of invasive species and the presence of only one strata with limited diversity. |
| Human Use Values | The wetland is within a cow pasture. |
| Wildlife Habitat | The wetland is small with only an herbaceous layer. Both are limiting for wildlife habitat use. |
| Fish and Aquatic Life Habitat | There is potential for aquatic organisms to use the wetland during periods of sustained inundation. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is small and can only hold a small amount of water. |
| Water Quality Protection | The wetland will have dense vegetation and will be able to filter water, but it's small size limits its filtering capacity. |
| Groundwater Processes | The feature is fed mainly by surface water. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

| Project/Site: Line 5 Relo | cation Project | t | City/C | ounty: Ash | land | Sar | npling Date: 2 | 020-05-23 |
|---|---------------------|----------|--------------------------|----------------|--------------------------|-----------------------------------|----------------|----------------------|
| Applicant/Owner: Enbridge | - | | | | | | | |
| Investigator(s): SBR/DGL | | | | | | | | |
| Landform (hillslope, terrace, e | | | | | | | | (%): 0-2% |
| Subregion (LRR or MLRA): N | | | | | | | | |
| Soil Map Unit Name: Sanb | | | | | | | | |
| Are climatic / hydrologic condi | • | | • | • | | | | |
| | | | - | | | | | No |
| Are Vegetation, Soil _ | | | | | | | | NO |
| Are Vegetation, Soil | | | | | | | | |
| SUMMARY OF FINDING | GS – Attach si | te ma | ap showing sam | ıpling poiı | nt locatio | ns, transects, im | portant fea | tures, etc. |
| Hydrophytic Vegetation Pres Hydric Soil Present? | Yes | ~ | No No | | etland? | Yes | | |
| Wetland Hydrology Present? Remarks: (Explain alternation | | | No | If yes, optio | nal Wetland | Site ID: | | |
| wetland feature. Th | e leature is di | OITIII | lated by Sedge | es, reed | Canary (| grass, and shor | t-awii ioxi | .dii. |
| Wetland Hydrology Indicat | ors: | | | | | Secondary Indicators | (minimum of tw | vo required) |
| Primary Indicators (minimum | | check | all that annly) | | | Surface Soil Crac | | <u>//o required/</u> |
| Surface Water (A1) | or one is required, | | Vater-Stained Leaves | | | Drainage Patterns | | |
| High Water Table (A2) | | | Aquatic Fauna (B13) | | | Moss Trim Lines | | |
| Saturation (A3) | | | Marl Deposits (B15) | | | Dry-Season Wate | | |
| Water Marks (B1) | | ⊦ | Hydrogen Sulfide Odd | or (C1) | | Crayfish Burrows | (C8) | |
| Sediment Deposits (B2) | | (| Oxidized Rhizosphere | es on Living F | Roots (C3) | Saturation Visible | on Aerial Imag | gery (C9) |
| Drift Deposits (B3) | | | Presence of Reduced | | | Stunted or Stress | | |
| Algal Mat or Crust (B4) | | | Recent Iron Reduction | | . , | ✓ Geomorphic Posi | | |
| Iron Deposits (B5) | | | Thin Muck Surface (C | | | Shallow Aquitard | | |
| Inundation Visible on Ae Sparsely Vegetated Cor | | — ' | Other (Explain in Ren | narks) | | Microtopographic FAC-Neutral Test | | |
| Field Observations: | icave Surface (Bo) | | | | | V TAC-Neutral Test | , (D3) | |
| Surface Water Present? | Yes No | ~ | Depth (inches): | | | | | |
| Water Table Present? | | | Depth (inches): | | | | | |
| Saturation Present? | <u> </u> | | Depth (inches): | | Wetland H | lydrology Present? | Yes <u>v</u> | No |
| (includes capillary fringe) Describe Recorded Data (str | roam gaugo, monito | ring we | all agrial photos prov | vious insport | tions) if ava | ilablo: | | |
| Describe Recorded Data (sti | eam gauge, monitor | illig we | eli, aeriai priotos, pre | vious irispect | 110115 <i>)</i> , 11 ava | nable. | | |
| | | | | | | | | |
| Remarks: The hydrologic regi | me is saturate | ed. | | | | | | |
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| VECETATION | Use scientific names | of planta |
|--------------|--------------------------|-----------|
| VEGELATION - | . I ISA SCIANTITIC NAMAS | of hights |

| /EGETATION – Use scientific names of plants | 3. | | | Sampling Point: wasa1037e_w |
|---|---------------------|-------------------|------|---|
| Tree Stratum (Plot size:30) | Absolute % Cover | Dominant Species? | | Dominance Test worksheet: |
| 1. <u>Ulmus americana</u> | | | | Number of Dominant Species That Are OBL, FACW, or FAC:4 (A) |
| 2 | | | | Total Number of Dominant Species Across All Strata:4 (B) |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC:100 (A/B) |
| 5 | | | | That Are OBL, I AGW, OFFAC (A/B) |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| AF | 5 | = Total Co | ver | OBL species 60 x1 = 60 |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species 30 x 2 = 60 FAC species 0 x 3 = 0 |
| 1 | | | | FACU species 10 x 4 = 40 |
| 2 | | | | UPL species |
| 3 | | | | Column Totals: 100 (A) 160 (B) |
| 4 5 | | | | Prevalence Index = B/A =1.6 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| · | _ | = Total Co | ···· | ∠ 2 - Dominance Test is >50% |
| Herb Stratum (Plot size: 5 | | - Total Co | vei | 3 - Prevalence Index is ≤3.0¹ |
| 1. Alopecurus aegualis | 20 | Y | OBL | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. Phalaris arundinacea | | Y | FACW | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. <u>Carex lacustris</u> | | | OBL | |
| 4. Juncus effusus | | N | OBL | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. Poa pratensis | | N | FACU | · · |
| 6. Typha sp. | | N | OBL | Definitions of Vegetation Strata: |
| 7. <u>Scirpus cyperinus</u> | | N | OBL | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8. Solidago gigantea | | | FACW | |
| 9 | | | | Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 11 | | | | |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in height. |
| Weady Vine Chatring (Dietains) | 95 | = Total Co | ver | ŭ |
| Woody Vine Stratum (Plot size:30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic Vegetation |
| 4 | | | | Present? Yes No |
| | | = Total Co | ver | |
| Remarks: (Include photo numbers here or on a separate The vegetation point is fairly represent slightly deeper and likely holds water for the state of the state | ative of t | | | |
| | | | | |

SOIL Sampling Point: wasa1037e_w

| Profile Desc | cription: (Describe t | o the de | oth needed | to docun | nent the i | ndicator | or confirm | n the absence | of indicators.) |
|---------------------------|---|-----------|--------------|------------|-------------------------------------|-------------------|------------------|------------------|--|
| Depth | Matrix | | | | x Features | S | | | |
| (inches) | Color (moist) | <u>%</u> | Color (n | | | Type ¹ | Loc ² | Texture | Remarks |
| 0-12 | 7.5YR 3/1 | 90 | 7.5YR | | 10 | _ <u>C</u> _ | _M_ | SICL | |
| 12-20 | 7.5YR 3/1 | 85 | <u>7.5YR</u> | 3/4 | <u> 15</u> | C | _M_ | <u> </u> | |
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| | | | | | . —— | | | | |
| 'Type: C=C Hydric Soil | oncentration, D=Deple Indicators: | etion, RM | =Reduced N | Matrix, MS | S=Masked | I Sand Gr | ains. | | PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : |
| Histosol | | | Polyva | lue Belov | w Surface | (S8) (LR | R R, | | luck (A10) (LRR K, L, MLRA 149B) |
| | oipedon (A2) | | | RA 149B) | | | | | Prairie Redox (A16) (LRR K, L, R) |
| | istic (A3) en Sulfide (A4) | | | | ıce (S9) (L ⁄lineral (F1 | | LRA 149B) | | lucky Peat or Peat (S3) (LRR K, L, R) urface (S7) (LRR K, L) |
| | d Layers (A5) | | | - | Matrix (F2 | | ., _ / | | ue Below Surface (S8) (LRR K, L) |
| | d Below Dark Surface | (A11) | | ed Matrix | | | | | ark Surface (S9) (LRR K, L) |
| | ark Surface (A12) Nucky Mineral (S1) | | | | rface (F6) Surface (F | :7) | | | anganese Masses (F12) (LRR K, L, R) ont Floodplain Soils (F19) (MLRA 149B) |
| | Gleyed Matrix (S4) | | | | ions (F8) | ') | | | Spodic (TA6) (MLRA 144A, 145, 149B) |
| Sandy F | Redox (S5) | | | • | ` , | | | Red Pa | rent Material (F21) |
| | l Matrix (S6) rface (S7) (LRR R, M | LRA 149 | В) | | | | | | nallow Dark Surface (TF12) Explain in Remarks) |
| ³ Indicators o | f hydrophytic vegetati | on and w | etland hydro | logy mus | t be prese | ent, unles | s disturbed | l or problematic | |
| Restrictive | Layer (if observed): | | | | | | | | |
| Type: | | | | | | | | | |
| - | ches): | | | | | | | Hydric Soil | Present? Yes <u> </u> |
| Remarks: A dark, c | layey soil with | redox | concen | tration | s throu | ıghout | the pro | ofile. | |
| , | | | | | | J | • | | |
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wasa1037e_w_NW



wasa1037e_w_SE

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | |
|---|------------------------------|--------------------------------|
| Project name: | Evaluator(s): | |
| Line 5 Relocation Project | SBR/DGL | |
| File #: | Date of visit(s): 2020-05-23 | |
| wasa1037 | | |
| Location: | Ecological Landsca | ape: |
| PLSS: sec 20 T047N R004W | Lake Superior Clay Plair | n |
| Lat: 46.531498 Long:90.896509 | Watershed: | |
| | LS09, Lower Bad River | |
| County: Ashland Town/City/Village: Gingles town | | |
| | | |
| SITE DESCRIPTION | . | |
| Soils: | WWI Class: | |
| Mapped Type(s): | N/A | |
| Sanborg-Badriver complex, 0 to 6 percent slopes | Wetland Type(s): | |
| F: 1137 '6' 1 | PEM wet meado | DW . |
| Field Verified: | | |
| The soils were not field verified. | Wetland Size: | Wetland Area Impacted |
| | 0.0482 | 0.0482 |
| | Vegetation: | |
| I budaa la au u | Plant Community D | . , , |
| Hydrology: | The wetland is a | wet meadow comprised |
| The hydrologic regime is saturated and storm | mostly of sedges | s, cattail, reed canary grass, |
| water runoff is the major source of hydrology. | and short-awn-n | |
| · · · · · · · · · · · · · · · · · · · | | TOGGOW TOXIGHT. |
| | | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | | Functional Value Assessment |
|----|-----|-----------|---|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | N | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | Ν | N | Used for educational or scientific purposes |
| 3 | Υ | Υ | Visually or physically accessible to public |
| 4 | Ζ | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| - | | | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | | ., | Wildlife Habitat |
| 1 | N | N | Wetland and contiguous habitat >10 acres |
| 2 | N | N | 3 or more strata present (>10% cover) |
| 3 | N | N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | N | N | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | Occurs in a Joint Venture priority township |
| 6 | N | N | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| | IN | IN | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| 7 | Ν | N | plans |
| 0 | | | |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | N | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | Ν | N | Along shoreline of a stream, lake, pond or open water area (<a>2 1 acre) - if no, not applicable |
| 2 | N.I | N. | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| | N | N | water levels or high flows – if no, not applicable |
| 3 | Ν | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | N | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | Υ | Υ | Water flow through wetland is NOT channelized |
| 3 | Y | Y | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | N | N | Within a watershed with <10% wetland |
| 8 | N | N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | . • | | Water Quality Protection |
| 1 | N | N | Provides substantial storage of storm and floodwater based on previous section |
| 2 | N | N | Basin wetland or constricted outlet |
| 3 | Y | Y | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Y | Y | Dense, persistent vegetation |
| 6 | | Y | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | N | | Stormwater or surface water from agricultural land is major hydrology source |
| | Y | Y | |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | Ν | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | Ν | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | Ν | N | Wetland is within a wellhead protection area |
| | | | |

Section 1 Comments (Refer to Section 1 numbers) HU-3 the wetland is visible from the road and from a personal residence. W-10/FA-2/4 it is possible that the wetland will be inundated after heavy rain events and provide habitat for aquatic organisms. ST-3/WQ-5 the vegetation is relatively dense at the time of survey and will become more dense later in the growing season. WQ-6 there is some cattails present at the time of survey but it does not dominate the feature WQ-7 stormwater is a major source of hydrology. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Avian Υ Small mammals (shrew) Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | inty intogrity (on olo) | | | |
|--|--|---|--|--|
| | Low | Medium | High | Exceptional |
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 | S2 🗌 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|----------------------------|-------------|------|-------------------|---|
| Carex lacustris* | | | Pem | Patchy |
| Alopecurus aequalis* | | | Pem | Rare |
| Typha sp.* | | | Pem | Rare |
| Juncus effusus | | | Pem | Rare |
| Phalaris arundinacea | | | Pem | Rare |
| Poa pratensis | | | Pem | Rare |
| Scirpus cyperinus | | | Pem | Rare |
| Carex stipata | | | Pem | Rare |
| Persicaria hydropiperoides | | | Pem | Rare |
| Ulmus americana | | | Pem | Rare |
| Barbarea vulgaris | | | Pem | Barren |
| Ranunculus cf recurvatus | | | Pem | Barren |
| Solidago gigantea | | | Pem | Barren |
| | | | | |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is relatively low based on common species present, invasive species, and only the herbaceous layer really being represented in the feature.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| X | Χ | | M | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| Х | Х | | Н | UC | Agriculture – pasture |
| Х | Х | | М | UC | Roads or railroad |
| | Х | | L | С | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | | | | | Removal of herbaceous stratum – mowing, |
| | | | | | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Х | Х | | М | С | Cover of non-native and/or invasive species |
| | Х | | L | UC | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | , |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is located within a cow pasture and likely receives polluted runoff from it. The major source of hydrology |
|--|
| for the wetland is stormwater runoff. A private residence, a gravel road, and an occasionally mowed utility corridor |
| are in the buffer area. The wetland has invasive species present. |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | SIGNIFICANCE | | | | | | | |
|-------------------------------|--------------|--------|------|-------------|----------|--|--|--|
| | Low | Medium | High | Exceptional | NA | | | |
| Floristic Integrity | / | | | | | | | |
| Human Use Values | / | | | | | | | |
| Wildlife Habitat | ✓ | | | | | | | |
| Fish and Aquatic Life Habitat | / | | | | | | | |
| Shoreline Protection | | | | | ' | | | |
| Flood and Stormwater Storage | ✓ | | | | | | | |
| Water Quality Protection | V | | | | | | | |
| Groundwater Processes | ✓ | | | | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | The florisitc integrity is low due to the presence of invasive species, only one strata present, and frequency of the plant community type within the general area. |
| Human Use Values | The wetland is within a cow pasture. |
| Wildlife Habitat | The small size limits wildlife use but a small mammal was observed using remnant biomass as a travel corridor. |
| Fish and Aquatic Life Habitat | Aquatic habitat could exist during times of sustained inundation. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is small and can not hold large amounts of water. |
| Water Quality Protection | The wetland is small in size but does have persistent vegetation. |
| Groundwater Processes | The wetland does not appear to influence ground water processes. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

| Project/Site: Line 5 Relocation | on Project | City/C | ounty: <u>Ash</u> l | land | Saı | mpling Date: <u>202</u> 0 | <u>0-05-23</u> |
|---|------------------------------------|--------------------------------|---------------------|--|-----------------------------|---------------------------|----------------|
| Applicant/Owner: Enbridge | - | | | ; | State: Wisconsin S | Sampling Point: wa | sa1037_u |
| Investigator(s): SBR/DGL | | Sectio | on, Township, | Range: Sec | 20 T047N R | 004W | |
| | Talf Local relief (concave, conve | | | | | | : <u>0-2%</u> |
| | orthcentral Forests Lat: 46.531386 | | | | | | |
| Soil Map Unit Name: Sanborg-E | | | | | | | |
| Are climatic / hydrologic conditions o | n the site typical for th | nis time of year? You | es 🔽 No | o (If | no, explain in Rema | ırks.) | |
| Are Vegetation, Soil, | or Hydrology | significantly disturb | bed? A | Are "Normal Ci | ircumstances" prese | ent? Yes <u> </u> | No |
| Are Vegetation, Soil, | | | | | olain any answers in | | |
| SUMMARY OF FINDINGS - | Attach site map | showing sam | npling poin | nt locations | s, transects, im | portant feature | es, etc. |
| Hydrophytic Vegetation Present? | Yes 1 | No V Is the Sample | | | | | |
| Hydric Soil Present? | Yes1 | No <u> </u> | within a We | tland? | Yes | No | |
| Wetland Hydrology Present? Remarks: (Explain alternative proc | | | If yes, option | nal Wetland S | ite ID: | | |
| The upland is located sl this serves as their shar dominated by pasture g | ightly upslope i ed upland poin | from two wet nt. The upland | | | | | and |
| HYDROLOGY Wetland Hydrology Indicators: | | | | Si | econdary Indicators | (minimum of two re | equired) |
| Primary Indicators (minimum of one | e is required; check all | l that annly) | | Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) | | | <u>'quireu</u> |
| Surface Water (A1) | • | ater-Stained Leaves | | Orainage Patterns (B10) | | | |
| High Water Table (A2) | | uatic Fauna (B13) | | | Moss Trim Lines (B16) | | |
| Saturation (A3) | | arl Deposits (B15) | | _ | Dry-Season Water Table (C2) | | |
| Water Marks (B1) | | drogen Sulfide Odo | or (C1) | _ | Crayfish Burrows (C8) | | |
| Sediment Deposits (B2) | | idized Rhizosphere | | | | | (C9) |
| Drift Deposits (B3) | | esence of Reduced | | Stunted or Stressed Plants (D1) | | | |
| Algal Mat or Crust (B4) | | cent Iron Reduction | | | | | |
| Iron Deposits (B5) | | _ Thin Muck Surface (C7) | | | Shallow Aquitard (D3) | | |
| Inundation Visible on Aerial Im | - | ner (Explain in Rem | narks) | _ | _ Microtopographic | | |
| Sparsely Vegetated Concave S | Surface (B8) | | | | _ FAC-Neutral Tes | t (D5) | |
| Field Observations: | . No 4 D | | | | | | |
| | No 🔽 De | | | | | | |
| Water Table Present? Yes No V Depth (inches): | | | | Motland Hye | drology Present? | Yao No | ., |
| (includes capillary fringe) | | | | - | | res No_ | |
| Describe Recorded Data (stream g | auge, monitoring well, | , aerial photos, prev | vious inspection | ons), if availal | ble: | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| No indicators of wetland | l hydrology we | re observed. | | | | | |
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VEGETATION – Use scientific names of plants.

| | | | | Sampling Point: <u>wasa1037_u</u> |
|---|---------------------|------------|-------------|---|
| Tree Stratum (Plot size: 30) | Absolute % Cover | | t Indicator | Dominance Test worksheet: |
| 1 | | • | | Number of Dominant Species That Are OBL, FACW, or FAC:(A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata: (B) |
| 4 | | | | Percent of Dominant Species |
| 5 | | | | That Are OBL, FACW, or FAC: (A/B) |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | 0 | = Total Co | ver | OBL species0 x 1 =0 |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species0 x 2 =0 |
| 1 | | | | FAC species0 x 3 =0 |
| 2 | | | | FACU species <u>58</u> x 4 = <u>232</u> |
| 3 | | | | UPL species <u>35</u> x 5 = <u>175</u> |
| 4 | | | | Column Totals: <u>93</u> (A) <u>407</u> (B) |
| 5. | | | | Prevalence Index = B/A = 4.376344086021505 |
| 6. | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| · | | = Total Co | | 2 - Dominance Test is >50% |
| Harb Chrotism (Distains) 5 | | - 10tal C0 | ivei | 3 - Prevalence Index is ≤3.0 ¹ |
| <u>Herb Stratum</u> (Plot size: <u>5</u>) 1. <i>Poa pratensis</i> | _40_ | Y | FACU | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. <u>Bromus inermis</u> | 35 | <u>Y</u> | UPL | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. <i>Trifolium pratense</i> | | Ν | FACU | 4 |
| 4. Taraxacum officinale | | N | FACU | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. <u>Fragaria virginiana</u> | | N | FACU | · · · |
| 6. Achillea millefolium | | | | Definitions of Vegetation Strata: |
| 7 | | | | Tree – Woody plants 3 in. (7.6 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 or equal to 3.28 ft (1 m) tall. |
| 10. | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11. | | | | of size, and woody plants less than 3.28 ft tall. |
| 12. | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | 93 | = Total Co | ver | height. |
| Woody Vine Stratum (Plot size:30) | | rotal oc | | |
| | | | | |
| 1 | | | | |
| 2 | | | | |
| 2. | | | | |
| 3 | | | | Hydrophytic Vegetation |
| | | = Total Co | <u> </u> | 1 , 1 , |

SOIL Sampling Point: wasa1037_u

| Profile Des | cription: (Descr | ribe to the dep | oth needed to docur | nent the | indicator | or confirm | the absence of | f indicators.) | |
|---------------------------|---------------------------------------|-----------------|---|-------------|--------------------|------------------|---|---|--|
| Depth | Matr | | | x Feature | | | | | |
| (inches) | Color (moist | | Color (moist) | | Type' | Loc ² | <u>Texture</u> | Remarks | |
| 0-6 | 7.5YR 4/ | <u>/3 100</u> | | 0 | · | | SIL | | |
| 6-20 | 7.5R 3/ | <u>4 95 </u> | 7.5YR 4/6 | 5 | C | _M_ | SICL | | |
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| 1 | - | | | | | | 2 | | |
| Type: C=C Hydric Soil | | Depletion, RM | =Reduced Matrix, MS | S=Masked | d Sand Gr | ains. | | PL=Pore Lining, M=Matrix. or Problematic Hydric Soils ³ : | |
| Histoso | | | Polyvalue Belov | w Surface | (S8) (LR I | R R, | | ck (A10) (LRR K, L, MLRA 149B) | |
| | pipedon (A2) | | MLRA 149B |) | | | Coast Pr | rairie Redox (A16) (LRR K, L, R) | |
| | istic (A3) | | Thin Dark Surfa | | | | | cky Peat or Peat (S3) (LRR K, L, R) | |
| | en Sulfide (A4) d Layers (A5) | | Loamy Mucky Mocky Moc | | | ., L) | | face (S7) (LRR K, L) e Below Surface (S8) (LRR K, L) | |
| | d Below Dark Su | urface (A11) | Depleted Matrix | | , | | | k Surface (S9) (LRR K, L) | |
| | ark Surface (A12 | | Redox Dark Su | . , | | | Iron-Manganese Masses (F12) (LRR K, L, R) | | |
| - | Mucky Mineral (S Gleyed Matrix (S4 | | Depleted Dark : Redox Depress | | -7) | | Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | | |
| - | Redox (S5) | ") | Redox Depress | 10113 (1 0) | | | Red Parent Material (F21) | | |
| Stripped | d Matrix (S6) | | | | | | Very Sha | allow Dark Surface (TF12) | |
| Dark Su | ırface (S7) (LRR | R, MLRA 149 | B) | | | | Other (E | xplain in Remarks) | |
| ³ Indicators o | of hydrophytic veg | getation and w | etland hydrology mus | st be pres | ent, unles: | s disturbed | or problematic. | | |
| | Layer (if observ | - | , 0, | | , | | T . | | |
| Type: | | | | | | | | | |
| Depth (in | ches): | | | | | | Hydric Soil P | resent? Yes No/ | |
| Remarks: | | | | | | | | | |
| Profile co | ontains silty | / soils with | some redox | but do | es not | meet ar | ny hydric so | oil indicators. | |
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wasa1037_u_E



wasa1037_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project C | ity/County: Ashland Sampling Date: 2020-05-23 |
|--|--|
| Applicant/Owner: Enbridge | |
| Investigator(s): SBR/DGL S | ection, Township, Range: Sec 20 T047N R004W |
| | I relief (concave, convex, none): Concave Slope (%): 0-2% |
| | Long: <u>-90.896112</u> Datum: <u>WGS84</u> |
| | percent slopes NWI classification: |
| Are climatic / hydrologic conditions on the site typical for this time of year | • |
| | isturbed? Are "Normal Circumstances" present? Yes _ v No |
| Are Vegetation, Soil, or Hydrology naturally prob | |
| | |
| SUMMARY OF FINDINGS – Attach site map showing s | sampling point locations, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes ✓ No | Is the Sampled Area |
| Hydric Soil Present? Yes No | within a Wetland? Yes No |
| Wetland Hydrology Present? Yes No | If yes, optional Wetland Site ID: |
| Remarks: (Explain alternative procedures here or in a separate report. The wetland is a small depression on the edge of | of an active cow pasture. The wetland is a sedge |
| meadow dominated by species including woolgr | · |
| The add in deministrating to engineering the engineering to engineering the en | acc, issue coage, suita ann it anca coage. |
| | |
| | |
| LIVEROL COV | |
| HYDROLOGY Westernd Hydrology Indicators: | Cocondary Indicators (minimum of two required) |
| Wetland Hydrology Indicators: | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | |
| Surface Water (A1) Water-Stained Le High Water Table (A2) Aquatic Fauna (B | |
| | |
| Saturation (A3) Marl Deposits (B Water Marks (B1) Hydrogen Sulfide | |
| | charles on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) |
| Oxidized Kilizos, Oxidized Kilizos, Presence of Red | |
| | uction in Tilled Soils (C6) Geomorphic Position (D2) |
| Iron Deposits (B5) Thin Muck Surface | |
| Indit Deposits (B3) Thirt Muck Surface Inundation Visible on Aerial Imagery (B7) Other (Explain in | |
| Sparsely Vegetated Concave Surface (B8) | FAC-Neutral Test (D5) |
| Field Observations: | PAC-Neutral Test (D5) |
| Surface Water Present? Yes No _ ✓ Depth (inches): | |
| Water Table Present? Yes No _ ✓ Depth (inches): | |
| Saturation Present? Yes No Depth (inches): | Wetland Hydrology Present? Yes <u>✓</u> No |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos. | nrevious inspections) if available: |
| Describe Necorded Data (stream gauge, monitoring well, aerial photos | previous inspections), ii available. |
| | |
| Remarks: | |
| The hydrologic regime is saturated. | |
| | |
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| VEGETATION - | Use scientific names | of plants |
|--------------|--|-----------|
| | | |

| True Otrature (Dietaine 20 | Absolute | | | Dominance Test worksheet: |
|--|----------|-------------|-------------|--|
| Tree Stratum (Plot size: 30) | | Species? | | Number of Dominant Species |
| 1 | | | | That Are OBL, FACW, or FAC:3 (A) |
| 2 | | | | 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: |
| | 0 | = Total Cov | /er | OBL species x 1 = 2 |
| Sapling/Shrub Stratum (Plot size:) | | | | FACW species34 x 2 =68 |
| 1. Salix petiolaris | 15 | <u>Y</u> | FACW | FAC species7 x 3 =21 |
| 2. Rhamnus cathartica | 5 | Y | FAC | FACU species x 4 = 0 |
| 3 | | | | UPL species 0 x 5 = 0 |
| 4 | | | | Column Totals:113 (A)161 (B) |
| 5 | | | | Prevalence Index = B/A = 1.424778761061947 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | | = Total Cov | /er | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:5) | | - 10181 00 | 701 | 3 - Prevalence Index is ≤3.0¹ |
| 1. <u>Scirpus cyperinus</u> | 50 | Υ | OBL | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. Phalaris arundinacea | | N | FACW | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. Typha sp. | | N | OBL | |
| 4. Juncus effusus | | N | OBL | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 0 1 1 | _ | N | OBL | · |
| 5. <u>Carex lacustris</u> 6. <u>Barbarea vulgaris</u> | | | FAC | Definitions of Vegetation Strata: |
| | | | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7. <u>Solidago gigantea</u> | | | FACW | at breast height (DBH), regardless of height. |
| 8. <u>Cardamine pensylvanica</u> | | | FACW | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9. <u>Persicaria hydropiperoides</u> | | | OBL | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 11 | | | | |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in height. |
| | 93 | = Total Cov | /er | noight. |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | | |
| 2. | _ | | | |
| 3 | | | | Hydrophytic |
| 4 | | | | Vegetation |
| | _ | = Total Cov | /er | Present? Yes No |
| Remarks: (Include photo numbers here or on a separate | | | | |
| The sample point is representative of the | ne small | wetlan | d featur | e, which is dominated by woolgrass. |
| | | | | |
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Sampling Point: wasa1036e_w

SOIL Sampling Point: wasa1036e_w

| 0-16 7.5YR 3/1 90 7.5YR 3/4 10 C M SICL 16-20 7.5YR 2.5/1 95 7.5YR 4/6 5 C M C | emarks | | |
|---|---|--|--|
| 16-20 7.5YR 2.5/1 95 7.5YR 4/6 5 C M C | | | |
| Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 2 Location: PL=Pore Lining | | | |
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| | | | |
| Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR R) | • | | |
| Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A1) | | | |
| Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Pea | | | |
| Hydrogen Sulfide (A4) | | | |
| Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) | | | |
| Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masseseseseseseseseseseseseseseseseseses | | | |
| | Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | | |
| Sandy Redox (S5) Red Parent Material (F2 | | | |
| Stripped Matrix (S6) Very Shallow Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remark | | | |
| | | | |
| 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 | s No | | |
| Remarks: | | | |
| A dark, clayey profile with redox concentrations throughout. | | | |
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wasa1036e_w_E



wasa1036e_w_S

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | |
|---|---|------------------------------|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | | |
| File #: wasa1036 | Date of visit(s): 2020-05-23 | | |
| Location: PLSS: sec 20 T047N R004W | Ecological Landsca Lake Superior Clay Plair | • | |
| Lat: 46.531692 Long: -90.896126 County: Ashland Town/City/Village: Gingles town | Watershed: LS09, Lower Bad River | | |
| SITE DESCRIPTION | | | |
| Soils: Mapped Type(s): Sanborg-Badriver complex, 0 to 6 percent slopes | WWI Class: N/A Wetland Type(s): | | |
| Field Verified: | PEM sedge mea | Idow | |
| The soils were not field verified. | Wetland Size: 0.3266 | Wetland Area Impacted 0.3266 | |
| | Vegetation: Plant Community D | Description(s): | |
| Hydrology: The hydrologic regime is saturated. The major source of input is from surface water. | The wetland is a sedge meadow comprised of multiple sedge species including cotton grass bulrush, soft rush, lake sedge, and awl-fruited sedge. | | |

| SITE MAP | | |
|----------|--|--|
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SECTION 1: Functional Value Assessment

| | | | Functional Value Assessment |
|----|------|-----------|---|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | N | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | Ν | N | Used for educational or scientific purposes |
| 3 | Υ | Υ | Visually or physically accessible to public |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| _ | | | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | Ν | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | | ., | Wildlife Habitat |
| 1 | N | N | Wetland and contiguous habitat >10 acres |
| 2 | N | N | 3 or more strata present (>10% cover) |
| 3 | N | N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | N | N | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | Occurs in a Joint Venture priority township |
| 6 | N | N | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| | IN | IN | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| 7 | Ν | N | plans |
| 0 | N.I. | | |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | N | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | Ν | N | Along shoreline of a stream, lake, pond or open water area (<a>2 1 acre) - if no, not applicable |
| 2 | N.I | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| | N | N | water levels or high flows – if no, not applicable |
| 3 | Ν | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | N | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | Υ | Υ | Water flow through wetland is NOT channelized |
| 3 | Υ | Υ | Dense, persistent vegetation |
| 4 | Ν | N | Evidence of flashy hydrology |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | N | N | Within a watershed with <10% wetland |
| 8 | N | N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | | | Water Quality Protection |
| 1 | N | N | Provides substantial storage of storm and floodwater based on previous section |
| 2 | N | N | Basin wetland or constricted outlet |
| 3 | Y | Y | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Y | Y | Dense, persistent vegetation |
| 6 | | N N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | N | | Stormwater or surface water from agricultural land is major hydrology source |
| | Y | Y | |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | Ν | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | Ν | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | Ν | N | Wetland is within a wellhead protection area |
| | | | |

Section 1 Comments (Refer to Section 1 numbers) HU-3 the wetland is visible from the road and from a personal residence. W-10/FA-2/4 it is likely the wetland will be inundated after heavy rains and provide habitat for aquatic organisms. ST-3/WQ-5 the vegetation is relatively dense at the time of survey and will likely become more dense as it grows taller later in the growing season. WQ-7 stormwater is a major source of hydrology. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Avian Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

| Observed | Potential | Species/Habitat |
|----------|-----------|-----------------------|
| | Υ | Aquatic invertebrates |
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SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4 | S3 🗸 | S2 🗌 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant [| Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|----------------------------|-------------|------|-------------------|---|
| Scirpus cyperinus* | | | Pem | Rare |
| Carex stipata* | | | PEM | Rare |
| Phalaris arundinacea* | | | Pem | Rare |
| Carex lacustris | | | Pem | Rare |
| Glyceria grandis* | | | Pem | Rare |
| Salix petiolaris | | | Pem | Rare |
| Typha sp. | | | PEM | Rare |
| Juncus effusus | | | Pem | Rare |
| Rhamnus cathartica | | | Pem | Rare |
| Barbarea vulgaris | | | Pem | Barren |
| Cardamine pensylvanica | | | Pem | Barren |
| Persicaria hydropiperoides | | | Pem | Barren |
| Solidago gigantea | | | Pem | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is moderate due to the relatively uncommon sedge dominated community and generally low cover of invasive species; however only one strata is present.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| Х | Х | | М | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| X | Х | | Н | С | Agriculture – pasture |
| | Х | | М | С | Roads or railroad |
| | Х | | М | С | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | | | | 0 | Removal of herbaceous stratum – mowing, |
| | Х | | L | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| X | Х | | М | С | Cover of non-native and/or invasive species |
| | Х | | L | С | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | · · · · · · · · · · · · · · · · · · · |
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^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is located within a cow pasture and likely receives polluted runoff from this pasture. The major source of |
|--|
| hydrology for the wetland is stormwater. A personal residence, a gravel road, and an occasionally mowed utility |
| corridor are in the buffer area. The wetland has invasive species present. |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | SIGNIFICANCE | | | | | | | |
|-------------------------------|--------------|----------|------|-------------|----------|--|--|--|
| | Low | Medium | High | Exceptional | NA | | | |
| Floristic Integrity | | ✓ | | | | | | |
| Human Use Values | V | | | | | | | |
| Wildlife Habitat | V | | | | | | | |
| Fish and Aquatic Life Habitat | / | | | | | | | |
| Shoreline Protection | | | | | ' | | | |
| Flood and Stormwater Storage | ✓ | | | | | | | |
| Water Quality Protection | / | | | | | | | |
| Groundwater Processes | ✓ | | | | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|--|
| Floristic Integrity | The invasive cover is somewhat low, and though all the stray are not represented in the feature, the plant community is not as abundant as others. |
| Human Use Values | The wetland is located in a cow pasture. |
| Wildlife Habitat | The small size and single strata are the limiting factors for potential wildlife habitat. |
| Fish and Aquatic Life Habitat | There is potential for aquatic invertebrates habitat after periods of inundation. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The small size of the wetland limits it holding potential. |
| Water Quality Protection | The small size of the wetland limits its filtering capacity. |
| Groundwater Processes | The wetland is fed by surface water and not ground water. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/Cou | ınty: Ashland | Sampling [| Date: <u>2020-05-30</u> |
|--|-----------------------------|--------------------------|------------------------------|-------------------------|
| Applicant/Owner: Enbridge | | | | |
| Investigator(s): SBR/DGL | | | | |
| Landform (hillslope, terrace, etc.): Depression | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat | | | | |
| Soil Map Unit Name: Sanborg-Badriver com | | | | |
| Are climatic / hydrologic conditions on the site typical f | • | • | | |
| Are Vegetation, Soil, or Hydrology | | | | es 🗸 No |
| Are Vegetation, Soil, or Hydrology | | | | |
| | | | | |
| SUMMARY OF FINDINGS – Attach site n | nap showing samp | ling point location | ons, transects, importa | nt features, etc. |
| | | s the Sampled Area | Yes <u> </u> | |
| | _ 110 | | | |
| Remarks: (Explain alternative procedures here or in | | yes, optional wetiand | d Site ID: | |
| The wetland is a sedge meadow loc | cated in a roadsid | de ditch and do | minated by lake sec | lge and dark |
| green bulrush. | | | | |
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| HYDROLOGY | | | | |
| Wetland Hydrology Indicators: | | | Secondary Indicators (minimi | um of two required) |
| Primary Indicators (minimum of one is required; chec | k all that apply) | | Surface Soil Cracks (B6) |) |
| Surface Water (A1) | Water-Stained Leaves (| B9) | Drainage Patterns (B10) | |
| High Water Table (A2) | Aquatic Fauna (B13) | | Moss Trim Lines (B16) | |
| Saturation (A3) | Marl Deposits (B15) | | Dry-Season Water Table | (C2) |
| | Hydrogen Sulfide Odor | | Crayfish Burrows (C8) | |
| | Oxidized Rhizospheres | - | | |
| | Presence of Reduced In | | Stunted or Stressed Plan | |
| | Recent Iron Reduction i | | ✓ Geomorphic Position (D2 | 2) |
| | Thin Muck Surface (C7) | | Shallow Aquitard (D3) | |
| | Other (Explain in Rema | rks) | Microtopographic Relief | (D4) |
| Sparsely Vegetated Concave Surface (B8) Field Observations: | | 1 | FAC-Neutral Test (D5) | |
| | Depth (inches): 1 | | | |
| | Depth (inches): | | | |
| | Depth (inches): | | Hydrology Present? Yes | ∨ No |
| (includes capillary fringe) | | | | |
| Describe Recorded Data (stream gauge, monitoring | weii, aeriai pnotos, previd | ous inspections), if ava | iliable: | |
| | | | | |
| Remarks: | Cubaurfaaa bud | مر امار ممارام م | * b a abaamiad | |
| The hydrologic regime is saturated. | Subsurface nyu | rology could no | n be observed. | |
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| VEGETATION – Use scientific names of plants. | | | | Sampling Point: wasa110e_xw |
|---|---------------------|-------------------|------------|--|
| Tree Stratum (Plot size:30) | Absolute % Cover | Dominant Species? | | Dominance Test worksheet: |
| 1. <u>Populus tremuloides</u> | | | | Number of Dominant Species That Are OBL, FACW, or FAC: (A) |
| 2 | | | | Total Number of Dominant Species Across All Strata:6 (B) |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B) |
| 6. | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | 5 | = Total Co | ver | OBL species x 1 = |
| Sapling/Shrub Stratum (Plot size:) | | | | FACW species10 x 2 =20 |
| 1. <u>Cornus alba</u> | 5 | Υ | FACW | FAC species30 x 3 =90 |
| 2. Rhamnus cathartica | | | · | FACU species 7 x 4 = 28 |
| | | | | UPL species0 x 5 =0 |
| Prunus pensylvanica | | | | Column Totals:117 (A)208 (B) |
| 5. | | | | Prevalence Index = B/A = 1.77777777777777777777777777777777777 |
| 6. | | | | Hydrophytic Vegetation Indicators: |
| 7. | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | | = Total Co | | ∠ 2 - Dominance Test is >50% |
| | | - Total Co | VCI | v 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5) 1. Scirpus atrovirens | 40 | Υ | OBL | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. Carex lacustris | | <u> </u> | OBL | Problematic Hydrophytic Vegetation¹ (Explain) |
| | | N | FAC | <u> </u> |
| 3. <u>Equisetum arvense</u> | | | | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. <u>Solidago gigantea</u> | _ | | FACW | be present, unless disturbed or problematic. |
| 5. <u>Cornus canadensis</u> | | | <u>FAC</u> | Definitions of Vegetation Strata: |
| 6. <u>Taraxacum officinale</u> | | | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7 | | | | at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | 97 | = Total Co | ver | height. |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2. | | | | |
| 3. | | | | Hudnonlostic |
| | | | | Hydrophytic Vegetation |
| 4 | _ | | | Present? Yes _ v No |
| Remarks: (Include photo numbers here or on a separate s | | = Total Co | vei | |
| The sample point is representative of the | | nd ditch | ٦. | |
| The cample point to representative of the | 10 110114 | iia aitoi | •• | |
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SOIL Sampling Point: wasa110e_xw

| Profile Desc | ription: (Describe t | o the depth | needed to docur | nent the i | ndicator | or confirm | the absence of inc | dicators.) |
|---------------|-----------------------|--------------|-----------------------------------|------------|-------------------|------------------|-----------------------|---|
| Depth | Matrix | | | x Features | | | | |
| (inches) | Color (moist) | <u></u> % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| | | | | | | | | |
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| | oncentration, D=Deple | etion, RM=R | educed Matrix, MS | S=Masked | Sand Gra | ains. | | Pore Lining, M=Matrix. |
| Hydric Soil I | | | | | | _ | | roblematic Hydric Soils ³ : |
| Histosol | | _ | _ Polyvalue Belov | | (S8) (LRF | RR, | | (A10) (LRR K, L, MLRA 149B) |
| | ipedon (A2) | | MLRA 149B) | | DD D MI | DA 440D) | | e Redox (A16) (LRR K, L, R) |
| Black His | n Sulfide (A4) | _ | _ Thin Dark Surfa _ Loamy Mucky N | | | | | Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L) |
| | Layers (A5) | | _ Loamy Gleyed I | | | , L) | | elow Surface (S8) (LRR K, L) |
| | l Below Dark Surface | (A11) | Depleted Matrix | | , | | | urface (S9) (LRR K, L) |
| | rk Surface (A12) | | _ Redox Dark Su | | | | | nese Masses (F12) (LRR K, L, R) |
| · | ucky Mineral (S1) | _ | _ Depleted Dark S | | 7) | | - | oodplain Soils (F19) (MLRA 149B) |
| - | leyed Matrix (S4) | | _ Redox Depress | | , | | | ic (TA6) (MLRA 144A, 145, 149B) |
| - | edox (S5) | | | , , | | | | Material (F21) |
| Stripped | Matrix (S6) | | | | | | Very Shallov | w Dark Surface (TF12) |
| Dark Sur | face (S7) (LRR R, M | LRA 149B) | | | | | ∠ Other (Explanation) | ain in Remarks) |
| _ | | | | | | | | |
| | hydrophytic vegetati | on and wetla | and hydrology mus | t be prese | ent, unless | disturbed | or problematic. | |
| Restrictive L | .ayer (if observed): | | | | | | | |
| Type: | | | <u></u> | | | | | |
| Depth (inc | ches): | | | | | | Hydric Soil Pres | ent? Yes <u>/</u> No |
| Remarks: | | | | | | | | |
| The soils | were not sam | pled du | e to the loca | tion of | the we | tland w | ithin a roadsi | de ditch. The soils are |
| | to be hydric b | | | | | | | |
| accarrica | to be riyane t | aooa oi | i tiro idiradoc | ipo pot | Jilion a | ina aon | mant vogota | |
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wasa110e_xw_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | |
|---|--|-----------------------|--|
| Project name: | Evaluator(s): | | |
| Line 5 Relocation Project | SBR/DGL | | |
| File #: | Date of visit(s): | | |
| wasa110_x | 2020-05-30 | | |
| Location: | Ecological Landsca | ape: | |
| PLSS: sec 29 T047N R004W | Lake Superior Clay Plair | | |
| | Lake Superior Slay I lail | • | |
| Lat: <u>46.530828</u> Long: <u>-90.896257</u> | Watershed: | | |
| _ | LS09, Lower Bad River | | |
| County: Ashland Town/City/Village: Gingles town | | | |
| | | | |
| SITE DESCRIPTION | | | |
| Soils: | WWI Class: | | |
| Mapped Type(s): | N/A | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes | Wetland Type(s): | | |
| | PEM - sedge meadow | | |
| Field Verified: | | | |
| The soils were not field verified. Soils were not | Wetland Size: | Wetland Area Impacted | |
| sampled due to the location of the feature in a | 0.0781 | 0.0781 | |
| roadside ditch. | Vegetation: | l | |
| Todasiae alteri. | Plant Community Description(s): | | |
| Hydrology: | The wetland is a sedge meadow dominated | | |
| The hydrologic regime is saturated, with surface | | | |
| water being the main water input. The feature is | by dark green bulrush, lake sedge, and field | | |
| , · · · · · · · · · · · · · · · · · · · | horsetail. | | |
| located in a roadside ditch. | | | |
| | | | |

| SITE MAP |
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SECTION 1: Functional Value Assessment

| | | ECTION 1: | Functional Value Assessment |
|--------|-------|-----------|--|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | Ν | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | N | N | Used for educational or scientific purposes |
| 3 | Υ | Y | Visually or physically accessible to public |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| | | | In or adjacent to RED FLAG areas |
| 5 | Ν | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | IN | 11 | Wildlife Habitat |
| 1 | N | Υ | Wetland and contiguous habitat >10 acres |
| 2 | N | N | 3 or more strata present (>10% cover) |
| 3 | N | N N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | | | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | _ |
| | N | N N | Occurs in a Joint Venture priority township |
| 6 | N | N | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| 7 | N | N | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| | | | plans |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | N | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | Ν | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | Ν | Υ | Vegetation is inundated in spring |
| SP | | - | Shoreline Protection |
| 1 | N | N | Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable |
| | | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| 2 | N | N | water levels or high flows – if no, not applicable |
| 3 | N | N | Densely rooted emergent or woody vegetation |
| ST | - 1 1 | 11 | Storm and Floodwater Storage |
| 1 | Υ | Υ | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | N | Y | Water flow through wetland is NOT channelized |
| 3 | Y | Y | Dense, persistent vegetation |
| 4 | | - | Evidence of flashy hydrology |
| - | N | N | |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | N | N N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | N | N N | Within a watershed with <10% wetland |
| 8 | N | N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | | | Water Quality Protection |
| 1 | N | Υ | Provides substantial storage of storm and floodwater based on previous section |
| 2 | Υ | Υ | Basin wetland or constricted outlet |
| 3 | N | Υ | Water flow through wetland is NOT channelized |
| 4 | Υ | Y | Vegetated wetland associated with a lake or stream |
| 5 | Υ | Υ | Dense, persistent vegetation |
| 6 | N | N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | Υ | Υ | Stormwater or surface water from agricultural land is major hydrology source |
| 8 | Ν | N | Discharge to surface water |
| 9 | Ν | Υ | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | N | N | Springs, seeps or indicators of groundwater present |
| 2 | | | Location near a groundwater divide or a headwater wetland |
| 3 | N | N N | Wetland remains saturated for an extended time period with no additional water inputs |
| | N | N | |
| 4 5 | N | N | Wetland soils are organic |
| 1 0 | N | N | Wetland is within a wellhead protection area |

Section 1 Comments (Refer to Section 1 numbers) HU-3: The wetland is located in a gravel roadside ditch. ST-3/WQ-5: There is dense vegetation present already at the time of survey.

ST-5/WQ-7: The wetland is in a roadside ditch and received runoff from the upslope road. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments **Amphibians** Avian Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat Υ Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| Thank community intogrity (choicy | | | | | | | | |
|--|--|---|--|--|--|--|--|--|
| | Low | Medium | High | Exceptional | | | | |
| Invasive species cover | > 50% | 20-50% | 10-20% 🔽 | <10% | | | | |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented | | | | |
| NHI plant community ranking | S4V | S3 🗌 | S2 🗌 | S1-S2 (S2 high quality) | | | | |
| Relative frequency of plant community in watershed | Abundant 🔽 | Common | Uncommon | Rare | | | | |
| FQI (optional) Mean C (optional) | <13 <2.4 | 13-23 2.4-4.2 | 23-32 4.3-4.7 | >32 <u> </u> | | | | |
| · · · · · · · · · · · · · · · · · · · | | | · · · · · · · · · · · · · · · · · · · | _ | | | | |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-----------------------|-------------|------|-------------------|---|
| Scirpus atrovirens* | | | PEM | Rare |
| Carex lacustris | | | PEM | Rare |
| Equisetum arvense* | | | PEM | Rare |
| Phalaris arundinacea* | | | PEM | Rare |
| Poa pratensis* | | | PEM | Rare |
| Juncus effusus | | | PEM | Rare |
| Rhamnus cathartica | | | PEM | Rare |
| Solidago gigantea | | | PEM | Rare |
| Phleum pratense | | | PEM | Barren |
| Salix bebbiana | | | PEM | Barren |
| Cornus alba | | | PEM | Barren |
| Cornus canadensis | | | PEM | Barren |
| Salix discolor | | | PEM | Barren |
| Salix petiolaris | | | PEM | Barren |
| Taraxacum officinale | | | PEM | Barren |
| Trifolium pratense | | | PEM | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

the floristic integrity is low due to presence of invasive species and missing strata.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| - | | | | | Filling, berms (non-impounding) |
| Х | Х | | Н | С | Drainage – tiles, ditches |
| Х | Х | | М | С | Hydrologic changes - high capacity wells, impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| Χ | Χ | | Н | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | Х | | M | С | Agriculture – hay |
| | | | | | Agriculture – pasture |
| Х | Х | | Н | С | Roads or railroad |
| | Х | | М | С | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| Х | Х | | М | С | Sediment input |
| V | | | | 0 | Removal of herbaceous stratum – mowing, |
| X | X | | M | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Χ | Х | | М | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | • |
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^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is located in a roadside ditch and likely receives polluted runoff and stormwater from the associated |
|---|
| gravel road. The ditch is likely mowed, which creates disturbance for invasive species to move in. |
| |
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^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | SIGNIFICANCE | | | | | | | | |
|-------------------------------|--------------|----------|------|-------------|----------|--|--|--|--|
| | Low | Medium | High | Exceptional | NA | | | | |
| Floristic Integrity | / | | | | | | | | |
| Human Use Values | V | | | | | | | | |
| Wildlife Habitat | / | | | | | | | | |
| Fish and Aquatic Life Habitat | / | | | | | | | | |
| Shoreline Protection | | | | | / | | | | |
| Flood and Stormwater Storage | | ✓ | | | | | | | |
| Water Quality Protection | | / | | | | | | | |
| Groundwater Processes | ✓ | | | | | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|--|
| Floristic Integrity | The feature has low species diversity, and invasive species are prevalent. |
| Human Use Values | The wetland is located in a roadside ditch. |
| Wildlife Habitat | The wetland is small and offers little habitat. |
| Fish and Aquatic Life Habitat | The wetland is small, with only some shallow water present at the time of survey. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland receives stormwater runoff from the upslope road and functions as a densely vegetated ditch. It is also associated with an ephemeral stream. |
| Water Quality Protection | See above. |
| Groundwater Processes | The wetland does not appear to influence groundwater processes. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ashl | land Sa | ampling Date: <u>2020-05-30</u> | | |
|--|--------------------------------|--|---------------------------------|--|--|
| Applicant/Owner: Enbridge | | | | | |
| Investigator(s): SBR/DGL | | | · - | | |
| Landform (hillslope, terrace, etc.): Talf | | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46.53 | | | | | |
| | | | | | |
| Soil Map Unit Name: Sanborg-Badriver complex, | • | | | | |
| Are climatic / hydrologic conditions on the site typical for this time | | | | | |
| Are Vegetation, Soil, or Hydrology signif | | re "Normal Circumstances" pres | ent? Yes <u>/</u> No | | |
| Are Vegetation, Soil, or Hydrology natur | ally problematic? (If | f needed, explain any answers ir | n Remarks.) | | |
| SUMMARY OF FINDINGS - Attach site map sho | owing sampling poin | t locations, transects, in | nportant features, etc. | | |
| Hydrophytic Vegetation Present? Yes No | ✓ Is the Samp | led Area | | | |
| Hydric Soil Present? Yes No | | tland? Yes | No <u> </u> | | |
| Wetland Hydrology Present? Yes No | | nal Wetland Site ID: | | | |
| Remarks: (Explain alternative procedures here or in a separate | te report.) | | | | |
| The upland is located upslope from the we | _ | dge of an old field. The | e upland is | | |
| dominated by Kentucky bluegrass and we | edy forbs. | | | | |
| | | | | | |
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| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | Secondary Indicators | s (minimum of two required) | | |
| Primary Indicators (minimum of one is required; check all that | apply) | Surface Soil Cracks (B6) | | | |
| Surface Water (A1) Water-S | Stained Leaves (B9) | Drainage Patterns (B10) | | | |
| · · | Fauna (B13) | Moss Trim Lines (B16) | | | |
| Saturation (A3) Marl De | posits (B15) | Dry-Season Water Table (C2) | | | |
| Water Marks (B1) Hydroge | en Sulfide Odor (C1) | Crayfish Burrows | s (C8) | | |
| Sediment Deposits (B2) Oxidized | d Rhizospheres on Living R | | | | |
| _ , , , | e of Reduced Iron (C4) | Stunted or Stressed Plants (D1) | | | |
| | Iron Reduction in Tilled Soil | | | | |
| | ick Surface (C7) | Shallow Aquitard (D3) | | | |
| | Explain in Remarks) | <pre> Microtopographic Relief (D4) FAC-Neutral Test (D5)</pre> | | | |
| Sparsely Vegetated Concave Surface (B8) | | FAC-Neutral Tes | st (D5) | | |
| Field Observations: | (in alta a). | | | | |
| Surface Water Present? Yes No Depth (| | | | | |
| Water Table Present? Yes No _ ✓ Depth (Saturation Present? Yes No ✓ Depth (| | Matley d Hydrology, Drocout | Vaa Na | | |
| Saturation Present? Yes No Depth ((includes capillary fringe) | inches): | Wetland Hydrology Present? | Yes No | | |
| Describe Recorded Data (stream gauge, monitoring well, aeria | al photos, previous inspection | ons), if available: | | | |
| | | | | | |
| Remarks: | | | | | |
| No indicators of wetland hydrology were of | bserved. | | | | |
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| | VEGETATION – | Use scientific i | names of | plants. |
|--|---------------------|------------------|----------|---------|
|--|---------------------|------------------|----------|---------|

| Tree Stratum (Plot size:) | Absolute % Cover | Dominant Species? | | Dominance Test worksheet: |
|---|---------------------|-------------------|-------------|---|
| 1. <u>Populus grandidentata</u> | 25 | <u>Y</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC:1 (A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata: (B) |
| 4 | | | | Percent of Dominant Species |
| 5 | | | | That Are OBL, FACW, or FAC:33 (A/B) |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | _25 | = Total Co | ver | OBL species0 x 1 =0 |
| Sapling/Shrub Stratum (Plot size:) | | | | FACW species0 x 2 =0 |
| 1. Rhamnus cathartica | 10 | Y | FAC | FAC species <u>15</u> x 3 = <u>45</u> |
| 2 | | | | FACU species 100 x 4 = 400 |
| 3 | | | | UPL species $12 	 x = 60$ Column Totals: $127 	 (A) 	 505 	 (B)$ |
| 4 | | | | Column Totals. 127 (A) 303 (B) |
| 5 | | | | Prevalence Index = B/A = 3.9763779527559056 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | - | | 1 - Rapid Test for Hydrophytic Vegetation |
| | 10 | = Total Co | ver | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:) | | | | 3 - Prevalence Index is ≤3.0¹ |
| 1. <u>Poa pratensis</u> | 50 | Y | <u>FACU</u> | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. <u>Lotus corniculatus</u> | | N | <u>FACU</u> | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Bromus inermis</u> | 10 | N | UPL | 1 |
| 4. <u>Galium mollugo</u> | 5 | N | <u>FACU</u> | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. <u>Carex gracillima</u> | 5 | N | <u>FACU</u> | Definitions of Vegetation Strata: |
| 6. <u>Potentilla recta</u> | 5 | N | | |
| 7. <u>Rhamnus cathartica</u> | 5 | N | FAC | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8. <u>Taraxacum officinale</u> | _ 3 | N | <u>FACU</u> | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9. <u>Hieracium aurantiacum</u> | _ 2 | <u>N</u> | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10. <u>Cirsium arvense</u> | 2 | N | <u>FACU</u> | Herb – All herbaceous (non-woody) plants, regardless |
| 11. <u>Leucanthemum vulgare</u> | _ 2 | <u>N</u> | UPL | of size, and woody plants less than 3.28 ft tall. |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | 99 | = Total Co | ver | height. |
| Woody Vine Stratum (Plot size: 30 | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic |
| 4 | | | | Vegetation Present? Yes No ✓ |
| | 0 | = Total Co | ver | 163 160 |
| Remarks: (Include photo numbers here or on a separate | sheet.) | | | |
| The upland sample point is somewhat | represe | ntative o | of the up | pland area, although the tree cover is |
| patchy. | | | | |
| | | | | |
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SOIL Sampling Point: wasa110e_xu

| Profile Desc | ription: (Describe | to the dept | h needed to docun | nent the | indicator | or confirm | the absence of | f indicators.) |
|----------------------------|---------------------------------------|-----------------|-----------------------------------|-----------|--------------------|------------------|-------------------------|--|
| Depth | Matrix | | Redox | x Feature | s | . 2 | | |
| (inches) | Color (moist) | <u></u> % | Color (moist) | <u></u> % | Type ¹ | Loc ² | Texture | Remarks |
| 0-20 | <u>5YR 4/4</u> | <u> 100</u> | | 0 | | | CL | |
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| ¹Type: C=C | oncentration, D=Dep | letion RM= | Reduced Matrix MS | S=Masker | d Sand Gr | aine | ² l ocation: | PL=Pore Lining, M=Matrix. |
| Hydric Soil | | iction, rtivi– | reduced Matrix, Me | J-Masket | d Garia Gi | anis. | | or Problematic Hydric Soils ³ : |
| Histosol | | | Polyvalue Belov | v Surface | (S8) (LR I | RR, | | uck (A10) (LRR K, L, MLRA 149B) |
| | pipedon (A2) | • | MLRA 149B) | | . , . | | | rairie Redox (A16) (LRR K, L, R) |
| Black Hi | | - | Thin Dark Surfa | | | | | ucky Peat or Peat (S3) (LRR K, L, R) |
| | n Sulfide (A4) | - | Loamy Mucky N | | | (, L) | | rface (S7) (LRR K, L) |
| | l Layers (A5) l Below Dark Surface | - - (Δ11) | Loamy Gleyed I Depleted Matrix | | <u>(')</u> | | | ue Below Surface (S8) (LRR K, L) rk Surface (S9) (LRR K, L) |
| | ark Surface (A12) | C (A11) | Redox Dark Sur | | ı | | | nganese Masses (F12) (LRR K, L, R) |
| | lucky Mineral (S1) | - | Depleted Dark S | , , | | | | nt Floodplain Soils (F19) (MLRA 149B) |
| Sandy G | Bleyed Matrix (S4) | - | Redox Depress | ions (F8) | | | Mesic S | podic (TA6) (MLRA 144A, 145, 149B) |
| - | ledox (S5) | | | | | | | rent Material (F21) |
| | Matrix (S6) | # DA 440D | | | | | | allow Dark Surface (TF12) |
| Dark Su | rface (S7) (LRR R, N | ILKA 149B |) | | | | Other (E | Explain in Remarks) |
| ³ Indicators of | f hydrophytic vegetat | tion and wet | land hydrology mus | t be pres | ent, unles | s disturbed | or problematic. | |
| | _ayer (if observed): | | , 0, | <u> </u> | | | | |
| Type: | | | | | | | | |
| Depth (inc | ches): | | | | | | Hydric Soil F | Present? Yes No |
| Remarks: | | | | | | | | |
| | y loam soil wi | th no re | dox features | observ | /ed. | | | |
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wasa110e_xu_E



wasa110e_xu_N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation | Proiect | City/C | ounty: Ashland | <u></u> s | ampling Date: 2020-05-30 | |
|---|---------------|---|---------------------|--|------------------------------|--|
| Applicant/Owner: Enbridge | - | | | | | |
| Investigator(s): SBR/DGL | | | | | | |
| Landform (hillslope, terrace, etc.): Dep | | | | | | |
| Subregion (LRR or MLRA): Northcentra | | | | | | |
| Soil Map Unit Name: Sanborg-Bac | | | | | | |
| Are climatic / hydrologic conditions on th | | • | • | | | |
| Are Vegetation, Soil, or F | | - | | | | |
| | | | | | | |
| Are Vegetation, Soil, or F | - | | | | | |
| SUMMARY OF FINDINGS – At | tach site r | map showing sam | pling point lo | cations, transects, i | mportant features, etc. | |
| Hydrophytic Vegetation Present? Hydric Soil Present? | Yes 🔽 | No No | | ? Yes <u>/</u> | | |
| Wetland Hydrology Present? Remarks: (Explain alternative procedu | | No | If yes, optional We | etland Site ID: | | |
| The feature is an extension meadow with a high cover pond. | | | | | | |
| HYDROLOGY | | | | | | |
| Wetland Hydrology Indicators: | | | | Secondary Indicator | rs (minimum of two required) | |
| Primary Indicators (minimum of one is | required; che | ck all that apply) | | Surface Soil Cracks (B6) | | |
| Surface Water (A1) | | _ Water-Stained Leave | | Drainage Patter | | |
| High Water Table (A2) | | _ Aquatic Fauna (B13) | | Moss Trim Line | | |
| Saturation (A3) | | Marl Deposits (B15) | (24) | Dry-Season Wa | | |
| Water Marks (B1) | | _ Hydrogen Sulfide Ode | | Crayfish Burrov | | |
| Sediment Deposits (B2) | | Oxidized Rhizosphere | = | | ble on Aerial Imagery (C9) | |
| Drift Deposits (B3) Algal Mat or Crust (B4) | | Presence of Reduced Recent Iron Reduction | | | ssed Plants (D1) | |
| Iron Deposits (B5) | | Thin Muck Surface (C | | 6) <u>v</u> Geomorphic Po Shallow Aquitar | | |
| Inundation Visible on Aerial Image | | Other (Explain in Ren | | Microtopograph | | |
| Sparsely Vegetated Concave Surfa | | _ Other (Explain in reci | nano) | <u>✓</u> FAC-Neutral Te | | |
| Field Observations: | | | | <u> </u> | | |
| Surface Water Present? Yes | No | Depth (inches): | | | | |
| Water Table Present? Yes | No | Depth (inches): | | | | |
| | No | Depth (inches): | Wetla | and Hydrology Present? | Yes No | |
| (includes capillary fringe) Describe Recorded Data (stream gauge | e monitorina | well aerial photos pre | vious inspections) | if available: | | |
| | -, ·····g | , p, p | ,,, | | | |
| | | | | | | |
| Remarks: The hydrologic regime is s | aturated. | | | | | |
| | | | | | | |
| | | | | | | |

| VEGETATION - | Llco | cciontific | namac | of plant | _ |
|---------------------|------|------------|-------|----------|----|
| VEGETATION - | use | scieniiiic | names | oi biani | S. |

| EGETATION – Use scientific names of plants. | | | | Sampling Point: wasa106e_xw |
|---|------------------|-------------------|-------------|--|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC:3 (A) |
| 2 | | | | 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: |
| | 0 | = Total Co | ver | OBL species <u>60</u> x 1 = <u>60</u> |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species <u>38</u> x 2 = <u>76</u> |
| 1 | | | | FAC species 2 x 3 = 6 |
| 2 | | | | FACU species0 x 4 =0 |
| 3 | | | | UPL species |
| 4. | | | | Column Totals:100 (A)142 (B) |
| 5 | | | | Prevalence Index = B/A =1.42 |
| 6. | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | |
| | | = Total Cov | | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size: 5 | | rotal oo | VCI | 3 - Prevalence Index is ≤3.0¹ |
| 1. Scirpus cyperinus | 20 | V | OBL | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. Phalaris arundinacea | | | FACW | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. Bromus ciliatus | | | FACW | <u> </u> |
| | | N N | OBL | ¹ Indicators of hydric soil and wetland hydrology must |
| | 15 15 | N | OBL | be present, unless disturbed or problematic. |
| 5. Carex stipata | | | | Definitions of Vegetation Strata: |
| 6. <u>Persicaria hydropiperoides</u> | | _N_ | OBL | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7. Ranunculus cf recurvatus | | N | FACW | at breast height (DBH), regardless of height. |
| 8. <u>Veronica serpyllifolia</u> | | | <u>FAC</u> | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9. <i>Impatiens capensis</i> | | <u>N</u> | <u>FACW</u> | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | · | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 11 | | | | |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in height. |
| | 100 | = Total Co | ver | 3 |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic |
| 4 | | | | Vegetation Present? Yes No |
| | 0 | = Total Co | ver | |
| Remarks: (Include photo numbers here or on a separate to The wetland is large and the sample po | | alv som | owhat ra | procentative of the whole feature |
| The welland is large and the sample po | niit io Ol | ny SUITE | -wiidt it | spiesenianve of the whole leathe. |

Other areas have some shrub cover of pussy willow and more reed canary grass. The dominance of reed canary across the entire feature eclipses the sedge cover and characterizes the overall feature as a wet meadow.

SOIL Sampling Point: wasa106e_xw

| Type: C=Concentrydric Soil Indicate Histosol (A1) Histic Epipedor Black Histic (A3 Hydrogen Sulfic Stratified Layer Depleted Below Thick Dark Sur Sandy Mucky M Sandy Gleyed I Sandy Redox (3 Stripped Matrix Dark Surface (\$ | rration, D=Depl tors: n (A2) 3) ide (A4) rs (A5) w Dark Surface rface (A12) Mineral (S1) Matrix (S4) | | Polyva MLF Thin D Loamy Loamy Deplet | 4/4 4/6 Matrix, MS alue Below RA 149B) Dark Surfar y Mucky M y Gleyed M ted Matrix k Dark Sur | w Surface) ace (S9) (L Mineral (F1 Matrix (F2 c (F3) rface (F6) | (S8) (LRI .RR R, MI | R R, LRA 149B) | Indicators f 2 cm Mi Coast P 5 cm Mi Dark Su Polyvalu Thin Da | Remarks PL=Pore Lining, M=Matrix. For Problematic Hydric Soils ³ : Prairie Redox (A16) (LRR K, L, R) Prairie Redox (A16) (LRR K, L, R) Pucky Peat or Peat (S3) (LRR K, L, R) Purface (S7) (LRR K, L) Purface (S8) (LRR K, L) Purface (S9) (LRR K, L) |
|--|---|-----------|---|---|--|------------------------|-------------------|--|---|
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| Type: C=Concentrydric Soil Indicate Histosol (A1) Histic Epipedor Black Histic (A3 Hydrogen Sulfice Stratified Layer Depleted Below Thick Dark Surr Sandy Mucky N Sandy Gleyed I Sandy Redox (I Stripped Matrix | rration, D=Depl tors: n (A2) 3) ide (A4) rs (A5) w Dark Surface rface (A12) Mineral (S1) Matrix (S4) | etion, RM | =Reduced M Polyva Thin D Loamy Loamy Deplet Redox | Matrix, MS alue Below RA 149B) Dark Surfar y Mucky M y Gleyed N ted Matrix c Dark Sur | S=Masked w Surface) ace (S9) (L Mineral (F1 Matrix (F2 (F3) rface (F6) | (S8) (LRI .RR R, MI | ains. R R, | ² Location: Indicators f 2 cm Mi Coast P 5 cm Mi Dark Su Polyvalu Thin Da | For Problematic Hydric Soils ³ : uck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) ucky Peat or Peat (S3) (LRR K, L, F) urface (S7) (LRR K, L) ue Below Surface (S8) (LRR K, L) urk Surface (S9) (LRR K, L) |
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| | x (S6) | ILRA 1491 | Redox | ted Dark S k Depressi | Surface (F iions (F8) | 7) | | Piedmonum Pi | nganese Masses (F12) (LRR K, L, I nt Floodplain Soils (F19) (MLRA 14: Spodic (TA6) (MLRA 144A, 145, 149 rent Material (F21) nallow Dark Surface (TF12) Explain in Remarks) |
| ndicators of hydro | | | etland hydro | ology mus | t be prese | ent, unles | s disturbed | or problematic. | |
| estrictive Layer (| (if observed): | | | | | | | | |
| Type: | | | | | | | | Hydric Soil F | Present? Yes <u>/</u> No |
| _{emarks:} eddish, silty | / clay loan | n over | silty clay | y with ı | redox p | oresen | nt throug | jhout the p | orofile. |



wasa106e_xw_S



wasa106e_xw_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | | |
|---|--|--------------------------------|--|--|
| Project name: | Evaluator(s): | | | |
| Line 5 Relocation Project | SBR/DGL | | | |
| File #: | Date of visit(s): | | | |
| wasa106_x | 2020-05-30 | | | |
| Location: | Ecological Landscape: | | | |
| PLSS: sec 29 T047N R004W | Lake Superior Clay Plain | | | |
| | Lake Superior Clay Flair | | | |
| Lat: <u>46.529151</u> Long: <u>-90.895932</u> | Watershed: | | | |
| • | LS09, Lower Bad River | | | |
| County: Ashland Town/City/Village: Gingles town | | | | |
| , | | | | |
| SITE DESCRIPTION | | | | |
| Soils: | WWI Class: | | | |
| Mapped Type(s): | N/A | | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes | Wetland Type(s): | | | |
| | PEM - fresh wet | meadow | | |
| Field Verified: | | | | |
| The soils were not field verified. Soils were a | Wetland Size: | Wetland Area Impacted | | |
| reduced silty clay loam over a heavily reduced | 0.8329 | 0.8329 | | |
| silty clay. | Vegetation: | | | |
| Silly Clay. | Plant Community D | escription(s): | | |
| Hydrology: | • | | | |
| The hydrologic regime is saturated. The feature encircles | The wetland is a wet meadow dominated by | | | |
| an open water body and collects water drained from the | reed canary grass and multiple sedge | | | |
| surrounding hay field. The feature likely discharges some | species. A numb | er of species are present, but | | |
| water into an associated ephemeral stream. | the feature has a disturbed plant community. | | | |
| mater into an accordated opnomoral enteam. | | , , | | |

| SITE MAP | | | |
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SECTION 1: Functional Value Assessment

| HU Y/N Potential Human Usa Values: recreation, culture, education, science, natural scenic beauty | | | | Functional Value Assessment |
|--|-------------|-----|-----------|---|
| 2 N N V Usually or physically accessible to public 4 N N V Assthetically pleasing due to diversity of habitat types, lack of pollution or degradation 5 N N List 6 N N In or adjacent to RED FLAG areas 7 N N In or adjacent to archaeological or cultural resource site WH WH 1 Y Wildlife Habitat 1 Y Y Welland and contiguous habitat for endangered, threatened or special concern species 2 N N 3 or more strata present (-10% cover) 3 N N Within or adjacent to habitat cornical stratage in the property of the proper | HU | Y/N | Potential | |
| 3 | 1 | N | N | |
| N | 2 | N | N | Used for educational or scientific purposes |
| 5 | 3 | N | N | Visually or physically accessible to public |
| 5 | 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| S | _ | | | |
| 7 | 5 | N | N | , |
| 7 | 6 | N | N | |
| WH | | | | |
| 1 | | IN | 111 | |
| 2 | | V | | |
| 3 | | | | |
| 4 N N 100 m buffer – natural land cover ≥60%(south) 75% (north) intact 5 N N Occurs in a Joint Venture priority township 6 Y Y Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex.etc.) 7 Y Supports or provides habitat for SGCN or birds listed in the WI Ali-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 Y Y Ephemeral pond with water present ≥45 days 10 Y Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) FA FA Fish and Aquatic Life Habitat 1 Y Y Weltand is connected or contiguous with perennial stream or lake 2 Y Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 Y Y Vegetation is inundated in spring Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 2 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable 3 N N Densely rooted emergent or woody vegetation Storm and Floodwater Storage 3 Y Y Water flow through wetland is NOT channelized 4 N N Evidence of flashy hydrology 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Water flow through wetland is NOT channelized 8 N Y Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water flow through wetland is NOT channelized 9 N Y Basin wetland or constricted outlet, has through-flow or is adjacent to a stream 1 Y Y Poential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water flow through wetland is NOT channelized 9 N Y Dense, persistent vegetation 1 Y Y Septiant watershed with <10% wetland i | | | | |
| 5 N N Cocurs in a Joint Venture priority township 6 Y Y Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) 7 Y Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 Y Y Ephemeral pond with water present ≥ 45 days 10 Y Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) Fish and Aquatic Life Habitat 1 Y Y Wetland is connected or contiguous with perennial stream or lake 2 Y Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 Y Y Vegetation is inundated in spring 5 P Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 2 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable 3 N N Densely rooted emergent or woody vegetation 5 Storm and Floodwater Storage 1 Y Y Water flow through wetland is NOT channelized 3 Y Y Dense, persistent vegetation 4 N N Evidence of flashy hydrology 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N N Within a watershed with <10% wetland 8 N Y Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event Water Quality Protection 1 Y Y Stassistantial storage of storm and floodwater based on previous section 8 N Y Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event Water Quality Protection 1 Y Y Stassistantial storage of storm and floodwater based on previous section 8 N Y Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event Water Quality Protection 9 | | | | |
| 6 Y Y Supports or provides habitat for SGCN or birds listed in the Wi All-Bird Cons. Plan, or other plans 7 Y Y Supports or provides habitat for SGCN or birds listed in the Wi All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 Y Y Ephemeral pond with water present ≥ 45 days 10 Y Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) FAA Fish and Aquatic Life Habitat 1 Y Y Wetland is connected or contiguous with perennial stream or lake 2 Y Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 Y Y V Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable 3 N N Densely rooted emergent or woody vegetation ST Storm and Floodwater Storage 1 Y Y Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 4 N N Evidence of flashy hydrology 5 Y Y Dense, persistent vegetation 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with <210% wetland 8 N Y Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 Y Y Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Dense, persistent vegetation 6 Y Y Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 Y Y Dense, persistent vegetation 9 N Y Stormwater or surface water from agricultural land is major hydrology source 1 N N Signs of excess nutrients, such as algae blooms, heav | | | | _ |
| 7 Y Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 Y Y Ephemeral pond with water present ≥ 45 days 10 Y Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) FA Fish and Aquatic Life Habitat 1 Y Y Wetland is connected or contiguous with perennial stream or lake 2 Y Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 Y Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable water levels or high flows - if no, not applicable 2 N N Denetital for ero | | | | |
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| 6 Y Y Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 Y Y Discharge to surface water 9 N Y Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N Wetland soils are organic | 5 | | | |
| 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 Y Y Discharge to surface water 9 N Y Natural land cover in 100m buffer area < 50% Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 8 Y Y Discharge to surface water 9 N Y Natural land cover in 100m buffer area < 50% | | | | |
| 9 N Y Natural land cover in 100m buffer area < 50% Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | - | IN | | |
| 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | N. | N 1 | |
| 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 4 N N Wetland soils are organic | | | | |
| | | | | |
| 5 N N Wetland is within a wellhead protection area | | | | |
| | 5 | N | N | Wetland is within a wellhead protection area |

Section 1 Comments (Refer to Section 1 numbers) WH-6: The wetland is a large wet meadow that encircles a pond. WH-9/10/FA-2/4: The wetland includes an elongated open pond with water present and deep enough to support aquatic life. WH-10/FA-2/4: The wetland feature is likely inundated during the spring and has some pockets of standing water present at the time of the survey. WQ-6: The pond has a dense growth of cattails. WQ-8: It is likely than the wetland discharges water to the pond and associated ephemeral stream. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Frogs Υ Υ Avian Herpetofauna

Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

| Observed | Potential | Species/Habitat |
|----------|-----------|-----------------------|
| | Υ | Fish |
| | Υ | Aquatic invertebrates |
| | | |
| | | |
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SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 | S2 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|--------------------------------|-------------|------|-------------------|---|
| Phalaris arundinacea* | | | PEM | Patchy |
| Juncus effusus* | | | PEM | Rare |
| Lemna minor* | | | PEM | Rare |
| Poa pratensis* | | | PEM | Rare |
| Salix discolor* | | | PEM | Rare |
| Typha sp.* | | | PEM | Rare |
| Bromus ciliatus | | | PEM | Rare |
| Carex gracillima | | | PEM | Rare |
| Carex lacustris | | | PEM | Rare |
| Carex stipata* | | | PEM | Rare |
| Cornus alba | | | PEM | Rare |
| Cornus alba | | | PEM | Rare |
| Glyceria grandis | | | PEM | Rare |
| Persicaria hydropiperoides | | | PEM | Rare |
| Phleum pratense | | | PEM | Rare |
| Populus tremuloides | | | PEM | Rare |
| Salix petiolaris | | | PEM | Rare |
| Scirpus cyperinus | | | PEM | Rare |
| Equisetum arvense | | | PEM | Barren |
| Schoenoplectus tabernaemontani | | | PEM | Barren |
| Viburnum lentago | | | PEM | Barren |
| Barbarea vulgaris | | | PEM | Barren |
| Carex castanea | | | PEM | Barren |
| Impatiens capensis | | | PEM | Barren |
| Iris versicolor | | | PEM | Barren |
| Leucanthemum vulgare | | | PEM | Barren |
| Mentha arvensis | | | PEM | Barren |
| Ranunculus acris | | | PEM | Barren |

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

Floristic integrity is relatively low based on invasive species and the disturbed plant community.

Additional species: Ranunculus cf. recurvatus (Plant Communities: PEM, Abundance: Barren), Rubus idaeus (Plant Communities: PEM, Abundance: Barren), Rumex crispus (Plant Communities: PEM, Abundance: Barren), Salix bebbiana (Plant Communities: PEM, Abundance: Barren), Spiraea alba (Plant Communities: PEM, Abundance: Barren), Veronica serpyllifolia (Plant Communities: PEM, Abundance: Barren)

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor | | |
|-------------------------|--------|----------|------------------|-------------------------|---|--|--|
| | | | | | Filling, berms (non-impounding) | | |
| | | | | | Drainage – tiles, ditches | | |
| | | | | | Hydrologic changes - high capacity wells, | | |
| | | | | | impounded water, increased runoff | | |
| | | | | | Point source or stormwater discharge | | |
| Χ | Х | | M | С | Polluted runoff | | |
| | | | | | Pond construction | | |
| | | | | | Agriculture – row crops | | |
| Х | Х | | М | С | Agriculture – hay | | |
| | | | | | Agriculture – pasture | | |
| | Х | | М | С | Roads or railroad | | |
| Х | Х | | М | С | Utility corridor (above or subsurface) | | |
| | | | | | Dams, dikes or levees | | |
| | | | | | Soil subsidence, loss of soil structure | | |
| | | | | | Sediment input | | |
| Х | V | | N.4 | С | Removal of herbaceous stratum – mowing, | | |
| Χ | Х | | M | C | grading, earthworms, etc. | | |
| | | | | | Removal of tree or shrub strata – logging, | | |
| | | | | | unprescribed fire | | |
| | | | | | Human trails – unpaved | | |
| | | | | | Human trails – paved | | |
| | | | | | Removal of large woody debris | | |
| X | Χ | | Н | С | Cover of non-native and/or invasive species | | |
| | | | | | Residential land use | | |
| | | | | | Urban, commercial or industrial use | | |
| | | | | | Parking lot | | |
| | | | | | Golf course | | |
| | | | | | Gravel pit | | |
| | | | | | Recreational use (boating, ATVs, etc.) | | |
| | | | | | Excavation or soil grading | | |
| | | | | | Other (list below): | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| he wetland is large and intersects a mowed utility corridor and a potential hay field that could be used for grazir | g |
|---|---|
| attle. There are invasive species present in the wetland. | |
| | |
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| | |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | SIGNIFICANCE | | | | | | | | | |
|-------------------------------|--------------|----------|----------|-------------|----------|--|--|--|--|--|
| | Low | Medium | High | Exceptional | NA | | | | | |
| Floristic Integrity | / | | - | | | | | | | |
| Human Use Values | V | | | | | | | | | |
| Wildlife Habitat | | ✓ | | | | | | | | |
| Fish and Aquatic Life Habitat | | ✓ | | | | | | | | |
| Shoreline Protection | | | | | / | | | | | |
| Flood and Stormwater Storage | | | ✓ | | | | | | | |
| Water Quality Protection | | | | ✓ | | | | | | |
| Groundwater Processes | | ✓ | | | | | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|--|
| Floristic Integrity | The floristic integrity is relatively low due to the presence of invasive species and lack of multiple strata. |
| Human Use Values | The area is located on the edge of a hay field and a utility corridor. |
| Wildlife Habitat | The area is large and includes a pond, but is lacking strata that would provide cover for more wildlife species. |
| Fish and Aquatic Life Habitat | There is a small pond present with the potential for small fish or minnows. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is relatively large and can likely hold a large amount of water from the surrounding area. |
| Water Quality Protection | The wetland is large, and contains dense vegetation that can likely filter large amounts of water. The feature is associated with an ephemeral stream and an open waterbody, and filters runoff from the surrounding hay field/roads/utility corridor. |
| Groundwater Processes | The wetland likely has an impact on groundwater processes as it is associated with an open waterbody. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project City/ | County: Ashland Sampling Date: 2020-05-30 |
|---|--|
| • | State: Wisconsin Sampling Point: wasa106e_xu |
| Investigator(s): SBR/DGL Sec | |
| | elief (concave, convex, none): None Slope (%): 0-2% |
| | Long: <u>-90.896167</u> Datum: <u>WGS84</u> |
| | ercent slopes NWI classification: |
| Are climatic / hydrologic conditions on the site typical for this time of year? | |
| | urbed? Are "Normal Circumstances" present? Yes _ ✓ No |
| Are Vegetation, Soil, or Hydrology naturally distributed and several problem. | |
| | |
| SUMMARY OF FINDINGS – Attach site map showing sa | mpling point locations, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes No | Is the Sampled Area |
| Hydric Soil Present? Yes No | within a Wetland? Yes No |
| Wetland Hydrology Present? Yes No | If yes, optional Wetland Site ID: |
| Remarks: (Explain alternative procedures here or in a separate report.) The upland point is located slightly upslope from t | he wetland within a hay field or notential cow |
| pasture. The feature is dominated by smooth bror | The state of the s |
| pastare. The reature is definitiated by smooth brot | no, nomuoky biaegiaes, and weedy forbe. |
| | |
| | |
| | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | |
| Surface Water (A1) Water-Stained Leav High Water Table (A2) Aquatic Fauna (B13 | |
| Saturation (A3) Marl Deposits (B15) | |
| Water Marks (B1) Hydrogen Sulfide O | |
| | eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) |
| Ordinant Deposits (B2) Ordinant Deposits (B3) Presence of Reduce | |
| Algal Mat or Crust (B4) Recent Iron Reduct | |
| Iron Deposits (B5) Thin Muck Surface | |
| Indit Deposits (B0) Thin Mack Cartage | |
| Sparsely Vegetated Concave Surface (B8) | FAC-Neutral Test (D5) |
| Field Observations: | 1710 Notice (20) |
| Surface Water Present? Yes No _ v _ Depth (inches): | |
| Water Table Present? Yes No _ ✓ Depth (inches): | |
| Saturation Present? Yes No Depth (inches): | Wetland Hydrology Present? Yes No |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, principle (includes capillary fringe) | revious inspections) if available: |
| besome recorded bata (stream gauge, monitoring wen, acrial priotos, pi | evious inspections), ii available. |
| | |
| Remarks: | 4 |
| No indicators of wetland hydrology were observed | J. |
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| | VEGETATION – | Use scientific i | names of | plants. |
|--|---------------------|------------------|----------|---------|
|--|---------------------|------------------|----------|---------|

| | Absolute | Dominan | t Indicator | Dominance Test worksheet: |
|---|----------|------------|-------------|---|
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Number of Dominant Species |
| 1 | | | | That Are OBL, FACW, or FAC:(A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata: (B) |
| 4 | | | | Percent of Dominant Species |
| 5 | | | | That Are OBL, FACW, or FAC: 0 (A/B) |
| 6. | | | | |
| | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | | = Total Co | ver | OBL species x 1 =0 |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species 0 x 2 = 0 |
| 1 | | | · | FACULTURE |
| 2 | | | | FACU species x 4 = 288 UPL species 25 x 5 = 125 |
| 3 | | | | Column Totals: 99 (A) 419 (B) |
| 4 | | | | Column Totals. <u>99</u> (A) <u>419</u> (B) |
| 5 | | | | Prevalence Index = B/A = <u>4.23232323232323232</u> |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | | = Total Co | | 2 - Dominance Test is >50% |
| Harl Objective (Dietains) | | - 10tal C0 | vei | 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5) | 30 | V | FACU | 4 - Morphological Adaptations ¹ (Provide supporting |
| 1. Poa pratensis | | | | data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) |
| 2. <u>Bromus inermis</u> | | <u>Y</u> | UPL | Problematic Hydrophytic Vegetation (Explain) |
| 3. <u>Taraxacum officinale</u> | 10 | N | <u>FACU</u> | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. <u>Plantago major</u> | | N | <u>FACU</u> | be present, unless disturbed or problematic. |
| 5. Cerastium fontanum | 5 | N | <u>FACU</u> | Definitions of Vegetation Strata: |
| 6. <i>Fragaria virginiana</i> | 5 | N | <u>FACU</u> | Tree Moody plants 2 in /7.6 cm) or more in diameter |
| 7. Leucanthemum vulgare | 5 | N | <u>UPL</u> | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8. <u>Carex gracillima</u> | 5 | Ν | FACU | Sanling/ahruh Woody plants loss than 2 in DRU |
| 9. <i>Trifolium hybridum</i> | _ | N | FACU | Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. |
| 10. <u>Achillea millefolium</u> | | | FACU | Herb – All herbaceous (non-woody) plants, regardless |
| 11. Barbarea vulgaris | 2 | N | FAC | of size, and woody plants less than 3.28 ft tall. |
| | | | | Woody vines – All woody vines greater than 3.28 ft in |
| 12. <u>Lotus corniculatus</u> | | <u>N</u> | <u>FACU</u> | height. |
| | 99 | = Total Co | ver | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | · | |
| 2 | | | | |
| 3 | | | | Hydrophytic |
| 4 | | | | Vegetation |
| | _ | = Total Co | ver | Present? Yes No |
| Remarks: (Include photo numbers here or on a separate | | | | |
| The upland sample point is within a pas | | d is rep | resentat | tive of the general area. |
| | | | | |
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Sampling Point: wasa106e_xu

SOIL Sampling Point: wasa106e_xu

| Profile Description: (Describe to the dep | oth needed to docur | ment the i | ndicator | or confirm | the absence of i | ndicators.) |
|---|-----------------------------|--------------------------|-------------------|------------------|----------------------------|---|
| Depth Matrix | Redo | x Feature | S1 | . 2 | | |
| (inches) Color (moist) % | Color (moist) | % | Type ¹ | Loc ² | <u>Texture</u> | Remarks |
| <u>0-20 5YR 4/3 100</u> | | _ 0 | | | CL | |
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| | | | ' | | | _ |
| ¹ Type: C=Concentration D=Deplation DM | -Poducod Matrix MA | C=Mooks= | L Cond C | raina | ² l postion: Di | _=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM Hydric Soil Indicators: | =Reduced Matrix, Mi | S=IVIasked | Sand Gr | ams. | | Problematic Hydric Soils ³ : |
| Histosol (A1) | Polyvalue Belo | w Surface | (S8) (LR | R R | | (A10) (LRR K, L, MLRA 149B) |
| Histic Epipedon (A2) | MLRA 149B | | (00) (=11 | , | | rie Redox (A16) (LRR K, L, R) |
| Black Histic (A3) | Thin Dark Surfa | , ace (S9) (L | RR R, M | LRA 149B) | | xy Peat or Peat (S3) (LRR K, L, R) |
| Hydrogen Sulfide (A4) | Loamy Mucky N | | | ζ, L) | | ice (S7) (LRR K, L) |
| Stratified Layers (A5) | Loamy Gleyed | |) | | | Below Surface (S8) (LRR K, L) |
| Depleted Below Dark Surface (A11) Thick Dark Surface (A12) | Depleted Matrix | | | | | Surface (S9) (LRR K, L) |
| Sandy Mucky Mineral (S1) | Redox Dark Su Depleted Dark | , , | | | _ | anese Masses (F12) (LRR K, L, R) Floodplain Soils (F19) (MLRA 149B) |
| Sandy Gleyed Matrix (S4) | Redox Depress | | ') | | | dic (TA6) (MLRA 144A, 145, 149B) |
| Sandy Redox (S5) | <u> </u> | (, , | | | | it Material (F21) |
| Stripped Matrix (S6) | | | | | | ow Dark Surface (TF12) |
| Dark Surface (S7) (LRR R, MLRA 149 | B) | | | | Other (Exp | olain in Remarks) |
| 3 | | | | | | |
| ³ Indicators of hydrophytic vegetation and w Restrictive Layer (if observed): | etiand hydrology mus | st be prese | ent, unies | s disturbed | or problematic. | |
| , , , | | | | | | |
| Type: | | | | | Ukadaia Cail Daa | and Van Na (|
| Depth (inches): | | | | | nyaric Soil Pre | sent? Yes No |
| Remarks: | 1 | | | | CI | |
| A reddish clay loam soil lacki | ng redox reatu | ires thr | ougno | ut the p | rofile. | |
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wasa106e_xu_N



wasa106e_xu_SW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relo | cation Project | t | City/C | ounty: Ash | nland | Samp | oling Date: 20 | 020-05-30 |
|--|---------------------|---------|---|----------------|----------------|---|----------------|------------------|
| Applicant/Owner: Enbridge | - | | | | | | | |
| Investigator(s): SBR/DGL | | | | | | | | |
| Landform (hillslope, terrace, e | | | | | _ | | | (%): 0-2% |
| Subregion (LRR or MLRA): N | | | | | | | | |
| Soil Map Unit Name: Sanb | | | | | | | | |
| Are climatic / hydrologic condi | • | | | • | | | | |
| Are Vegetation, Soil | | | | | | | | No |
| _ | | | | | | | | NO |
| Are Vegetation, Soil | | | | | | | | |
| SUMMARY OF FINDING | GS – Attach si | te m | nap showing sam | ipling poi | nt locatio | ns, transects, imp | ortant feat | ures, etc. |
| Hydrophytic Vegetation Pres Hydric Soil Present? | | | No _ No | Is the Sam | | Yes <u> </u> N | o | |
| Wetland Hydrology Present? | | | No | If yes, optic | onal Wetland | Site ID: | | |
| Remarks: (Explain alternative | ve procedures here | or in a | a separate report.) | | | | | |
| The wetland is a sm | • | | • | a cow pa | Sture an | d a dillity corrido | n. The lea | ature is |
| a wet meadow dom | inated by ree | u C | anary grass. | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| HYDROLOGY | | | | | | | | |
| Wetland Hydrology Indicat | ors: | | | | | Secondary Indicators (m | ninimum of tw | o required) |
| Primary Indicators (minimum | of one is required; | checl | k all that apply) | | | Surface Soil Cracks | s (B6) | |
| Surface Water (A1) | | | Water-Stained Leave | | | Drainage Patterns (| | |
| High Water Table (A2) | | | Aquatic Fauna (B13) | | | Moss Trim Lines (B | | |
| Saturation (A3) | | | Marl Deposits (B15) | | | Dry-Season Water | | |
| Water Marks (B1) | | | Hydrogen Sulfide Ode | | D ((00) | Crayfish Burrows (C | | (00) |
| Sediment Deposits (B2) | | | Oxidized Rhizosphere | _ | Roots (C3) | Saturation Visible o | _ | ery (C9) |
| Drift Deposits (B3) Algal Mat or Crust (B4) | | | Presence of Reduced Recent Iron Reductio | | oile (C6) | Stunted or Stressed | | |
| Iron Deposits (B5) | | | Thin Muck Surface (C | | | ✓ Geomorphic Position✓ Shallow Aquitard (D | | |
| Inundation Visible on Ae | erial Imagery (B7) | | Other (Explain in Ren | • | | Microtopographic R | | |
| Sparsely Vegetated Cor | | _ | Other (Explain in Nei | nano) | | FAC-Neutral Test (I | | |
| Field Observations: | ioaro canaco (Bo) | | | | | <u></u> 1710 1100000 1 | | |
| Surface Water Present? | Yes No _ | ~ | Depth (inches): | | | | | |
| Water Table Present? | | | Depth (inches): | | | | | |
| Saturation Present? | Yes No _ | ~ | Depth (inches): | | Wetland H | lydrology Present? Y | es 🗸 | No |
| (includes capillary fringe) Describe Recorded Data (str | roam gaugo, monito | ring v | well aerial photos pro | vious inspec | tions) if ava | ilablo: | | |
| Describe Necorded Data (sti | eam gauge, monitor | ilig v | veli, aeriai priotos, pre | vious irispeci | tions), ii ava | liable. | | |
| | | | | | | | | |
| Remarks: | | | | | | | | |
| The hydrologic regi | me is saturate | ea. | | | | | | |
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| | | | | Sampling Point: wasa1040e_v |
|---|---------------------|-------------|-------------|---|
| Tree Stratum (Plot size: 30) | Absolute % Cover | | t Indicator | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC: (A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata: (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: |
| | 0 | = Total Co | over | OBL species <u>45</u> x 1 = <u>45</u> |
| Sapling/Shrub Stratum (Plot size:) | | | | FACW species <u>45</u> x 2 = <u>90</u> |
| 1 | | | | FAC species 0 x 3 = 0 |
| 2 | | | | FACU species x 4 = 40 UPL species 0 x 5 = 0 |
| 3 | | | | Column Totals: 100 (A) 175 (B) |
| 4 | | r | | |
| 5 | | | | Prevalence Index = B/A =1.75 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | 0 | = Total Co | over | |
| Herb Stratum (Plot size: <u>5</u>) 1. <i>Phalaris arundinacea</i> | 40 | V | FACW | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. <u>Juncus effusus</u> | | | OBL | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Poa pratensis</u> | | N | FACU | replander rydrophydd regelddion (Explan) |
| 4. <u>Carex stipata</u> | | N | OBL | ¹ Indicators of hydric soil and wetland hydrology must |
| 5. <u>Carex vulpinoidea</u> | | N | OBL | be present, unless disturbed or problematic. |
| 6. <u>Ranunculus recurvatus</u> | | | FACW | Definitions of Vegetation Strata: |
| 7. <u>Persicaria hydropiperoides</u> | | | OBL | Tree – Woody plants 3 in. (7.6 cm) or more in diamete |
| 8 | | | | at breast height (DBH), regardless of height. |
| 9 | | | | Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | |
| 11 | | | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in |
| 12. | | = Total Co | nvor. | height. |
| Woody Vine Stratum (Plot size:30) | 100 | - Total Co | , vei | |
| 1 | | | | |
| · | | | | |
| 2 | | | | Hadranbada |
| 2 | | | | |
| 3 | | | - | Hydrophytic Vegetation |
| | | | | |

SOIL Sampling Point: wasa1040e_w

| | epth Matrix nches) Color (moist) % | | | Color (ı | | x Features % | Type ¹ | Loc ² | Texture | Remarks |
|-----------------------------|------------------------------------|-----------------|------------|-------------------|--------------------------|-----------------|-------------------|------------------|-----------------|---|
| <u> </u> | 5YR | | | 5YR | | 10 | С | | SIC | Nomano |
| | <u> </u> | 1/2 | | 0111 | 170 | | | | | |
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| . | | | | | | | | | 2 | |
| ype: C=Cor vdric Soil In | | | letion, RM | =Reduced | Matrix, MS | S=Masked | Sand Gr | ains. | | PL=Pore Lining, M=Matrix. or Problematic Hydric Soils ³ : |
| _ Histosol (| | | | - | | v Surface | (S8) (LR | R R, | 2 cm Mu | ck (A10) (LRR K, L, MLRA 149B) |
| _ Histic Epi _ Black His | ipedon (A2 | 2) | | | RA 149B) | | DDD M | LRA 149B) | | rairie Redox (A16) (LRR K, L, R) cky Peat or Peat (S3) (LRR K, L, R) |
| | n Sulfide (A | \ 4) | | | | lineral (F1 | | | | face (S7) (LRR K, L) |
| | Layers (A | | (8.4.4) | | | Matrix (F2) |) | | - | e Below Surface (S8) (LRR K, L) |
| | Below Da rk Surface | | e (A11) | _∠ Deple Redox | ted Matrix c Dark Sui | | | | | k Surface (S9) (LRR K, L) nganese Masses (F12) (LRR K, L, R |
| _ Sandy Mu | ucky Mine | ral (S1) | | Deple | ted Dark S | Surface (F | 7) | | Piedmor | nt Floodplain Soils (F19) (MLRA 149 |
| _ Sandy Gl _ Sandy Re | leyed Matr | ix (S4) | | Redox | Depress | ions (F8) | | | | oodic (TA6) (MLRA 144A, 145, 149E ent Material (F21) |
| | Matrix (S6 |) | | | | | | | | allow Dark Surface (TF12) |
| _ Dark Surf | face (S7) (| LRR R, N | ILRA 149 | B) | | | | | Other (E | xplain in Remarks) |
| ndicators of | hydrophyt | ic vegetat | ion and w | etland hydro | ology mus | t be prese | nt, unles | s disturbed | or problematic. | |
| strictive La | ayer (if ob | served): | | | | | | | | |
| Type: | | | | | | | | | Unadaia Cail D | recent? Ves / No |
| Depth (inch | hes): | | | | | | | | Hyaric Soil P | resent? Yes <u>/</u> No |
| emarks: silty cla | v soil v | vith a c | consist | ent colo | r throu | ghout 1 | the pro | ofile with | n redox cor | ncentrations present. |
| , | , | | | | | 9 | | | | |



wasa1040e_w_N



wasa1040e_w_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | |
|--|--|--------------------------|--|
| Project name: | Evaluator(s): | | |
| Line 5 Relocation Project | SBR/DGL | | |
| File #: | Date of visit(s): | | |
| wasa1040 | 2020-05-30 | | |
| Location: | Ecological Landsca | ape: | |
| PLSS: <u>sec 29 T047N R004W</u> | Lake Superior Clay Plair | | |
| | Lake Superior Clay Flair | I | |
| Lat: <u>46.528445</u> Long: <u>-90.896055</u> | Watershed: | | |
| | LS09, Lower Bad River | | |
| County: Ashland Town/City/Village: Gingles town | | | |
| | | | |
| SITE DESCRIPTION | | | |
| Soils: | WWI Class: | | |
| Mapped Type(s): | N/A | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes | Wetland Type(s): | | |
| | PEM - fresh wet meadow | | |
| Field Verified: | | | |
| The soil series was not field verified. Soils were a | Wetland Size: | Wetland Area Impacted | |
| reduced reddish silty clay throughout the profile. | 0.0373 | 0.0373 | |
| I reduced readistribility diay timodeflicat the profile. | Vegetation: | 10.00.0 | |
| | | Description(s): | |
| Hydrology: | Plant Community Description(s): | | |
| The hydrologic regime is saturated and surface | The wetland is a wet meadow dominated by | | |
| , , , | reed canary gras | ss and other graminoids. | |
| water is the main source of hydrology. | | | |
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| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | | Functional Value Assessment |
|----|------|-----------|---|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | N | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | Ν | N | Used for educational or scientific purposes |
| 3 | Ν | N | Visually or physically accessible to public |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| _ | | | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | Ν | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | | ., | Wildlife Habitat |
| 1 | Υ | Υ | Wetland and contiguous habitat >10 acres |
| 2 | N | N | 3 or more strata present (>10% cover) |
| 3 | N | N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | N | N | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | Occurs in a Joint Venture priority township |
| 6 | N | N | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| | IN | IN | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| 7 | Υ | Y | plans |
| 0 | N.I. | | |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | N | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | Ν | N | Along shoreline of a stream, lake, pond or open water area (<a>2 1 acre) - if no, not applicable |
| 2 | N.I | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| | N | N | water levels or high flows – if no, not applicable |
| 3 | Ν | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | Υ | Υ | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | Υ | Υ | Water flow through wetland is NOT channelized |
| 3 | Υ | Υ | Dense, persistent vegetation |
| 4 | Ν | N | Evidence of flashy hydrology |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | N | N | Within a watershed with <10% wetland |
| 8 | N | N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | | | Water Quality Protection |
| 1 | N | Υ | Provides substantial storage of storm and floodwater based on previous section |
| 2 | Y | Y | Basin wetland or constricted outlet |
| 3 | Y | Y | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Y | Y | Dense, persistent vegetation |
| 6 | | N N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | N | | Stormwater or surface water from agricultural land is major hydrology source |
| | N | N | |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | Ν | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | Ν | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | Ν | N | Wetland is within a wellhead protection area |
| | | | |

Section 1 Comments (Refer to Section 1 numbers) WH-1: The feature is fairly close to a large forested area. WH-10/FA-2/4: At the time of survey, the wetland feature has a small amount of standing water present but it is likely inundated during the spring and after heavy rain events. ST-2/WQ-3: The wetland is not channelized. ST-3/WQ-5: The wetland has a dense herbaceous layer. ST-5: Surface water is the most likely source of hydrology. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Small mammals, herpetofauna Avian Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

| Observed | Potential | Species/Habitat |
|----------|-----------|-----------------------|
| | Υ | Aquatic invertebrates |
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SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 | S2 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) Mean C (optional) | <13<2.4 | 13-23 2.4-4.2 | 23-32 4.3-4.7 | >32 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-----------------------|-------------|------|-------------------|---|
| Phalaris arundinacea* | | | PEM | Interrupted |
| Juncus effusus | | | PEM | Rare |
| Poa pratensis | | | PEM | Rare |
| Carex stipata | | | PEM | Rare |
| Carex vulpinoidea | | | PEM | Rare |
| Ranunculus recurvatus | | | PEM | Rare |
| Rhamnus cathartica | | | PEM | Rare |
| Ranunculus acris | | | PEM | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low based on the dominance of reed canary grass and presence of other non-native species.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| X | Х | | M | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| X | Х | | Н | С | Agriculture – hay |
| Х | Х | | Н | UC | Agriculture – pasture |
| | | | | | Roads or railroad |
| | Х | | L | С | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | ., | | | | Removal of herbaceous stratum – mowing, |
| | X | | L | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Х | Х | | Н | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | , , |
| | | | | | |
| | | | | | |
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^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is on the edge of a field that could be used for hay or as a pasture for cattle | . The feature borders a utility |
|---|---------------------------------|
| corridor. There are invasive species present. | |
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^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|----------|-------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | / | | | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | V | | | | |
| Fish and Aquatic Life Habitat | V | | | | |
| Shoreline Protection | | | | | / |
| Flood and Stormwater Storage | | ✓ | | | |
| Water Quality Protection | | ' | | | |
| Groundwater Processes | / | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|--|
| Floristic Integrity | The wetland is small with limited species diversity and prevalent invasive species. |
| Human Use Values | The wetland is on the edge of a field used for hay or cattle. |
| Wildlife Habitat | There are limited cover options, with only one strata present. |
| Fish and Aquatic Life Habitat | The wetland is small and likely only occasionally holds standing water. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is a small and densely vegetated depressional feature. |
| Water Quality Protection | The wetland has dense vegetation, but is small and therefore limited in its filtering ability. |
| Groundwater Processes | The wetland does not seem to influence groundwater processes. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relo | cation Proiec | :t | City | /County: Ash | nland | Sa | mpling Date: 2 | <u>2020-05-30</u> |
|---|-----------------------|-----------------|--|----------------|------------------|---|----------------|--------------------|
| | - | State: Wisconsi | | | | | | |
| Investigator(s): SBR/DGL Section, Township, Range: Sec 29 T047N R004W | | | | | | | | |
| Landform (hillslope, terrace, e | | | | | _ | | | e (%): 0-2% |
| Subregion (LRR or MLRA): N | orthcentral Forest | S Lat | 46 528349 | (, | Long: -90 | 895879 | Datum: | WGS84 |
| Soil Map Unit Name: Sanb | org-Badriver | com | nlex 0 to 6 n | ercent slo | nes | NWI classification | n· | |
| Are climatic / hydrologic condi | ŭ | | • | | • | | | |
| Are Vegetation, Soil _ | | | | | | | | , No |
| Are Vegetation, Soil _ | | | | | | | | |
| _ | | | | | | | | |
| SUMMARY OF FINDIN | GS – Attach s | ite m | nap showing sa | mpling poi | nt locatioi | ns, transects, in | iportant fea | itures, etc. |
| Hydrophytic Vegetation Pres | sent? Yes _ | | No | Is the Sam | | | | |
| Hydric Soil Present? | Yes_ | | No | within a W | etland? | Yes | No <u> </u> | |
| Wetland Hydrology Present? | | | No | If yes, option | onal Wetland | Site ID: | | |
| Remarks: (Explain alternative The upland is located) | ve procedures here | or in | a separate report.) | atland hat | waan a c | ow nasture ar | nd a utility | corridor |
| <u> </u> | • | | | | | • | - | comaon. |
| The feature is domi | nated by wee | auy | ioros and nas | s bur oak p | oresent ir | i all three stra | ıa. | |
| | | | | | | | | |
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| | | | | | | | | |
| HYDROLOGY | | | | | | | | |
| Wetland Hydrology Indicat | tors: | | | | <u> </u> | Secondary Indicators | (minimum of ty | wo required) |
| Primary Indicators (minimum | n of one is required; | chec | k all that apply) | | | Surface Soil Crac | cks (B6) | |
| Surface Water (A1) | | | Water-Stained Leav | ves (B9) | ·- | Drainage Pattern | ıs (B10) | |
| High Water Table (A2) | | | Aquatic Fauna (B13 | 3) | - | Moss Trim Lines | (B16) | |
| Saturation (A3) | | | Marl Deposits (B15 | | - | Dry-Season Wat | | |
| Water Marks (B1) | | | Hydrogen Sulfide C | | · - | Crayfish Burrows | | |
| Sediment Deposits (B2) | ı | | Oxidized Rhizosphe | _ | | Saturation Visible | | |
| Drift Deposits (B3) | | | Presence of Reduc | , , | | Stunted or Stress | | 1 |
| Algal Mat or Crust (B4) | | | Recent Iron Reduct | | | Geomorphic Pos | | |
| Iron Deposits (B5) Inundation Visible on Ae | orial Imagony (P7) | | Thin Muck Surface Other (Explain in R | | | Shallow AquitardMicrotopographic | | |
| | | | Other (Explain in R | emarks) | - | | | |
| Sparsely Vegetated Cor Field Observations: | icave Surface (Bo) | | | | - | FAC-Neutral Tes | i (D3) | |
| Surface Water Present? | Yes No. | ~ | _ Depth (inches): | | | | | |
| Water Table Present? | | | Depth (inches): | | | | | |
| Saturation Present? | | | Depth (inches): | | Wetland Hy | ydrology Present? | Yes | No 🗸 |
| (includes capillary fringe) | | | | | _ | | | |
| Describe Recorded Data (st | ream gauge, monito | oring v | well, aerial photos, p | revious inspec | tions), if avail | able: | | |
| | | | | | | | | |
| Remarks: | | | | | | | | |
| No indicators of we | tland hydrolo | av v | were observe | d. | | | | |
| | | 9) . | | . | | | | |
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| VEGETATION - | Use scientific names | of plants. |
|---------------------|----------------------|------------|
| | | |

| EGETATION – Use scientific names of plants. | | | | Sampling Point: wasa1040_u |
|---|---------------------|-------------------|-------------|---|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | | Dominance Test worksheet: |
| 1. Quercus macrocarpa | 10 | Y | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC:3 (A) |
| 2. <i>Populus tremuloides</i> 3 | | | | Total Number of Dominant Species Across All Strata: |
| 4 5 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC:43 (A/B) |
| 6. | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | 15 | = Total Cov | /er | OBL species x 1 =0 |
| Sapling/Shrub Stratum (Plot size:15) | | | | FACW species10 x 2 =20 |
| 1. Quercus macrocarpa | 10 | <u>Y</u> | <u>FACU</u> | FAC species10 x 3 =30 |
| 2. <u>Populus tremuloides</u> | | Υ | FAC | FACU species <u>115</u> x 4 = <u>460</u> |
| 3. <u>Cornus alba</u> | | N | FACW | UPL species 10 x 5 = 50 |
| 4. <u>Amelanchier cf laevis</u> | | | | Column Totals: <u>145</u> (A) <u>560</u> (B) |
| 5. <u>Prunus pensylvanica</u> | | N | FACU | Prevalence Index = B/A =3.86 |
| 6. <u>Salix bebbiana</u> | 5 | Y | <u>FACW</u> | Hydrophytic Vegetation Indicators: |
| 7 | | · | | 1 - Rapid Test for Hydrophytic Vegetation |
| | | = Total Cov | /er | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:5) | | | | 3 - Prevalence Index is ≤3.0¹ |
| 1. Poa pratensis | _30 | Y | <u>FACU</u> | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. <u>Lotus corniculatus</u> | _25 | Y | <u>FACU</u> | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Fragaria virginiana</u> | _10_ | N | <u>FACU</u> | The disease of headring will and constant be dealers as well as |
| 4. <u>Achillea millefolium</u> | 10 | N | <u>FACU</u> | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. <u>Leucanthemum vulgare</u> | 10 | N | UPL | Definitions of Vegetation Strata: |
| 6. <u>Solidago canadensis</u> | 5 | N | <u>FACU</u> | _ |
| 7. <u>Taraxacum officinale</u> | 5 | N | <u>FACU</u> | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8. Quercus macrocarpa | 5 | N | <u>FACU</u> | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | <u></u> | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12 | | · | | Woody vines – All woody vines greater than 3.28 ft in |
| | 100 | = Total Cov | /er | height. |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3. | | | | Hydrophytic |
| 4 | | | | Vegetation |
| | | = Total Cov | /er | Present? Yes No _ ✓ |
| Remarks: (Include photo numbers here or on a separate s | sheet.) | | | |
| The upland is on the edge of a cow pas | | | | • |
| upland areas have less tree and shrub | cover a | s compa | ared to t | tne sample point. |

SOIL Sampling Point: wasa1040_u

| | cription: (I | | to the dep | th needed to docum | | | or confirm | the absence of ir | ndicators.) |
|-------------------|--------------------------------------|------------------|-------------|--------------------------------|------------|------------------------|------------------|-------------------|--|
| Depth (inches) | Color (| Matrix moist) | % | Color (moist) | K Feature | s Type ¹ | Loc ² | Texture | Remarks |
| 0-20 | 5YR | 4/3 | 100 | | 0 | | | CL | |
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| | | | letion, RM= | Reduced Matrix, MS | =Masked | Sand Gr | ains. | | =Pore Lining, M=Matrix. |
| Hydric Soil | | | | Delinielus Delev | Curtoso | (CO) (I DI | . D | | Problematic Hydric Soils ³ : |
| Histosol | (AT) pipedon (A2 | 2) | | Polyvalue Below MLRA 149B) | | (50) (LK I | х κ, | | (A10) (LRR K, L, MLRA 149B) rie Redox (A16) (LRR K, L, R) |
| Black Hi | istic (A3) | | | Thin Dark Surfa | | | | 5 cm Muck | y Peat or Peat (S3) (LRR K, L, R) |
| | en Sulfide (<i>l</i> d Layers (A | | | Loamy Mucky M Loamy Gleyed M | | | , L) | | ce (S7) (LRR K, L) Below Surface (S8) (LRR K, L) |
| Deplete | d Below Da | rk Surface | e (A11) | Depleted Matrix | (F3) | | | Thin Dark S | Surface (S9) (LRR K, L) |
| | ark Surface /lucky Mine | . , | | Redox Dark Sur Depleted Dark S | | | | - | nnese Masses (F12) (LRR K, L, R) Floodplain Soils (F19) (MLRA 149B) |
| - | Bleyed Matr | | | Redox Depressi | | .7) | | | dic (TA6) (MLRA 144A, 145, 149B) |
| Sandy F | Redox (S5) | | | | | | | Red Parent | t Material (F21) |
| | l Matrix (S6 rface (S7) (| | ILRA 149E | 3) | | | | | ow Dark Surface (TF12) lain in Remarks) |
| | | - | | etland hydrology mus | t be prese | ent, unles | s disturbed | or problematic. | |
| Restrictive | Layer (if ol | oserved): | | | | | | | |
| Type: | -h\. | | | | | | | Hydric Soil Pres | sent? Yes No/_ |
| Remarks: | cnes): | | | | | | | Tryunc con i res | 10 <u></u> |
| | ıv loam | soil wi | th no re | edox features | observ | ed. | | | |
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wasa1040_u_N



wasa1040_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ash | land | _ Sampling Date: <u>2020-06-01</u> | | |
|---|--|-----------------------------|------------------------------------|--|--|
| Applicant/Owner: Enbridge | | | | | |
| Investigator(s): SBR/DGL | Section, Township, | , Range: <u>sec 29 T047</u> | N R004W | | |
| Landform (hillslope, terrace, etc.): Depression | Local relief (concave, | convex, none): Concave | Slope (%): <u>0-2%</u> | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46.52 | | | | | |
| Soil Map Unit Name: Sanborg-Badriver complex, O |) to 6 percent slop | DES NWI classif | ication: | | |
| Are climatic / hydrologic conditions on the site typical for this time | e of year? Yes N | lo (If no, explain in | Remarks.) | | |
| Are Vegetation, Soil, or Hydrology signific | cantly disturbed? | Are "Normal Circumstances" | present? Yes No | | |
| Are Vegetation, Soil, or Hydrology natura | | If needed, explain any answ | | | |
| SUMMARY OF FINDINGS - Attach site map sho | wing sampling poir | nt locations, transect | s, important features, etc. | | |
| Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative procedures here or in a separate The wetland is a fresh wet meadow found | within a We If yes, option e report.) | etland? Yes | | | |
| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | Secondary Indic | cators (minimum of two required) | | |
| Primary Indicators (minimum of one is required; check all that a | | Surface Soi | | | |
| 1 | ained Leaves (B9) | Drainage Pa | | | |
| High Water Table (A2) Aquatic F | | Moss Trim I | | | |
| Saturation (A3) Marl Dep | osits (B15) | Dry-Seasor | Dry-Season Water Table (C2) | | |
| | n Sulfide Odor (C1) | Crayfish Bu | | | |
| | Rhizospheres on Living F | | Visible on Aerial Imagery (C9) | | |
| | e of Reduced Iron (C4) | | Stressed Plants (D1) | | |
| | on Reduction in Tilled Soi | | | | |
| <u> </u> | ck Surface (C7) | Shallow Aqu | | | |
| Inundation Visible on Aerial Imagery (B7) Other (Ex Sparsely Vegetated Concave Surface (B8) | xplain in Remarks) | Microtopogi | raphic Relief (D4) | | |
| Field Observations: | | V PAC-Neulla | ar rest (D3) | | |
| Surface Water Present? Yes _ v No Depth (ii | nches): 1 | | | | |
| Water Table Present? Yes No Depth (iii | | | | | |
| Saturation Present? Yes No V Depth (iii | | Wetland Hydrology Prese | ent? Yes ✓ No | | |
| (includes capillary fringe) | | | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial | photos, previous inspect | ions), if available: | | | |
| | | | | | |
| Remarks: | | | | | |
| The hydrologic regime is saturated with so | me small areas o | of standing water th | roughout the wetland | | |
| feature. | | | | | |
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VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: 30) | Absolute | Dominant Species? | | Dominance Test worksheet: |
|---|----------|-------------------|----------|---|
| 1 | | | | Number of Dominant Species |
| | | | | That Are OBL, FACW, or FAC:3 (A) |
| 2 | | | | Total Number of Dominant Species Across All Strata: 3 (B) |
| | | | | |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B) |
| 5 | | | | , |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| Continue/Charle Ctrature (District | | = Total Cov | /er | OBL species 10 x 1 = 10 FACW species 105 x 2 = 210 |
| Sapling/Shrub Stratum (Plot size: 15) | 15 | V | FACW | FAC species5 x3 =15 |
| 1. <u>Salix discolor</u> | | | FACW | FACU species x 4 = |
| 2. <u>Salix petiolaris</u> | | | | UPL species0 x 5 =0 |
| 3 | | | | Column Totals: <u>120</u> (A) <u>235</u> (B) |
| 4. 5. | | | | Prevalence Index = B/A = <u>1.958333333333333333</u> |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | - | 1 - Rapid Test for Hydrophytic Vegetation |
| · · | | = Total Cov | /or | ∠ 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:5 | | - Total Cov | , Ci | 3 - Prevalence Index is ≤3.0¹ |
| 1. Phalaris arundinacea | _85_ | <u>Y</u> | FACW | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. Carex lacustris | _10_ | <u>N</u> | OBL | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Equisetum arvense</u> | | N | FAC | 1 |
| 4. | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. | | | | Definitions of Vegetation Strata: |
| 6. | | | | |
| 7. | | | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | · | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | 100 | = Total Cov | /er | height. |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. | | | | |
| 2 | | | · | |
| 3 | | | | Hydrophytic |
| 4. | | | | Vegetation |
| | _ | = Total Cov | /er | Present? Yes No |
| Remarks: (Include photo numbers here or on a separate s | | | | |
| The sample point is representative of the | ne small | wetland | d featur | е. |
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Sampling Point: wasa1042e_w

SOIL Sampling Point: wasa1042e_w

| Profile Desc | ription: (Describe t | o the depth | needed to docur | nent the i | ndicator | or confirm | the absence of | findicators.) |
|----------------------------|----------------------|-------------|--------------------|---------------------|---------------------|------------------------|--------------------------|---|
| Depth | Matrix | | | x Features | | | | |
| (inches) | Color (moist) | | Color (moist) | % | Type' | <u>Loc²</u> | <u>Texture</u> | Remarks |
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| ¹ Type: C=Co | ncentration, D=Depl | etion, RM=F | Reduced Matrix, MS | S=Masked | Sand Gra | ains. | ² Location: I | PL=Pore Lining, M=Matrix. |
| Hydric Soil I | ndicators: | | | | | | Indicators fo | r Problematic Hydric Soils ³ : |
| Histosol | (A1) | | Polyvalue Belov | w Surface | (S8) (LRF | RR, | 2 cm Mu | ck (A10) (LRR K, L, MLRA 149B) |
| Histic Ep | ipedon (A2) | | MLRA 149B) | | | | | airie Redox (A16) (LRR K, L, R) |
| Black His | stic (A3) | _ | Thin Dark Surfa | ice (S9) (L | RR R, ML | RA 149B) | | cky Peat or Peat (S3) (LRR K, L, R) |
| Hydroge | n Sulfide (A4) | _ | Loamy Mucky N | /lineral (F1 | 1) (LRR K , | , L) | Dark Sur | face (S7) (LRR K, L) |
| Stratified | Layers (A5) | _ | Loamy Gleyed I | Matrix (F2 |) | | Polyvalue | e Below Surface (S8) (LRR K, L) |
| Depleted | Below Dark Surface | (A11) _ | Depleted Matrix | (F3) | | | Thin Darl | k Surface (S9) (LRR K, L) |
| Thick Da | rk Surface (A12) | _ | Redox Dark Su | rface (F6) | | | Iron-Man | ganese Masses (F12) (LRR K, L, R) |
| Sandy M | ucky Mineral (S1) | _ | Depleted Dark S | Surface (F | 7) | | Piedmon | t Floodplain Soils (F19) (MLRA 149B) |
| Sandy G | leyed Matrix (S4) | _ | Redox Depress | ions (F8) | | | Mesic Sp | oodic (TA6) (MLRA 144A, 145, 149B) |
| Sandy R | edox (S5) | | | | | | Red Pare | ent Material (F21) |
| Stripped | Matrix (S6) | | | | | | Very Sha | allow Dark Surface (TF12) |
| Dark Sur | face (S7) (LRR R, M | LRA 149B) | | | | | <u>✓</u> Other (Ex | xplain in Remarks) |
| | | | | | | | | |
| ³ Indicators of | hydrophytic vegetati | on and wetl | and hydrology mus | t be prese | ent, unless | disturbed | or problematic. | |
| Restrictive L | .ayer (if observed): | | | | | | | |
| Type: | | | | | | | | |
| Donth (inc | haa): | | | | | | Hydric Soil P | resent? Yes <u>/</u> No |
| Depth (inc | hes): | | | | | | Tryuno con i | 103 <u></u> 10 |
| rtemanto. | | | | | | | | <u>-</u> |
| | | | | | | | | dside ditch. The soils are |
| assumed | to be hydric b | ased or | n the presend | ce of h | ydroph | ytic veg | getation and | d hydrologic indicators. |
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wasa1042e_w_E



wasa1042e_w_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | |
|--|--|------------------------------|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | | |
| File #: wasa1042 | Date of visit(s): 2020-06-01 | | |
| Location: PLSS: sec 29 T047N R004W | Ecological Landsca Lake Superior Clay Plair | • | |
| Lat: <u>46.523663</u> Long: <u>-90.899887</u> | Watershed: LS09, Lower Bad River | | |
| County: Ashland Town/City/Village: Gingles town | | | |
| SITE DESCRIPTION | | | |
| Soils: | WWI Class: | | |
| Mapped Type(s): | N/A | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes | Wetland Type(s): PEM wet meado | DW . | |
| Field Verified: | | | |
| The soils were not field verified. | Wetland Size: 0.0336 | Wetland Area Impacted 0.0336 | |
| | Vegetation: Plant Community D | Description(s): | |
| Hydrology: The hydrolgic regime is saturated with some areas of standing water present. The major source of hydrology is from surface water. | The wetland is a fresh wet meadow domainted by reed canary grass and wth a few willow species present. | | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | | Functional Value Assessment |
|----|-----|-----------|--|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | N | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | Ν | N | Used for educational or scientific purposes |
| 3 | Υ | Υ | Visually or physically accessible to public |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| _ | | | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | | ., | Wildlife Habitat |
| 1 | N | N | Wetland and contiguous habitat >10 acres |
| 2 | N | N | 3 or more strata present (>10% cover) |
| 3 | N | N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | N | N | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | Occurs in a Joint Venture priority township |
| 6 | N | | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| | IN | N | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| 7 | Ν | N | |
| | | | plans |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | N | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | Ν | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | Ν | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | N | N | Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable |
| | | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| 2 | Ν | N | water levels or high flows – if no, not applicable |
| 3 | N | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | Υ | Υ | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | N | N | Water flow through wetland is NOT channelized |
| 3 | Y | Y | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | N | N N | Within a watershed with <10% wetland |
| 8 | N | N N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | IN | IN | Water Quality Protection |
| | N.I | N.I | Provides substantial storage of storm and floodwater based on previous section |
| 1 | N | N | Basin wetland or constricted outlet |
| 2 | Y | Y | |
| 3 | N | N | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Y | Y | Dense, persistent vegetation |
| 6 | N | N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | Υ | Y | Stormwater or surface water from agricultural land is major hydrology source |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | N | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | N | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | N | N N | Wetland is within a wellhead protection area |
| J | IN | IN | rvenana is within a weiliteau protection area |

Section 1 Comments (Refer to Section 1 numbers) HU-3 the wetland is found in a roadside ditch. WH-10/FA-2/4 the wetland has shallow water present in a small portion of the wetland at the time of the survey and could hold more water after periods of heavy water events. ST-1/WQ-2 the wetland flows through a culvert. ST3/WQ-5 the wetland has dense vegetation present. WQ-7 the wetland is next to a hay field and likely receives stormwater runoff from the field. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments White tailed deer Avian Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | inty intogrity (on olo) | | | |
|--|--|---|--|--|
| | Low | Medium | High | Exceptional |
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 | S2 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-----------------------|-------------|------|-------------------|---|
| Phalaris arundinacea* | | | PEM | Interrupted |
| Carex lacustris | | | PEM | Rare |
| Salix discolor | | | PEM | Rare |
| Equisetum arvense | | | PEM | Rare |
| Poa pratensis | | | PEM | Rare |
| Salix petiolaris | | | PEM | Rare |
| Spiraea alba | | | PEM | Rare |
| Carex gracillima | | | PEM | Barren |
| Cirsium arvense | | | PEM | Barren |
| Fragaria virginiana | | | PEM | Barren |
| Scirpus cyperinus | | | PEM | Barren |
| Solidago gigantea | | | PEM | Barren |
| | | | | |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low due to high cover of invasive species in missing strata.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| • | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| Χ | Х | | M | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| Х | Х | | Н | С | Agriculture – hay |
| | | | | | Agriculture – pasture |
| Х | Х | | М | С | Roads or railroad |
| | | | | | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| Х | V | | N.4 | UC | Removal of herbaceous stratum – mowing, |
| Χ | Х | | M | UC | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| X | Χ | | Н | С | Cover of non-native and/or invasive species |
| | Χ | | L | UC | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is in a roadside ditch and next to a hayfield. The ditch is likely mowed at some point in time. Acro | ss the |
|--|--------|
| street from the wetland is a personal residence. | |
| | |
| | |
| | |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | SIGNIFICANCE | | | | | | |
|-------------------------------|--------------|--------|------|-------------|----------|--|--|
| Γ | Low | Medium | High | Exceptional | NA | | |
| Floristic Integrity | / | | _ | | | | |
| Human Use Values | ✓ | | | | | | |
| Wildlife Habitat | V | | | | | | |
| Fish and Aquatic Life Habitat | / | | | | | | |
| Shoreline Protection | | | | | / | | |
| Flood and Stormwater Storage | ✓ | | | | | | |
| Water Quality Protection | ✓ | | | | | | |
| Groundwater Processes | ✓ | | | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|--|
| Floristic Integrity | The floristic integrity is low due to the dominance of reed canary grass and missing strata. |
| Human Use Values | The wetland is in a roadside ditch. |
| Wildlife Habitat | The wildlife habitat is low due to the monotypic nature of reed canary grass in the herbaceous layer in the small size of the wetland. |
| Fish and Aquatic Life Habitat | Some small areas of standing water were present at the time of the survey which does not appear to provide aquatic habitat but could be more likely after heavy rain events. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is small and the culvert is partially blocked. |
| Water Quality Protection | The wetland is small and does not have a lot of capacity for water filtration. |
| Groundwater Processes | The wetland does not appear to influence groundwater processes. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ashland | Sampling Date: <u>2020-06-01</u> |
|--|---------------------------------------|--|
| Applicant/Owner: Enbridge | | State: Wisconsin Sampling Point: wasa1041e_w |
| Investigator(s): SBR/DGL | | |
| Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, no | ne): <u>Concave</u> Slope (%): <u>0-2%</u> |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46.52 | 3690 Long: -90 |).899574 Datum: WGS84 |
| Soil Map Unit Name: Sanborg-Badriver complex, (| | |
| Are climatic / hydrologic conditions on the site typical for this time | • | |
| Are Vegetation, Soil, or Hydrology signifi | • | |
| Are Vegetation, Soil, or Hydrology natura | | |
| SUMMARY OF FINDINGS – Attach site map sho | | |
| | le the Complet Area | , , , , , , , , , , , , , , , , , , , |
| Hydrophytic Vegetation Present? Yes ✓ No | within a Watland? | Yes <u> </u> |
| Hydric Soil Present? Yes ✓ No Wetland Hydrology Present? Yes ✓ No No | | d Site ID: |
| Remarks: (Explain alternative procedures here or in a separati | , , , | I Site ID. |
| The wetland is a small depression found in | n a roadside ditch. A part | ially blocked culvert seems |
| functionally impaired and it's likely the wet | | |
| unobstructed and let water flow through. T | he wetland feature is dor | minated by lake sedge but the |
| community as whole is more representativ | e of a fresh wet meadow | '- |
| | | |
| HYDROLOGY | | |
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that a | apply) | Surface Soil Cracks (B6) |
| ✓ Surface Water (A1) Water-St | ained Leaves (B9) | Drainage Patterns (B10) |
| High Water Table (A2) Aquatic F | Fauna (B13) | Moss Trim Lines (B16) |
| Saturation (A3) Marl Dep | | Dry-Season Water Table (C2) |
| | n Sulfide Odor (C1) | Crayfish Burrows (C8) |
| | Rhizospheres on Living Roots (C3) | Saturation Visible on Aerial Imagery (C9) |
| | e of Reduced Iron (C4) | Stunted or Stressed Plants (D1) |
| | ron Reduction in Tilled Soils (C6) | ✓ Geomorphic Position (D2) |
| | k Surface (C7) | Shallow Aquitard (D3) |
| | xplain in Remarks) | Microtopographic Relief (D4) |
| Sparsely Vegetated Concave Surface (B8) | | <u> </u> FAC-Neutral Test (D5) |
| Field Observations: | rahas). 1 | |
| Surface Water Present? Yes No Depth (i Water Table Present? Yes No Depth (i | • | |
| Saturation Present? Yes No V Depth (i | | Hydrology Present? Yes ✓ No |
| (includes capillary fringe) | wettand i | rydrology i resent: Tes NO |
| Describe Recorded Data (stream gauge, monitoring well, aeria | photos, previous inspections), if ava | ailable: |
| | | |
| Remarks: | | |
| The hydrologic regime is saturated. | | |
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| VEGETATION | Use scientific names | of plants |
|--------------|----------------------|------------|
| VEGETATION - | use scienilic names | or biants. |

| 2 | Sampling Point: wasa1041e_w |
|--|--|
| 1. | Liominance lest worksheet. |
| 2. | Number of Dominant Species |
| 3. | |
| 4 | Total Hambol of Dominant |
| Prevalence Index worksheet: Total % Cover of: | |
| Prevalence Index worksheet: Total % Cover of: Multiply by: | That Are ODI FACIAL TAGE 100 (A/D) |
| Total % Cover of: | |
| Sapling/Shrub Stratum (Plot size: 15) 1. Spiraea alba 5 Y FACW 2. Cornus alba 5 Y FACW 3. Salix petiolaris 5 Y FACW 4. Rhamnus cathartica 2 N FAC 5. Salix bebbiana 2 N FACW 6. — — Herb Stratum (Plot size: 5 7. — — — Hydrophytic Vegetation Indicators: 8. — — — — Hydrophytic Vegetation Indicators: 9. — | |
| 1. Spiraea alba | = Total Cover OBL species x 1 = |
| FACU species 15 | FACW species x 2 = 54 |
| Salix petiolaris Salix petiolaris Salix petiolaris Salix petiolaris Salix petiolaris Salix bebbiana Salix petiolaris Salix bebbiana Salix beb | I IACVVI · |
| 3. Salix petiolaris 4. Rhamnus cathartica 2. N. FAC 5. Salix bebbiana 6. Prevalence Index = B/A = 1.64 Hydrophytic Vegetation Indicators: 2. Poa pratensis 3. Carex stipata 4. Phalaris arundinacea 5. N. FACW 5. Carex castanea 6. Provide sure indicators: 2. Poa pratensis 3. Carex castanea 6. Provide sure indicators: 2. Poa pratensis 5. N. OBL 5. N. FACW 6. Providence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide sure data in Remarks or on a separate sheet) 5. N. FACW 6. Providence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide sure data in Remarks or on a separate sheet) 5. N. FACW 6. Providence Index is ≤3.0¹ 1 Indicators of hydric soil and wetland hydrology be present, unless disturbed or problematic. 6. Providence Index is ≤3.0¹ 1 Indicators of hydric soil and wetland hydrology be present, unless disturbed or problematic. 7. Providenatic Hydrophytic Vegetation¹ (Explatations) 1 Indicators of hydric soil and wetland hydrology be present, unless disturbed or problematic. 7. Providenatic Hydrophytic Vegetation¹ (Explatations) 1 Indicators of hydric soil and wetland hydrology be present, unless disturbed or problematic. 7. Providenatic Hydrophytic Vegetation¹ (Explatations) 1 Indicators of hydric soil and wetland hydrology be present, unless disturbed or problematic. 7. Providenatic Hydrophytic Vegetation¹ (Explatations) 1 Indicators of hydric soil and wetland hydrology be present, unless disturbed or problematic. 8. Provident Hydrophytic Vegetation Indicators 1 Indicators of hydric soil and wetland hydrology be present, unless disturbed or problematic. 9. Providenations | Y FACAVI |
| 4. Rhamnus cathartica 2. N FACW 5. Salix bebbiana 2. N FACW 6. Hydrophytic Vegetation Indicators: 7. | V ΕΔ(`\Λ/ |
| 6 | <u>NFAC</u> |
| 7 | N FACW Prevalence Index = B/A =1.64 |
| 19 | Hydrophytic Vegetation Indicators: |
| Herb Stratum (Plot size: 5) 1. Carex lacustris 70 Y OBL 2. Poa pratensis 15 N FACU 5. OBL 7. O | <u> </u> |
| Herb Stratum (Plot size: 5) 1. Carex lacustris 70 Y OBL 2. Poa pratensis 15 N FACU 5 N OBL 4. Phalaris arundinacea 5 N FACW 5. Carex castanea 5 N FACW 5. Carex castanea 5 N FACW 5. Carex castanea 5 N FACW 6. | g = Lotal Cover — |
| 1. Carex lacustris 2. Poa pratensis 3. Carex stipata 4. Phalaris arundinacea 5. N FACW 5. Carex castanea 6. Tree – Woody plants 3 in. (7.6 cm) or more in d at breast height (DBH), regardless of height. 8. Sapling/shrub – Woody plants less than 3 in. Definitions of size, and woody plants less than 3.28 ft tall. 10. Herb – All herbaceous (non-woody) plants, regardless of size, and woody vines greater than 3.28 ft tall. 10. Woody vines – All woody vines greater than 3.28 ft tall. | - |
| 3. Carex stipata 4. Phalaris arundinacea 5 N FACW 5. Carex castanea 5 N FACW 5. Carex castanea 5 N FACW 6. Tree – Woody plants 3 in. (7.6 cm) or more in d at breast height (DBH), regardless of height. 8. Sapling/shrub – Woody plants less than 3 in. Dand greater than or equal to 3.28 ft (1 m) tall. 10. Herb – All herbaceous (non-woody) plants, regardless than 3.28 ft tall. 11. Woody vines – All woody vines greater than 3.3 |) Y OBL data in Remarks or on a separate sheet) |
| 4. Phalaris arundinacea 5 N FACW 5. Carex castanea 5 N FACW Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in d at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. Dand 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 3.3. | N FACU Problematic Hydrophytic Vegetation ¹ (Explain) |
| 4. Phalaris arundinacea 5 N FACW be present, unless disturbed or problematic. 5. Carex castanea 5 N FACW Definitions of Vegetation Strata: 6. Tree – Woody plants 3 in. (7.6 cm) or more in d at breast height (DBH), regardless of height. 8. Sapling/shrub – Woody plants less than 3 in. D and greater than or equal to 3.28 ft (1 m) tall. 10. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 11. Woody vines – All woody vines greater than 3.3 | N OBL Indicators of budge sail and watland budge must |
| 6. Tree – Woody plants 3 in. (7.6 cm) or more in d at breast height (DBH), regardless of height. 8. Sapling/shrub – Woody plants less than 3 in. D and greater than or equal to 3.28 ft (1 m) tall. 10. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 11. Woody vines – All woody vines greater than 3.3 | indicators of flydric soil and wetland flydrology must |
| 7 | N FACW Definitions of Vegetation Strata: |
| 7 | Tree – Woody plants 3 in (7.6 cm) or more in diameter |
| 9. and greater than or equal to 3.28 ft (1 m) tall. 10. Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall. 12. Woody vines – All woody vines greater than 3.3. | |
| 9. and greater than or equal to 3.28 ft (1 m) tall. 10. Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall. 12. Woody vines – All woody vines greater than 3.3 | Sapling/shrub – Woody plants less than 3 in. DBH |
| of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.3.28 ft tall. | and greater than or equal to 3.28 ft (1 m) tall. |
| 12. Woody vines – All woody vines greater than 3.3. | |
| | of size, and woody plants less than 3.28 ft tall. |
| I DEIGHT | Woody vines – All woody vines greater than 3.28 ft in height. |
| 100 = Total Cover | O = Total Cover |
| Woody Vine Stratum (Plot size: 30) | |
| 1 | |
| 2 | |
| 3 Hydrophytic | |
| 4 Vegetation Present? Yes <u>v</u> No | |
| = Total Cover | = Total Cover |
| Remarks: (Include photo numbers here or on a separate sheet.) The sample point is fairly representative of the roadside ditch. Other areas of the wetland have greater cover of reed canary grass and less shrub cover. | |

SOIL Sampling Point: wasa1041e_w

| Profile Descriptio | n: (Describe to | o the depth | n needed to docur | nent the i | ndicator | or confirm | the absence of in | dicators.) |
|----------------------------------|----------------------------------|-------------|--------------------|---------------------|-------------------|------------------|-------------------------------------|--|
| Depth | Matrix | | | x Features | 3 | | | |
| (inches) C | olor (moist) | <u>%</u> | Color (moist) | % | Type ¹ | Loc ² | <u>Texture</u> | Remarks |
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| ¹ Type: C=Concent | tration, D=Deple | etion, RM=F | Reduced Matrix, MS | S=Masked | Sand Gra | ains. | ² Location: PL: | =Pore Lining, M=Matrix. |
| Hydric Soil Indica | itors: | | | | | | | roblematic Hydric Soils ³ : |
| Histosol (A1) | | _ | Polyvalue Belov | w Surface | (S8) (LRF | RR, | 2 cm Muck | (A10) (LRR K, L, MLRA 149B) |
| Histic Epipedo | on (A2) | | MLRA 149B) |) | | | Coast Prairi | e Redox (A16) (LRR K, L, R) |
| Black Histic (A | ۸3) | _ | Thin Dark Surfa | ice (S9) (L | .RR R, ML | RA 149B) | 5 cm Mucky | Peat or Peat (S3) (LRR K, L, R) |
| Hydrogen Sulf | | _ | Loamy Mucky N | | | , L) | | e (S7) (LRR K, L) |
| Stratified Laye | | _ | Loamy Gleyed I | |) | | | elow Surface (S8) (LRR K, L) |
| - | w Dark Surface | (A11) _ | Depleted Matrix | | | | | urface (S9) (LRR K, L) |
| Thick Dark Su | , , | _ | Redox Dark Su | . , | | | _ | nese Masses (F12) (LRR K, L, R) |
| Sandy Mucky | | _ | Depleted Dark S | | 7) | | | oodplain Soils (F19) (MLRA 149B) |
| Sandy Gleyed | | _ | Redox Depress | ions (F8) | | | | ic (TA6) (MLRA 144A, 145, 149B) |
| Sandy Redox | | | | | | | | Material (F21) |
| Stripped Matri | x (50) (S7) (LRR R, M | I D A 140D\ | | | | | very Shallo <u>✓</u> Other (Expl | w Dark Surface (TF12) |
| Dark Surface (| (37) (LKK K, W | LKA 149D) | | | | | V Other (Expir | all III Relliaiks) |
| ³ Indicators of hydro | onhytic vegetati | on and wetl | and hydrology mus | t he prese | ent unless | disturbed | or problematic | |
| Restrictive Layer | | | and hydrology mad | 7. 50 p. 000 | 7111, 0111000 | diotarboa | l problematio. | |
| Type: | (0500. 104). | | | | | | | |
| | | | | | | | United a Coll Days | 10 V / N |
| Depth (inches): | | | | | | | Hydric Soil Pres | ent? Yes <u>/</u> No |
| Remarks: | | | | | | | | |
| The soils we | re not sam | pled du | e to the loca | tion of | the we | tland w | ithin a roadsi | de ditch. The soils are |
| assumed to l | be hydric b | ased or | n the presend | ce of h | ydroph | ytic vec | getation and I | nydrologic indicators. |
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wasa1041e_w_E



wasa1041e_w_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | |
|---|--|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | |
| File #: wasa1041 | Date of visit(s): 2020-06-01 | |
| Location: PLSS: sec 29 T047N R004W | Ecological Landsca Lake Superior Clay Plain | • |
| Lat: 46.523684 Long: -90.899524 County: Ashland Town/City/Village: Gingles town | Watershed: LS09, Lower Bad River | |
| SITE DESCRIPTION | | |
| Soils: Mapped Type(s): Sanborg-Badriver complex, 0 to 6 percent slopes | WWI Class: N/A Wetland Type(s): PEM Wet meado | DW. |
| Field Verified: | T EW Wet meade | ,,,, |
| The soils were not field verified. | Wetland Size: 0.0277 | Wetland Area Impacted 0.0277 |
| Hydrology: The hydrologic regime is saturated. The major source of hydrology is from surface water. | by lake sedge ar the presence of | rescription(s): resh wet meadow dominated and reed canary grass and with some shrub species such as and meadow willow. |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | | Functional Value Assessment |
|----|-----|-----------|--|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | N | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | Ν | N | Used for educational or scientific purposes |
| 3 | Υ | Υ | Visually or physically accessible to public |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| _ | | | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | | ., | Wildlife Habitat |
| 1 | N | N | Wetland and contiguous habitat >10 acres |
| 2 | N | N | 3 or more strata present (>10% cover) |
| 3 | N | N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | N | N | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | Occurs in a Joint Venture priority township |
| 6 | N | | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| | IN | N | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| 7 | Ν | N | |
| | | | plans |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | N | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | Ν | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | Ν | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | N | N | Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable |
| | | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| 2 | Ν | N | water levels or high flows – if no, not applicable |
| 3 | N | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | Υ | Υ | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | N | N | Water flow through wetland is NOT channelized |
| 3 | Y | Y | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | N | N N | Within a watershed with <10% wetland |
| 8 | N | N N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | IN | IN | Water Quality Protection |
| | N.I | N.I | Provides substantial storage of storm and floodwater based on previous section |
| 1 | N | N | Basin wetland or constricted outlet |
| 2 | Y | Y | |
| 3 | N | N | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Y | Y | Dense, persistent vegetation |
| 6 | N | N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | Υ | Y | Stormwater or surface water from agricultural land is major hydrology source |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | N | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | N | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | N | N N | Wetland is within a wellhead protection area |
| J | IN | IN | rvenana is within a weiliteau protection area |

Section 1 Comments (Refer to Section 1 numbers) HU-3 the wetland is located in a roadside ditch. WH-10/FA-2/4 the wetland has shallow water present in a small portion of the wetland at the time of the survey and could hold more water after periods of heavy water events. ST-1 the wetland flows through a culvert. ST3/WQ-5 the wetland has dense vegetation present. WQ-7 the wetland is next to a hay field and likely receives stormwater runoff from the field. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments White tailed deer Υ Avian Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% 🗸 | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 🗌 | S2 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Common Name | C of C | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-------------|-------------|-------------------|---|
| | | PEM | Patchy |
| | | PEM | Patchy |
| | | PEM | Rare |
| | | PEM | Barren |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | Common Name | | C communities PEM PEM PEM PEM |

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low due to invasive species presence and missing strata.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| X | Х | | М | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| Х | Х | | Н | С | Agriculture – hay |
| | | | | | Agriculture – pasture |
| Х | Х | | Н | С | Roads or railroad |
| | | | | | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | | | | | Removal of herbaceous stratum – mowing, |
| X | X | | M | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Х | Х | | М | С | Cover of non-native and/or invasive species |
| | Х | | М | С | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | , |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is found in a likely mowed roadside ditch and next to a hay field. Across the street from the wetland is a |
|--|
| private residence. Invasive species are present in the wetland feature. |
| |
| |
| |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|--------|-------------|-------------|----------|
| Γ | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | / | | _ | | |
| Human Use Values | ✓ | | | | |
| Wildlife Habitat | / | | | | |
| Fish and Aquatic Life Habitat | / | | | | |
| Shoreline Protection | | | | | / |
| Flood and Stormwater Storage | ✓ | | | | |
| Water Quality Protection | ✓ | | | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|--|
| Floristic Integrity | The wetland is small with one species dominant in the herbaceous layer and a small shrub layer presence. |
| Human Use Values | The wetland is in a roadside ditch. |
| Wildlife Habitat | The wetland is small and beside a road. |
| Fish and Aquatic Life Habitat | The wetland could support aquatic invertebrates but only after large rain events. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is small and the culvert is nearly blocked. |
| Water Quality Protection | The wetland is small and can only filter small amounts of water. |
| Groundwater Processes | The wetland likely serves as groundwater recharge |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project City/ | County: Ashland Sampling Date: 2020-06-01 |
|--|---|
| • | State: Wisconsin Sampling Point: wasa1041_u |
| Investigator(s): SBR/DGL Sec | |
| | elief (concave, convex, none): None Slope (%): 0-2% |
| | Long: <u>-90.899637</u> Datum: <u>WGS84</u> |
| | ercent slopes NWI classification: |
| Are climatic / hydrologic conditions on the site typical for this time of year? | |
| | urbed? Are "Normal Circumstances" present? Yes _ ✓ No |
| Are Vegetation, Soil, or Hydrology naturally disk | |
| | |
| SUMMARY OF FINDINGS – Attach site map showing sa | mpling point locations, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes No | Is the Sampled Area |
| Hydric Soil Present? Yes No | within a Wetland? Yes No |
| Wetland Hydrology Present? Yes No | If yes, optional Wetland Site ID: |
| Remarks: (Explain alternative procedures here or in a separate report.) The upland is located in a hay field and is domina | ted by smooth brome and Kentucky bluegrass |
| The upland point is also shared with wasa1042e. | ted by Sillouth brothe and Renderly bluegrass. |
| The upland point is also shared with wasa 1042e. | |
| | |
| | |
| | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | |
| Surface Water (A1) Water-Stained Leav | |
| High Water Table (A2) Aquatic Fauna (B13 | |
| Saturation (A3) Marl Deposits (B15) | |
| Water Marks (B1) Hydrogen Sulfide O | |
| | eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) |
| Drift Deposits (B3) Presence of Reduce Algal Mat or Crust (B4) Recent Iron Reduct | • |
| Iron Deposits (B5) Thin Muck Surface | |
| Indit Deposits (B0) Thin Mack Cartage | |
| Sparsely Vegetated Concave Surface (B8) | FAC-Neutral Test (D5) |
| Field Observations: | |
| Surface Water Present? Yes No _ 🗸 Depth (inches): | |
| Water Table Present? Yes No _v _ Depth (inches): | |
| Saturation Present? Yes Nov _ Depth (inches): | Wetland Hydrology Present? Yes No |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, principle (includes capillary fringe) | revious inspections) if available: |
| Describe resorded Bata (stream gauge, monitoring wen, dental priotos, pr | eviduo inopeditorio), ii dvalidore. |
| | |
| Remarks: No indicators of wetland hydrology were observed | 4 |
| The indicators of wetland hydrology were observed | ١. |
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| I control of the cont | |

VEGETATION – Use scientific names of plants.

| Total Co | ver UPL FACU FACU | Dominance Test worksheet: Number of Dominant Species 0 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B) Prevalence Index worksheet: |
|------------------|--|---|
| Total Co | ver UPL FACU FACU | That Are OBL, FACW, or FAC:(A) Total Number of Dominant Species Across All Strata: |
| Total Co | ver Ver Ver Ver Ver Ver | Species Across All Strata: |
| Total Co | ver UPL FACU FACU | Percent of Dominant Species That Are OBL, FACW, or FAC: Description |
| Total Co | ver UPL FACU FACU | That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 |
| Total Co | ver Ver Ver Ver Ver Ver FACU FACU | Prevalence Index worksheet: |
| Total Co | ver Ver Ver Ver Ver Ver FACU FACU | Total % Cover of: OBL species O |
| Total Co | ver ver ver Ver Ver FACU FACU | OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 4 x 3 = 12 FACU species 59 x 4 = 236 UPL species 37 x 5 = 185 Column Totals: 100 (A) 433 (B) Prevalence Index = B/A = 4.33 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) |
| Total Co | ver UPL FACU FACU | FACW species |
| Total Co | ver UPL FACU FACU | FAC species 4 x 3 = 12 FACU species 59 x 4 = 236 UPL species 37 x 5 = 185 Column Totals: 100 (A) 433 (B) Prevalence Index = B/A = 4.33 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) |
| Total Co | ver UPL FACU FACU | FACU species59 x 4 =236 |
| Total Co | ver UPL FACU FACU | UPL species 37 x 5 = 185 Column Totals: 100 (A) 433 (B) Prevalence Index = B/A = 4.33 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) |
| Total Co | ver UPL FACU FACU | Column Totals: (A) (B) Prevalence Index = B/A = (B) Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) |
| Total Co | ver UPL FACU FACU | Prevalence Index = B/A = |
| Total Co | ver UPL FACU FACU | Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) |
| Total Co | ver UPL FACU FACU | 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) |
| Y Y N | UPL FACU FACU | 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) |
| Y Y Y N | UPL FACU FACU | 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) |
| Y Y N | UPL FACU FACU | 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) |
| | FACU FACU | data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) |
| | FACU FACU | Problematic Hydrophytic Vegetation ¹ (Explain) |
| | FACU | 1 Indicators of hydric coil and watland hydrology must |
| | | Indicators of hydric coil and watland hydrology must |
| | FACU | be present, unless disturbed or problematic. |
| Ν | FACU | · · · · · · · · · · · · · · · · · · · |
| | | Definitions of Vegetation Strata: |
| | UPI | 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 or equal to 3.28 ft (1 m) tall. |
| | FAC | Herb – All herbaceous (non-woody) plants, regardless |
| | 1710 | of size, and woody plants less than 3.28 ft tall. |
| | FΔC | Woody vines – All woody vines greater than 3.28 ft in |
| | | height. |
| TOTAL CO | vei | |
| | | |
| | | |
| | | |
| | · | Hydrophytic Vegetation |
| | | Present? Yes No _ ✓ |
| Total Co | ver | |
| | N N N Total Co | N UPL N FACU N FAC N FAC |

SOIL Sampling Point: wasa1041_u

| Depth Matrix Redox Features Color (moist) % Type¹ Loc² Texture Remarks |
|--|
| 0-3 5YR 3/3 100 0 SIC |
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| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : |
| Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) |
| Histic Epipedon (A2) |
| Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) |
| Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) |
| Depleted Below Bank Garlade (XYY) Depleted Madhk (10) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) |
| Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B |
| Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) |
| Stripped Matrix (S6) Very Shallow Dark Surface (TF12) |
| Dark Surface (S7) (LRR R, MLRA 149B) 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 _ ✓ |
| Depth (inches): Hydric Soil Present? Yes No V |
| Clayey soils with no redox features observed. |
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wasa1041_u_SE



wasa1041_u_SW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation F | Proiect | City/C | ounty: Ashl | and | Sam | pling Date: 20 | 020-05-30 |
|--|--------------------|--|------------------|----------------|-------------------------------------|----------------|-------------|
| Applicant/Owner: Enbridge | - | | | | | | |
| Investigator(s): SBR/DGL | | | | | | | |
| Landform (hillslope, terrace, etc.): Dep | | | | | | | (%): 0-2% |
| Subregion (LRR or MLRA): Northcentra | | | | | | | |
| Soil Map Unit Name: Sanborg-Bac | | | | | | | |
| Are climatic / hydrologic conditions on the | • | • | • | | | | |
| Are Vegetation, Soil, or H | | _ | | | | | No |
| | | | | | | | NO |
| Are Vegetation, Soil, or H | | | | | xplain any answers in R | ŕ | |
| SUMMARY OF FINDINGS – Att | tach site map | showing sam | pling poin | t location | ns, transects, imp | ortant feat | ures, etc. |
| Hydrophytic Vegetation Present? Hydric Soil Present? | Yes Yes | No | | tland? | Yes <u> </u> ✓ N | | |
| Wetland Hydrology Present? Remarks: (Explain alternative procedure) | Yes | | If yes, option | al Wetland | Site ID: | | |
| The roadside portion is dor greater prevalence of com | - | _ | | | The portion that | cuts in ha | as a |
| HYDROLOGY | | | | | | | |
| Wetland Hydrology Indicators: | | | | | Secondary Indicators (r | | o required) |
| Primary Indicators (minimum of one is r | | | | | Surface Soil Crack | | |
| Surface Water (A1) | | ater-Stained Leaves | | | Drainage Patterns | | |
| High Water Table (A2) Saturation (A3) | | quatic Fauna (B13) arl Deposits (B15) | | | Moss Trim Lines (E Dry-Season Water | | |
| Water Marks (B1) | | /drogen Sulfide Odd | or (C1) | | Crayfish Burrows (| | |
| Sediment Deposits (B2) | | kidized Rhizosphere | | | Saturation Visible of | | erv (C9) |
| Drift Deposits (B3) | | esence of Reduced | _ | | Stunted or Stresse | _ | ., () |
| Algal Mat or Crust (B4) | | ecent Iron Reduction | | | ✓ Geomorphic Position | | |
| Iron Deposits (B5) | Th | nin Muck Surface (C | 27) | | Shallow Aquitard (I | | |
| Inundation Visible on Aerial Imager | ry (B7) Ot | her (Explain in Rem | narks) | - | Microtopographic F | Relief (D4) | |
| Sparsely Vegetated Concave Surfa | ace (B8) | | | - | FAC-Neutral Test (| (D5) | |
| Field Observations: | | | | | | | |
| | | epth (inches): | | | | | |
| | | epth (inches): | | | | | |
| Saturation Present? Yes (includes capillary fringe) | No <u> </u> | epth (inches): | ' | Wetland Hy | ydrology Present? Y | ′es <u> </u> | No |
| Describe Recorded Data (stream gauge | e, monitoring well | l, aerial photos, prev | vious inspection | ons), if avail | able: | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| The hydrologic regime is s | aturated. Tl | here is some | standing | water p | resent in some | parts of the | he |
| wetland. | | | | - | | | |
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| | VEGETATION - | - Use | scientific | names | of i | olants. |
|--|---------------------|-------|------------|-------|------|---------|
|--|---------------------|-------|------------|-------|------|---------|

| | | | | Sampling Point: <u>wasa039e_xv</u> |
|-------------------------------------|--------------|-------------------|-------------|---|
| Tree Stratum (Plot size:30) | | Dominant Species? | | Dominance Test worksheet: |
| | | | | Number of Dominant Species That Are OBL, FACW, or FAC:4 (A) |
| | | | | Total Number of Dominant |
| · | | | | Species Across All Strata:5 (B) |
| · <u> </u> | | | | Percent of Dominant Species |
| i | | | | That Are OBL, FACW, or FAC: 80 (A/B |
| S | | | | Prevalence Index worksheet: |
| | | | | Total % Cover of: Multiply by: |
| | 0 | = Total Co | ver | OBL species0 x 1 =0 |
| Sapling/Shrub Stratum (Plot size:) | | | | FACW species x 2 = 140 |
| Salix petiolaris | _ <u>10</u> | <u>Y</u> | <u>FACW</u> | FAC species 30 x 3 = 90 FACU species 15 x 4 = 60 |
| Rhamnus cathartica | _ <u>5</u> _ | Y | <u>FAC</u> | UPL species x 5 = 0 |
| k | | | | Column Totals: 115 (A) 290 (B) |
| | | | | |
| | | | | Prevalence Index = B/A = 2.5217391304347827 |
| i. | | | | Hydrophytic Vegetation Indicators: |
| · | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | 15 | = Total Co | ver | 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5) | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| . <u>Solidago gigantea</u> | 30 | Y | <u>FACW</u> | data in Remarks or on a separate sheet) |
| . <u>Phalaris arundinacea</u> | 20 | <u>Y</u> | <u>FACW</u> | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Carex cf blanda</u> | 10 | N | <u>FAC</u> | The disease of hydric call and watered hydrology moves |
| <u>Equisetum arvense</u> | 10 | N | FAC | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| s. <u>Carex castanea</u> | 10 | N | <u>FACW</u> | Definitions of Vegetation Strata: |
| s. <u>Poa pratensis</u> | 10 | Y | <u>FACU</u> | |
| . <u>Rumex crispus</u> | 5 | N | FAC | Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height. |
| 3. <u>Lotus corniculatus</u> | 5 | N | <u>FACU</u> | Sapling/shrub – Woody plants less than 3 in. DBH |
|) | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 1 | | | | of size, and woody plants less than 3.28 ft tall. |
| 2 | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | 100 | = Total Co | ver | height. |
| Noody Vine Stratum (Plot size: 30) | | | | |
| • | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic |
| 4 | | | | Vegetation Present? Yes ✓ No |
| | 0 | = Total Co | ver | resent: res_v No |

SOIL Sampling Point: wasa039e_xw

| Profile Desc | ription: (Describe t | o the depth | needed to docur | nent the i | ndicator | or confirm | the absence of inc | dicators.) |
|---------------|-----------------------|--------------|-----------------------------------|---------------|-------------------|------------------|-----------------------|--|
| Depth | Matrix | | | x Features | | | | |
| (inches) | Color (moist) | <u></u> % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| | | | | | | | | |
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| | oncentration, D=Deple | etion, RM=R | educed Matrix, MS | S=Masked | Sand Gra | ains. | | Pore Lining, M=Matrix. |
| Hydric Soil I | | | | | | _ | | roblematic Hydric Soils ³ : |
| Histosol | | _ | _ Polyvalue Belov | | (S8) (LRF | RR, | | (A10) (LRR K, L, MLRA 149B) |
| | ipedon (A2) | | MLRA 149B) | | DD D MI | DA 440D) | | e Redox (A16) (LRR K, L, R) |
| Black His | n Sulfide (A4) | _ | _ Thin Dark Surfa _ Loamy Mucky N | | | | | Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L) |
| | Layers (A5) | | _ Loamy Gleyed I | | | , L) | | elow Surface (S8) (LRR K, L) |
| | l Below Dark Surface | (A11) | Depleted Matrix | | , | | | urface (S9) (LRR K, L) |
| | rk Surface (A12) | | _ Redox Dark Su | | | | | nese Masses (F12) (LRR K, L, R) |
| · | ucky Mineral (S1) | _ | _ Depleted Dark S | | 7) | | - | oodplain Soils (F19) (MLRA 149B) |
| - | leyed Matrix (S4) | | _ Redox Depress | | , | | | ic (TA6) (MLRA 144A, 145, 149B) |
| - | edox (S5) | | | , , | | | | Material (F21) |
| Stripped | Matrix (S6) | | | | | | Very Shallov | w Dark Surface (TF12) |
| Dark Sur | face (S7) (LRR R, M | LRA 149B) | | | | | ∠ Other (Explanation) | ain in Remarks) |
| _ | | | | | | | | |
| | hydrophytic vegetati | on and wetla | and hydrology mus | t be prese | ent, unless | disturbed | or problematic. | |
| Restrictive L | .ayer (if observed): | | | | | | | |
| Type: | | | <u></u> | | | | | |
| Depth (inc | ches): | | | | | | Hydric Soil Pres | ent? Yes <u>/</u> No |
| Remarks: | | | | | | | | |
| The soils | were not sam | pled du | e to the loca | tion of | the we | tland w | ithin a roadsi | de ditch. The soils are |
| | to be hydric b | | | | | | | |
| accarrica | to be riyane t | aooa oi | i tiro idiridoce | ipo pot | Jilion a | ina aon | mant vogota | |
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wasa039e_xw_E



wasa039e_xw_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | |
|---|---|------------------------------|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | | |
| File #: wasa039_x | Date of visit(s): 2020-05-30 | | |
| Location: PLSS: sec 29 T047N R004W | Ecological Landsca Lake Superior Clay Plain | • | |
| Lat: 46.523662 Long: -90.893950 County: Ashland Town/City/Village: Gingles town | Watershed: LS09, Lower Bad River | | |
| SITE DESCRIPTION | | | |
| Soils: Mapped Type(s): | WWI Class: N/A | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes. Odanah silt loam, 6 to 15 percent slopes. Field Verified: | Wetland Type(s): PEM - fresh wet meadow | | |
| The soils were not field verified. Soils could not be sampled due to the wetland's location within a | Wetland Size: 0.4062 | Wetland Area Impacted 0.4062 | |
| roadside ditch. | Vegetation: | escription(s): | |
| Hydrology: The hydrolgic regime is saturated. The major water input source is surface water and runoff from the upslope road. | Plant Community Description(s): The wetland is a wet meadow located in a roadside ditch, with a shrub presence of common buckthorn and meadow willow. The herbaceous layer is comprised of sedge species, giant goldenrod, and reed canary grass. | | |

| SITE MAP |
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SECTION 1: Functional Value Assessment

| HU Y/N Potential Human Usa Values: recreation, culture, education, science, natural scenic beauty | | | | Functional Value Assessment |
|--|-------------|------|-----------|--|
| 2 | HU | Y/N | Potential | |
| 3 | 1 | N | N | |
| N | 2 | Ν | N | Used for educational or scientific purposes |
| S | 3 | Υ | Υ | Visually or physically accessible to public |
| S | 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| 6 N N Supports or provides habitat for endangered, threatened or special concern species 7 N N N In or adjacent to archaeological or cultural resource site WH WH Wildlife Habitat 1 N N Wetland and contiguous habitat >10 acres 2 N N N 3 or more stratal gresent (>10% cover) 3 N N Within or adjacent to habitat corridor or established wildlife habitat area 4 N N N Of more brain anatural land cover >50%(south) 75% (north) intact 5 N N Cocurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex,etc.) 7 Y Supports or provides habitat for SGCN or birds listed in the Wi All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present >45 days 10 N N Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 11 N N Seasonally exposed mudflats present 11 N N Seasonally exposed mudflats present 11 N N Standing water provides habitat for area (urban, agricultural, etc.) 11 N N Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Standing water provides habitat for amphibians and aquatic invertebrates 13 N N N Standing water provides habitat for amphibians and aquatic invertebrates 14 N N Standing water provides habitat for amphibians and aquatic invertebrates 15 N N Standing water provides habitat for amphibians and aquatic invertebrates 16 N N N Natural Heritage inventory (NHI) listed aquatic species within aquatic system 17 N N Not provides habitat for amphibians and aquatic invertebrates 18 N N N Notarral Heritage inventory (NHI) listed aquatic species within aquatic system 19 N N Standing water provides habitat for amphibians and aquatic invertebrates 10 N N Notarral Heritage inventory (NHI) listed aquatic species within aquatic system 10 N N Densely rooted emergent or woody vegetation 11 N N N Densely rooted emergent or woody vegetation | _ | | | In or adjacent to RED FLAG areas |
| 7 | 5 | N | N | List: |
| 7 | 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| WH | 7 | | | |
| 1 N N Welland and contiguous habital >10 acres 2 N N N 3 or more strata present (>10% cover) 3 N N N Within or adjacent to habitat corridor or established wildlife habitat area 4 N N N 100 m buffer − natural land cover ≥50% (south) 75% (north) intact 5 N N Occurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex,etc.) 7 Y Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N N Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) Fish and Aquatic Life Habitat 1 N N Welland is connected or contiguous with perennial stream or lake 2 N N N Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N N Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 2 N N Potential for errosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable 3 N N Densely rotoete emergent or woody vegetation 5 Storm and Floodwater Storage 1 Y Y Dense, persistent vegetation 2 N N Weltin a watersflow of the runoff from contributing area from a 2-year 24-hour storm event WQ Water flow through wetland is NOT channelized 1 N N Provides substantial storage of storm and floodwater based on previous section 2 N N Vegetation before the runoff from contributing area from a 2-year 24-hour storm event Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 N N Vegetated wetland associated with a lake or stream 4 N N Vegetated wetland associate | WH | | ., | |
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| 1 Y Y Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 N Y Water flow through wetland is NOT channelized 3 Y Y Dense, persistent vegetation 4 N N Evidence of flashy hydrology 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with ≤10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 N Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y | | Ν | N | Densely rooted emergent or woody vegetation |
| 2 N Y Water flow through wetland is NOT channelized 3 Y Y Dense, persistent vegetation 4 N N Evidence of flashy hydrology 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with <10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 N Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | ST | | | Storm and Floodwater Storage |
| 3 Y Y Dense, persistent vegetation 4 N N Evidence of flashy hydrology 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with ≤10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 N Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N | 1 | Υ | Υ | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 3 Y Y Dense, persistent vegetation 4 N N Evidence of flashy hydrology 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with ≤10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 N Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N | 2 | N | Υ | Water flow through wetland is NOT channelized |
| 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with <10% wetland | 3 | | | Dense, persistent vegetation |
| 5 Y Y Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with <10% wetland | 4 | Ν | N | Evidence of flashy hydrology |
| 6 N N N Impervious surfaces cover >10% of land surface within the watershed 7 N N N Within a watershed with ≤10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 N Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | 5 | | | |
| 7 N N Within a watershed with ≤10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 N Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N N Natural land cover in 100m buffer area < 50% | 6 | | | |
| 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 N Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% | | | | |
| WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 N Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% | | | | |
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| 3 N Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N Wetland soils are organic | | | | |
| 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
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| 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 7 Y Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% | | | | |
| 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | - | | | |
| GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | - | IN | IN IN | |
| 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 4 N N Wetland soils are organic | | Ν | N | |
| | 3 | N | N | |
| 5 N N Wetland is within a wellhead protection area | | N | N | |
| | 5 | N | N | Wetland is within a wellhead protection area |

Section 1 Comments (Refer to Section 1 numbers) HU-3: The wetland is located in a roadside ditch. WH-1: The feature is surrounded by roads, residential properties, and fields, so the feature does not have significant contiguous habitat. ST-3/WQ-5: There is dense vegetation present already at the time of survey. ST-5/WQ-7: The wetland is in a roadside ditch and received runoff from the upslope paved road. WQ-2: The roadside ditch is funneled to a culvert. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Avian Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 | S2 🗌 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🔽 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of C | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-----------------------|-------------|-----------|-------------------|---|
| Phalaris arundinacea* | | | PEM | Rare |
| Rhamnus cathartica* | | | PEM | Rare |
| Solidago gigantea* | | | PEM | Rare |
| Carex castanea* | | | PEM | Rare |
| Carex cf. blanda* | | | PEM | Rare |
| Poa pratensis* | | | PEM | Rare |
| Salix petiolaris | | | PEM | Rare |
| Carex gracillima | | | PEM | Rare |
| Equisetum arvense | | | PEM | Rare |
| Lotus corniculatus | | | PEM | Rare |
| Salix bebbiana | | | PEM | Barren |
| Salix interior | | | PEM | Barren |
| Solidago canadensis | | | PEM | Barren |
| Spiraea alba | | | PEM | Barren |
| Achillea millefolium | | | PEM | Barren |
| Amelanchier laevis | | | PEM | Barren |
| Anemone canadensis | | | PEM | Barren |
| Carex lacustris | | | PEM | Barren |
| Cirsium arvense | | | PEM | Barren |
| Fragaria virginiana | | | PEM | Barren |
| Galium mollugo | | | PEM | Barren |
| Phleum pratense | | | PEM | Barren |
| Ranunculus acris | | | PEM | Barren |
| Rumex crispus | | | PEM | Barren |
| | | | | |
| | | | | |

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low because of the invasive species presence, lack of multiple strata, and the commonality of the plant community.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| X | Х | | Н | С | Drainage – tiles, ditches |
| V | V | | N.4 | С | Hydrologic changes - high capacity wells, |
| Х | X | | M | C | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| Χ | Х | | Н | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| Х | Х | | Н | С | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | Х | | М | С | Roads or railroad |
| | | | | | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| V | V | | N.4 | 0 | Removal of herbaceous stratum – mowing, |
| X | X | | M | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Χ | Χ | | Н | С | Cover of non-native and/or invasive species |
| | Х | | L | UC | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
| | | | | | |
| | | | | | |
| | _ | | _ | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is a roadside | ditch that is likely mowed and is also adjacent to a hay field. The wetland likely receives |
|---------------------------|---|
| runoff from both sources. | There are invasive species present in the herbaceous and shrub layer of the wetland. |
| Residences are within the | buffer area. |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | SIGNIFICANCE | | | | | | | | | |
|-------------------------------|--------------|----------|------|-------------|----------|--|--|--|--|--|
| | Low | Medium | High | Exceptional | NA | | | | | |
| Floristic Integrity | / | | | | | | | | | |
| Human Use Values | V | | | | | | | | | |
| Wildlife Habitat | V | | | | | | | | | |
| Fish and Aquatic Life Habitat | V | | | | | | | | | |
| Shoreline Protection | | | | | / | | | | | |
| Flood and Stormwater Storage | | ✓ | | | | | | | | |
| Water Quality Protection | | ' | | | | | | | | |
| Groundwater Processes | / | | | | | | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | The florisitc integrity is low due to the presence of invasive species in relative commonality of the plant community. |
| Human Use Values | The wetland is located in a roadside ditch. |
| Wildlife Habitat | The feature is dominated by herbaceous vegetation with little cover options in the shrub or tree strata. This lack of multiple strata limits the diversity of wildlife species using the wetland. |
| Fish and Aquatic Life Habitat | There was no standing water present at the time of the survey. The wetland likely offers little to low habitat options if any water is present after heavy rains or periods of inundation. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is in a roadside ditch, and obtains significant stormwater runoff. |
| Water Quality Protection | There is dense vegetation present within the wetland, and it obtains runoff from the surrounding road and field. |
| Groundwater Processes | The wetland doesn't seem to influence groundwater processes. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relo | cation Proiec | ct City/ | County: Ashland | Sampling Date: _ | 2020-05-30 | |
|--|---------------------|-------------------------------------|---------------------------------------|--|---------------------|--|
| | • | | | State: Wisconsin Sampling Poin | | |
| • | | | | sec 29 T047N R004W | | |
| | | | | one): None Slop | pe (%): 0-2% | |
| Subregion (LRR or MLRA). N | orthcentral Forests | is Lat. 46 523557 | Long: -9 | 0.893928 Datum | n: WGS84 | |
| Soil Map Unit Name: Sanb | org-Badriver | complex 0 to 6 pe | ercent slopes | NWI classification: | <u> </u> | |
| Are climatic / hydrologic condi | | | | | | |
| | | • | · · · · · · · · · · · · · · · · · · · | al Circumstances" present? Yes | ✓ No | |
| | | | | explain any answers in Remarks.) | | |
| | | | | | | |
| SUMMARY OF FINDING | - Attach Si | ite map snowing sar | npling point locati | ons, transects, important fe | atures, etc. | |
| Hydrophytic Vegetation Pres | | No | Is the Sampled Area | | | |
| Hydric Soil Present? | Yes _ | No | within a Wetland? | | | |
| Wetland Hydrology Present? Remarks: (Explain alternation | | No | If yes, optional Wetlar | nd Site ID: | | |
| common Timothy, s | mooth brome | e, and weedy forb | S. | | | |
| HYDROLOGY | | | | Cocondan Indicators (minimum of | two required) | |
| Wetland Hydrology Indicat | | check all that apply) | | Secondary Indicators (minimum of | two requirea) | |
| Primary Indicators (minimum Surface Water (A1) | or one is required, | Water-Stained Leav | | Surface Soil Cracks (B6)Drainage Patterns (B10) | | |
| High Water Table (A2) | | Aquatic Fauna (B13 | | Moss Trim Lines (B16) | | |
| Saturation (A3) | | Marl Deposits (B15) | | Moss Till Lines (B10) Dry-Season Water Table (C2) | | |
| Water Marks (B1) | | Hydrogen Sulfide O | | Crayfish Burrows (C8) | | |
| Sediment Deposits (B2) | | | | Saturation Visible on Aerial Image | agery (C9) | |
| Drift Deposits (B3) | | Presence of Reduce | = : : | Stunted or Stressed Plants (D1 | | |
| Algal Mat or Crust (B4) | | Recent Iron Reducti | on in Tilled Soils (C6) | Geomorphic Position (D2) | | |
| Iron Deposits (B5) | | Thin Muck Surface (| C7) | Shallow Aquitard (D3) | | |
| Inundation Visible on Ae | | Other (Explain in Re | emarks) | Microtopographic Relief (D4) | | |
| Sparsely Vegetated Cor | icave Surface (B8) | | | FAC-Neutral Test (D5) | | |
| Field Observations: | Voc. No. | W Donth (inches): | | | | |
| Surface Water Present? Water Table Present? | | ✓ Depth (inches): ✓ Depth (inches): | | | | |
| Saturation Present? | | Depth (inches): | | Hydrology Present? Yes | No 🗸 | |
| (includes capillary fringe) | | | | | | |
| Describe Recorded Data (str | eam gauge, monito | oring well, aerial photos, pr | evious inspections), if av | ailable: | | |
| | | | | | | |
| Remarks: | | | | | | |
| No indicators of we | tland hydrolo | gy were observed | l. | | | |
| | | | | | | |
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| | Absolute | Dominan | t Indicator | Dominance Test worksheet: |
|---|---------------|------------|-------------|--|
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Number of Dominant Species |
| 1 | | | | That Are OBL, FACW, or FAC:(A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata: 4 (B) |
| 4 | | | | Percent of Dominant Species |
| 5 | | | | That Are OBL, FACW, or FAC: 0 (A/B) |
| 6 | | | | |
| | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | 0 | = Total Co | over | OBL species x 1 = 0 |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species0 x 2 =0 |
| 1 | | | | FACULTURE |
| 2 | | | | FACU species <u>81</u> x 4 = <u>324</u> UPL species <u>17</u> x 5 = <u>85</u> |
| 3 | | | | • |
| 4 | | | | Column Totals: <u>98</u> (A) <u>409</u> (B) |
| 5 | | | | Prevalence Index = B/A = 4.173469387755102 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | | = Total Co | | 2 - Dominance Test is >50% |
| Harl Objectives (Diet siese F | | - Total CC |)VCI | 3 - Prevalence Index is ≤3.0 ¹ |
| Herb Stratum (Plot size: 5) 1. Phleum pratense | 20 | V | FACU | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| • | | | FACU | Problematic Hydrophytic Vegetation¹ (Explain) |
| 2. Lotus corniculatus | | I | | residentatio riyarophytic vegetation (Explain) |
| 3. <u>Bromus inermis</u> | | <u>Y</u> | <u>UPL</u> | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. <u>Poa pratensis</u> | | <u>Y</u> | <u>FACU</u> | be present, unless disturbed or problematic. |
| 5. <u>Trifolium hybridum</u> | _ <u>10</u> _ | N | <u>FACU</u> | Definitions of Vegetation Strata: |
| 6. <u>Trifolium pratense</u> | 5 | N | <u>FACU</u> | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7. <u>Galium mollugo</u> | 5 | N | <u>FACU</u> | at breast height (DBH), regardless of height. |
| 8. <u>Fragaria virginiana</u> | | N | FACU | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9. <u>Taraxacum officinale</u> | | Ν | FACU | and greater than or equal to 3.28 ft (1 m) tall. |
| 10. <u>Hieracium cf aurantiacum</u> | | N | | Herb – All herbaceous (non-woody) plants, regardless |
| 11. Vicia americana | | N | FACU | of size, and woody plants less than 3.28 ft tall. |
| 12. Achillea millefolium | | N | FACU | Woody vines – All woody vines greater than 3.28 ft in |
| 12. Acrimea milierollum | | | | height. |
| | 100 | = Total Co | over | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic |
| 4 | | | | Vegetation |
| | _ | = Total Co | ver | Present? Yes No _ ✓ |
| Remarks: (Include photo numbers here or on a separate | | | | |
| The sample point is representative of t | | id area | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Sampling Point: wasa039e_xu

SOIL Sampling Point: wasa039e_xu

| Profile Desc | ription: (Describe t | to the dept | h needed to docun | nent the | indicator | or confirm | the absence of | f indicators.) |
|----------------|---------------------------------------|------------------|---|-----------|--------------------|------------------|------------------------|---|
| Depth | Matrix | . | Redox | k Feature | <u>S</u> 1 | | _ | |
| (inches) | Color (moist) | <u></u> % | Color (moist) | <u>%</u> | _Type ¹ | Loc ² | Texture | Remarks |
| 0-20 | 7.5YR 3/3 | 100 | | 0 | | | SICL | |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
| 1Type: C=C | oncentration, D=Depl | etion PM= | Peduced Matrix MS | =Macked | d Sand Gr | aine | ² Location: | PL=Pore Lining, M=Matrix. |
| Hydric Soil | | Clion, Min- | reduced Matrix, Mc | -iviasket | J Garia Gr | ali is. | | or Problematic Hydric Soils ³ : |
| Histosol | | | Polyvalue Belov | v Surface | (S8) (LRI | ₹R, | | uck (A10) (LRR K, L, MLRA 149B) |
| | oipedon (A2) | - | MLRA 149B) | | ` , ` | • | | rairie Redox (A16) (LRR K, L, R) |
| Black Hi | | - | Thin Dark Surfa | | | | | ucky Peat or Peat (S3) (LRR K, L, R) |
| | n Sulfide (A4) | - | Loamy Mucky M | | | , L) | | rface (S7) (LRR K, L) |
| | d Layers (A5) d Below Dark Surface | . (A11) | Loamy Gleyed NoteDepleted Matrix | | <u>(')</u> | | | ue Below Surface (S8) (LRR K, L) rk Surface (S9) (LRR K, L) |
| | ark Surface (A12) | - (A11) <u> </u> | Redox Dark Sur | | | | | nganese Masses (F12) (LRR K, L, R) |
| | fucky Mineral (S1) | - | Depleted Dark S | , , | | | | nt Floodplain Soils (F19) (MLRA 149B) |
| | Bleyed Matrix (S4) | - | Redox Depressi | | , | | | podic (TA6) (MLRA 144A, 145, 149B) |
| | Redox (S5) | | | | | | | rent Material (F21) |
| | Matrix (S6) | | | | | | | allow Dark Surface (TF12) |
| Dark Su | rface (S7) (LRR R, M | ILRA 149B |) | | | | Other (E | xplain in Remarks) |
| 3Indicators of | f hydrophytic vegetati | ion and wet | land hydrology mus | t be pres | ent. unles: | s disturbed | or problematic. | |
| | _ayer (if observed): | | | | , | | 1 | |
| Type: | , | | | | | | | |
| | ches): | | | | | | Hydric Soil F | Present? Yes No |
| Remarks: | | | | | | | <u> </u> | |
| | il with no redo | x featui | es. | | | | | |
| 7 Conty OC | ii wiiii iio ioac | /X loatai | 00. | | | | | |
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wasa039e_xu_S



wasa039e_xu_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/C | ounty: Ashland | Sampling Date: <u>2020-06-01</u> |
|---|----------------------------|---------------------------------------|--|
| | | | State: Wisconsin Sampling Point: wasa1043e_w |
| Investigator(s): SBR/DGL | | | |
| | | | one): <u>Concave</u> Slope (%): <u>0-2%</u> |
| Subregion (LRR or MLRA). Northcentral Forests | Lat: 46 523154 | Long: -9 | 0.899644 Datum: WGS84 |
| Soil Man Unit Name: Sanborg-Badriver of | omplex 0 to 6 per | rcent slones | NWI classification: |
| Are climatic / hydrologic conditions on the site typic | • | • | |
| | | | al Circumstances" present? Yes No |
| | | | |
| Are Vegetation, Soil, or Hydrology _ | naturally problema | itic? (if needed, | explain any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site | e map showing sam | pling point locati | ons, transects, important features, etc. |
| Hydric Soil Present? Yes | <u>∨</u> No | Is the Sampled Area within a Wetland? | Yes <u>/</u> No |
| Wetland Hydrology Present? Yes Remarks: (Explain alternative procedures here or | ✓ No | If yes, optional Wetlar | nd Site ID: |
| dominated by reed canary grass. HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; cl | heck all that apply) | | |
| | Water-Stained Leave | | Drainage Patterns (B10) |
| | Aquatic Fauna (B13) | | Moss Trim Lines (B16) |
| Saturation (A3) | Marl Deposits (B15) | | Dry-Season Water Table (C2) |
| | Hydrogen Sulfide Ode | or (C1) | Crayfish Burrows (C8) |
| | Oxidized Rhizosphere | = : : | |
| | Presence of Reduced | | Stunted or Stressed Plants (D1) |
| | Recent Iron Reductio | | ✓ Geomorphic Position (D2) |
| | Thin Muck Surface (C | | Shallow Aquitard (D3) |
| Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) | Other (Explain in Ren | narks) | Microtopographic Relief (D4) _✓ FAC-Neutral Test (D5) |
| Field Observations: | | | V I AC-Neutral Test (D3) |
| | ✓ Depth (inches): | | |
| | Depth (inches): 16 | | |
| | Depth (inches): 14 | | Hydrology Present? Yes ✓ No |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitori | ng well serial photos pre | vious inspections) if a | vailable: |
| Beschibe Recorded Bata (stream gauge, monitori | ng wen, aenar priotos, pre | vious irispections), ii av | anasic. |
| | | | |
| Remarks: The hydrologic regime is saturate | d. Water table wa | as observed at 1 | 16 inches with saturation at 14 |
| inches. | a. Water table we | as observed at | io mones with saturation at 14 |
| mones. | | | |
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| VECETATION | l lea eciantific names | of plants |
|------------|------------------------|-----------|

| EGETATION – Use scientific names of plants. | | | | Sampling Point: wasa1043e_w |
|---|-------------|-------------------|-------------|---|
| Tree Stratum (Plot size:30) | | Dominant Species? | | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC:1 (A) |
| 2 | | | | Total Number of Dominant Species Across All Strata:1 (B) |
| 4 | | | | Percent of Dominant Species |
| 5 | | | | That Are OBL, FACW, or FAC: 100 (A/B) |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | <u></u> | Total % Cover of: Multiply by: |
| | 0 | = Total Co | ver | OBL species 10 x 1 = 10 |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species80 x 2 =160 |
| 1 | | | | FAC species <u>0</u> x 3 = <u>0</u> |
| 2. | | | | FACU species10 x 4 =40 |
| | | | | UPL species0 x 5 =0 |
| 3 4 | | | | Column Totals:100 (A)210 (B) |
| 5 | | | | Prevalence Index = B/A = |
| 6. | | | | Hydrophytic Vegetation Indicators: |
| | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| 7 | _ | = Total Co | | 2 - Dominance Test is >50% |
| | | = Total Co | ver | 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5 | | | = 4 0 14 / | 4 - Morphological Adaptations ¹ (Provide supporting |
| 1. <u>Phalaris arundinacea</u> | | <u>Y</u> | <u>FACW</u> | data in Remarks or on a separate sheet) |
| 2. <u>Poa pratensis</u> | | <u>N</u> | <u>FACU</u> | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. <u>Scirpus cyperinus</u> | 5 | N | OBL | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. <u>Salix petiolaris</u> | 5 | N | <u>FACW</u> | be present, unless disturbed or problematic. |
| 5. <u>Carex stipata</u> | 2 | <u>N</u> | OBL | Definitions of Vegetation Strata: |
| 6. <u>Persicaria cf amphibia</u> | 2 | N | OBL | Tree Mondy plants 2 in (7.6 cm) or more in diameter |
| 7. Eleocharis acicularis | 1 | <u>N</u> | OBL | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 11 | | | | |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in height. |
| | <u>100</u> | = Total Co | ver | . No.g. no. |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | | |
| 2 | | | <u></u> | |
| 3 | | | | Hydrophytic |
| 4 | | | | Vegetation No. |
| | | = Total Co | ver | Present? Yes No |
| Remarks: (Include photo numbers here or on a separate | sheet.) | | 1.6 | - |
| The sample point is fairly representative spot and has a few obligate species that | | | | |

US Army Corps of Engineers

SOIL Sampling Point: wasa1043e_w

| nches) Color (molst) % Color (molst) % Type Loc Texture Remarks 0-10 5YR 3/2 95 5YR 4/6 5 C M SICL 10-20 5YR 3/2 85 5YR 3/4 15 C M C Sype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Sydric Soil Indicators: Indicators for Problematic Hydric Soils Indicators for Musch Patrix Indicators for Problematic Hydric Soils Indicators for Musch Patrix Indicators for Problematic Hydric Soils Indicators for Musch Patrix Indicators for Problematic Hydric Soils Indicators for Problematic Hydric Soils Indicators for Musch Patrix Indicators for Musch Patrix Indicators for Problematic Hydric Soils Indicators for Musch Patrix Indicators for Problematic Hydric Soil Present? Yes V No Michael Matrix Indicators for Patrix Indicators for Problematic Patrix Indicators for Patrix Indicators fo | 0-10 | Color (| !-4\ | 0/ | 0-1 | | x Features | | Loc ² | Taratrana | Damanda |
|--|--------------|------------|------------|------------|--------------|------------|-------------|--------------------|------------------|------------------|--------------------|
| Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Catalon: PL=Pore Lining, M=Matrix. | | EVD. | | <u>%</u> | | | <u> </u> | Type ¹ | | <u>Texture</u> | Remarks |
| Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 2Location: PL=Pore Lining, M=Matrix. Indicators: Indicators: Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Soils*. 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) MLRA 149B) 2 cm Muck (A10) (LRR K, L, RR A149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, F, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Pledmont Floodplain Soils (F19) (MLRA 144, 145, 145, 145, 145, 145, 145, 145, | 10-20 | | | | | | | | | SICL _ | |
| ydric Soil Indicators: Histosol (A1) | | <u>5YR</u> | 3/2 | 85 | <u>5YR</u> | 3/4 | <u>15</u> | <u> </u> | <u> </u> | C | |
| Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) | | | | | | | | | | | |
| Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) | | | | | | | | | | | |
| Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) | | | | | | | | | | | |
| Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) | | | | | | | | | | | |
| Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) | | | | | | | | | | | |
| Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) | | | | | | | | | | | |
| Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) | | | | | | | . —— | | | | |
| Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) | | | | | | | | | | | |
| Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) | | | | | | | | | | | |
| Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) | | | | | | | | | | | |
| Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) | | | | | | | | | | | |
| Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, F) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Thick Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144 Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 145, 145, 145, 145, 145, 145, 145 | | | | letion, RM | =Reduced I | Matrix, MS | S=Masked | Sand Gr | ains. | | |
| Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 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) Stratified Layers (A5) Coast Prairie Redox (A16) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L) Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, P) Piedmont Floodplain Soils (F19) (MLRA 144 A, 145, 149 A) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Addicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Popth (inches): Depth (inches): Depth (inches): Depth (inches): Depth (inches): Depth (inches): Destrictive Layer (if observed): Type: Depth (inches): Depth (inches): Destrictive Layer (if observed): Destrictive Layer (if observed): Depth (inches): Destrictive Layer (if observed): | | | | | | | | | | | • |
| Black Histic (A3) | | |)) | | | | | (S8) (LR I | R R, | | |
| Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144 Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 148 Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Other (Explain in Remarks) Setrictive Layer (if observed): Depth (inches): Hydric Soil Present? Yes V No Pemarks: No Pemarks: Polyvalue Below Surface (S8) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (| | | -) | | | , | | RR R, M | LRA 149B) | | |
| Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144 | | | | | | - | | | (, L) | | |
| Thick Dark Surface (A12) | | | | - (Δ11) | - | - | | | | - | |
| Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149 Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Other (Explain in Remarks) Depth (inches): Hydric Soil Present? Yes No Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) | | | | 5 (7111) | | | | | | | |
| Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Depth (inches): Beth (inches): | - | - | | | | | | 7) | | | |
| Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) | | | ix (S4) | | Redox | Depress | ions (F8) | | | | |
| Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. It is a surface (S7) (LRR R, MLRA 149B) | | |) | | | | | | | | |
| estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yesv No emarks: | | | | ILRA 149 | B) | | | | | | |
| estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yesv No emarks: | ndicators of | hydronhyt | ic venetat | ion and w | etland hydro | ology mus | t he nrese | nt unles | e disturbed | or problematic | |
| Depth (inches): Hydric Soil Present? Yes _v No emarks: | | | - | | ctiana nyare | ology mas | it be prese | rit, uriico | 3 disturbed | or problematic. | |
| emarks: | | | | | | | | | | | |
| | Depth (inc | :hes): | | | | | | | | Hydric Soil Pres | sent? Yes <u> </u> |
| layey soils with redox features present. | emarks: | | | | | | | | | | |
| | ayey so | oils with | redox | c featur | es pres | ent. | | | | | |
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wasa1043e_w_E



wasa1043e_w_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | |
|--|--|------------------------------|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | | |
| File #: wasa1043 | Date of visit(s): 2020-06-01 | | |
| Location: PLSS: sec 29 T047N R004W | Ecological Landsca Lake Superior Clay Plair | • | |
| Lat: 46.523169 Long: -90.899634 County: Ashland Town/City/Village: Gingles town | Watershed: LS09, Lower Bad River | | |
| SITE DESCRIPTION | | | |
| Soils: Mapped Type(s): | WWI Class: | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes Field Verified: | Wetland Type(s): PEM Wet meado | ow | |
| The soils were not field verified. | Wetland Size: 0.0286 | Wetland Area Impacted 0.0286 | |
| Hydrology: The hydrologic regime is saturated and surface | Vegetation: Plant Community Description(s): The wetland is a small fresh wet meadow domainted by reed canary grass with some | | |
| water is the major source of hydrology. | more obligate spot. | pecies found at its wettest | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | ECTION 1: | Functional Value Assessment |
|----|-----|-----------|--|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | Ν | Ν | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | N | N | Used for educational or scientific purposes |
| 3 | N | N | Visually or physically accessible to public |
| 4 | Ν | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| | | | In or adjacent to RED FLAG areas |
| 5 | Ν | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | IN | IN | Wildlife Habitat |
| 1 | N | N | Wetland and contiguous habitat >10 acres |
| 2 | N | N N | 3 or more strata present (>10% cover) |
| 3 | N | N N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | | | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | |
| | N | N | Occurs in a Joint Venture priority township |
| 6 | N | N | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| 7 | N | N | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| | | | plans |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | Υ | Ephemeral pond with water present > 45 days |
| 10 | N | N | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | Ν | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | Z | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | N | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | Ν | N | Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable |
| | | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| 2 | N | N | water levels or high flows – if no, not applicable |
| 3 | Ν | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | N | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | Y | Y | Water flow through wetland is NOT channelized |
| 3 | Y | Y | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | | | Within a watershed with <10% wetland |
| 8 | N | N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | N | N | Water Quality Protection |
| | N. | N.I | |
| 1 | N | N | Provides substantial storage of storm and floodwater based on previous section |
| 2 | N | N | Basin wetland or constricted outlet |
| 3 | Y | Y | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Y | Υ | Dense, persistent vegetation |
| 6 | N | N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | Υ | Υ | Stormwater or surface water from agricultural land is major hydrology source |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | N | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | N | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | N | N | Wetland is within a wellhead protection area |
| J | IN | IN IN | welland is within a wellifead protection area |

Section 1 Comments (Refer to Section 1 numbers) WH-10/FA-2/4 the wetland has shallow water present in a small portion of the wetland at the time of the survey and could hold more water after periods of heavy water events that would provide habitat for aquatic invertebrates. ST3/WQ-5 the wetland has dense vegetation present at the time of the survey. WQ-7 the wetland is within a hay field and likely receives stormwater runoff from the surrounding field. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Avian Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | inty intogrity (on olo) | | | |
|--|--|---|--|--|
| | Low | Medium | High | Exceptional |
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 | S2 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|------------------------|-------------|------|-------------------|---|
| Phalaris arundinacea* | | | PEM | Interrupted |
| Carex gracillima | | | PEM | Rare |
| Poa pratensis | | | PEM | Rare |
| Carex stipata | | | PEM | Rare |
| Phleum pratense | | | PEM | Rare |
| Scirpus cyperinus | | | PEM | Rare |
| Trifolium hybridum | | | PEM | Rare |
| Eleocharis acicularis | | | PEM | Barren |
| Fragaria virginiana | | | PEM | Barren |
| Lotus corniculatus | | | PEM | Barren |
| Persicaria cf amphibia | | | PEM | Barren |
| Salix petiolaris | | | PEM | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low based on invasive species cover, missing strata, and the common plant community.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| X | Х | | М | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| Х | Х | | Н | С | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | Х | | L | UC | Roads or railroad |
| | | | | | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| V | Х | | L | UC | Removal of herbaceous stratum – mowing, |
| X | | | | | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| X | Х | | Н | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | , |
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| | | | | | |
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^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| Γhe wetland is located in a hay field and that will be mowed at some point. The wetland likely receives polluted ru | unoff |
|---|-------|
| rom the field. There are invasive species present within the wetland feature. | |
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^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | SIGNIFICANCE | | | | | | | | | | |
|-------------------------------|--------------|--------|------|-------------|----------|--|--|--|--|--|--|
| | Low | Medium | High | Exceptional | NA | | | | | | |
| Floristic Integrity | V | | | | | | | | | | |
| Human Use Values | V | | | | | | | | | | |
| Wildlife Habitat | V | | | | | | | | | | |
| Fish and Aquatic Life Habitat | / | | | | | | | | | | |
| Shoreline Protection | | | | | / | | | | | | |
| Flood and Stormwater Storage | ✓ | | | | | | | | | | |
| Water Quality Protection | / | | | | | | | | | | |
| Groundwater Processes | ✓ | | | | | | | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | The floristic integrity is low due to the high cover of invasive species and only the herbaceous layer present. |
| Human Use Values | The wetland is within a hay field. |
| Wildlife Habitat | The wetland is small and dominated by a single species. |
| Fish and Aquatic Life Habitat | Only a very small area seems to be able to hold water after periods of heavy rain. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is small and very shallow. |
| Water Quality Protection | The wetland has dense vegetation but is overall very small. |
| Groundwater Processes | The wetland does not appear to influence ground water processes. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relo | cation Projec | t | City/C | County: Ash | nland | Sa | mpling Date: 2 | 2020-06-01 |
|--|---------------------|------------------|--|----------------|---------------------------|--------------------------------------|----------------|--------------------|
| Applicant/Owner: Enbridge | • | | | | | | | |
| Investigator(s): SBR/DGL | | | | | | | | • |
| Landform (hillslope, terrace, e | | | | | _ | | | e (%): 0-2% |
| Subregion (LRR or MLRA): N | orthcentral Forest | S _{Lat} | 46 523010 | , | Long: -90 | 899524 | Datum | • WGS84 |
| Soil Map Unit Name: Sanb | org-Badriver | a | nlex 0 to 6 ne | rcent slor | nes | NWI classification | n. | . <u> </u> |
| Are climatic / hydrologic condi | | | | | | | | |
| Are Vegetation, Soil | | | | | | | | / No |
| _ | | | - | | | | | NO |
| Are Vegetation, Soil | | | | | | | | |
| SUMMARY OF FINDING | GS – Attach si | ite n | nap showing sam | npling poi | nt locatio | ns, transects, in | nportant fea | atures, etc. |
| Hydrophytic Vegetation Pres | ent? Yes | | No | Is the Sam | | | | |
| Hydric Soil Present? | Yes _ | | No | within a W | etland? | Yes | No | |
| Wetland Hydrology Present? | | | No | If yes, option | nal Wetland | Site ID: | | |
| Remarks: (Explain alternative The upland is located) | re procedures here | or in | a separate report.) | inated by | v nacture | araccae and | forbe The | o upland |
| • | | • | ielu aliu is uolii | יווומנכט טי | y pasture | grasses and | 10103. 1116 | s uplatiu |
| point is shared with | wasa1044e. | | | | | | | |
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| | | | | | | | | |
| HYDROLOGY | | | | | | | | |
| Wetland Hydrology Indicat | ors: | | | | | Secondary Indicators | (minimum of t | wo required) |
| Primary Indicators (minimum | of one is required; | chec | k all that apply) | | | Surface Soil Cra | cks (B6) | |
| Surface Water (A1) | | | Water-Stained Leave | es (B9) | | Drainage Pattern | ns (B10) | |
| High Water Table (A2) | | | Aquatic Fauna (B13) | | Moss Trim Lines (B16) | | | |
| Saturation (A3) | | | Marl Deposits (B15) | | | Dry-Season Water Table (C2) | | |
| Water Marks (B1) | | | Hydrogen Sulfide Od | | | Crayfish Burrows | | (00) |
| Sediment Deposits (B2) | | | Oxidized Rhizosphere Presence of Reduced | _ | | Saturation Visible Stunted or Stress | | |
| Drift Deposits (B3) Algal Mat or Crust (B4) | | | Recent Iron Reduction | | | Geomorphic Pos | | ' |
| Iron Deposits (B5) | | | Thin Muck Surface (0 | | | Shallow Aquitard | | |
| Inundation Visible on Ae | erial Imagery (B7) | | Other (Explain in Rer | • | | Microtopographic | | |
| Sparsely Vegetated Cor | ncave Surface (B8) | | | | | FAC-Neutral Tes | st (D5) | |
| Field Observations: | | | | | | | | |
| Surface Water Present? | Yes No | ~ | Depth (inches): | | | | | |
| Water Table Present? | | | _ Depth (inches): | | | | | |
| Saturation Present? | Yes No | ~ | Depth (inches): | | Wetland H | ydrology Present? | Yes | No <u> </u> |
| (includes capillary fringe) Describe Recorded Data (str | ream gauge monito | ring v | well aerial photos pre | vious inspec | tions) if avai | lable: | | |
| Describe Necorded Bata (str | cam gauge, monte | ning ' | well, aeriai priotos, pre | vious irispec | 110113 <i>)</i> , 11 avai | labic. | | |
| | | | | | | | | |
| Remarks: | | | | | | | | |
| No indicators of we | tland hydrolo | gy v | were observed | - | | | | |
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VEGETATION – Use scientific names of plants.

| | | | | | | 1 3 | | 1043_ι |
|--|---------|----------------------|-------------|---|--------------------|-------------|--------------|----------|
| Tree Stratum (Plot size: 30) | | Dominant Species? | | Dominance Test | workshe | et: | | |
| 1 | | | - ' | Number of Domir That Are OBL, FA | | | 0 | (A) |
| 2. | _ | | | Total Number of I | Dominant | | | |
| 3 | | | | Species Across A | All Strata: | | 3 | (B) |
| ł | | - | | Percent of Domin | | | 0 | |
| 5 | _ | | | That Are OBL, FA | ACW, or FA | AC: | 0 | (A/B |
| S | _ | | | Prevalence Inde | x workshe | eet: | | |
| 7 | | | | Total % Cove | er of: | Mu | Itiply by: | _ |
| | 0 | = Total Co | ver | OBL species _ | | | | |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species _ | | | | |
| l | | | | FAC species _ FACU species _ | | | | |
| 2 | | | . <u></u> - | UPL species _ | | | | |
| 3 | | | . <u></u> - | Column Totals: | | | | |
| l | | | | Drovolonoo | Indov - D | | 4.0 | |
| i | | | | Prevalence | | | | _ |
| i | | | | Hydrophytic Veg | | | | |
| | | | | 1 - Rapid Tes | - | | egetation | |
| | 0 | = Total Co | ver | 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ | | | | |
| Herb Stratum (Plot size: 5 | | | | 4 - Morpholo | | | Provide sup | portin |
| . Phleum pratense | 25 | <u> </u> | <u>FACU</u> | data in Re | emarks or | on a sepai | rate sheet) | |
| 2. <u>Carex gracillima</u> | 20 | <u>Y</u> | <u>FACU</u> | Problematic | Hydrophyti | ic Vegetat | ion¹ (Expla | in) |
| 3. <u>Poa pratensis</u> | 20 | <u>Y</u> | <u>FACU</u> | ¹ Indicators of hyd | ric soil and | d wetland | hvdrology | must |
| 1. <u>Trifolium pratense</u> | 10 | N | <u>FACU</u> | be present, unless disturbed or problematic. | | | | |
| s. <u>Fragaria virginiana</u> | 10 | N | <u>FACU</u> | Definitions of Ve | egetation | Strata: | | |
| 5. <u>Taraxacum officinale</u> | _ 5 | N | <u>FACU</u> | Tree – Woody pla | ante 3 in <i>(</i> | 7 6 cm) or | more in di | amete |
| 7. <u>Lotus corniculatus</u> | 5 | N | <u>FACU</u> | at breast height (| | | | arricto |
| 3. <u>Galium mollugo</u> | | | FACU | Sapling/shrub – and greater than | | | | ВН |
|) | | | | | | | | |
| 10 11 | | | | Herb – All herbac of size, and wood | | | | iraless |
| 12. | | | | Woody vines – A | All woody v | rines great | ter than 3.2 | 28 ft in |
| | 100 | = Total Co | ver | height. | | | | |
| Noody Vine Stratum (Plot size:) | | | | | | | | |
| , I, | | | | | | | | |
| 2. | | | | | | | | |
| 3. | | | | Hydrophytic | | | | |
| 4. | | | | Vegetation | | | | |
| | | = Total Co | ver | Present? | Yes | No | <u> </u> | |
| | sheet.) | - 10tal C0 | VCI | | | | | |

SOIL Sampling Point: wasa1043_u

| Profile Desc | ription: (D | escribe t | to the dep | th needed to docum | ent the i | indicator | or confirm | the absence of ind | licators.) |
|---------------------------------------|-------------------------------------|-----------|------------|---------------------------------|----------------|-------------------|------------------|--------------------|--|
| Depth | | Matrix | | | <u>Feature</u> | | . 2 | | |
| (inches) | Color (I | , | <u>%</u> | Color (moist) | % | Type' | Loc ² | Texture | Remarks |
| 0-4 | <u>5YR</u> | 3/3 | 100 | | _0_ | | | SICL | |
| 4-20 | <u> 5YR</u> | 3/4 | 100 | | | · | | | |
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| | | | | | | | | | |
| ¹ Type: C=C Hydric Soil | | | etion, RM= | Reduced Matrix, MS | =Masked | Sand Gr | ains. | | Pore Lining, M=Matrix. roblematic Hydric Soils ³ : |
| Histosol | | | | Polyvalue Below | / Surface | (S8) (LRI | R R. | | 410) (LRR K, L, MLRA 149B) |
| Histic E | oipedon (A2 | !) | | MLRA 149B) | | | | Coast Prairie | e Redox (A16) (LRR K, L, R) |
| | istic (A3) en Sulfide (<i>A</i> | (4) | | Thin Dark Surface Loamy Mucky M | | | | | Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L) |
| | d Layers (A | | | Loamy Gleyed N | | | , L) | | elow Surface (S8) (LRR K, L) |
| - | d Below Da | | e (A11) | Depleted Matrix | | | | | urface (S9) (LRR K, L) |
| | ark Surface Jucky Miner | | | Redox Dark Sur Depleted Dark S | | | | _ | ese Masses (F12) (LRR K, L, R) podplain Soils (F19) (MLRA 149B) |
| | Bleyed Matri | | | Redox Depressi | | ', | | | c (TA6) (MLRA 144A, 145, 149B) |
| | Redox (S5) | | | | | | | | Material (F21) |
| | Matrix (S6) | | ILRA 149E | 3) | | | | | v Dark Surface (TF12) in in Remarks) |
| | | - | | tland hydrology mus | t be prese | ent, unles | s disturbed | or problematic. | |
| Restrictive | Layer (if ob | served): | | | | | | | |
| Type: | - l \. | | | | | | | Hydric Soil Prese | ent? Yes No <u> </u> |
| Remarks: | ches): | | | | | | | Tryuno com ricoc | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| | ators of | hydric | soil we | re observed. | | | | | |
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wasa1043_u_E



wasa1043_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ash | land | Sampling Date: 2020-06-01 | | |
|--|--|-------------------------------|--|--|--|
| Applicant/Owner: Enbridge | | | | | |
| Investigator(s): SBR/DGL | Section, Township | , Range: sec 29 T0471 | N R004W | | |
| Landform (hillslope, terrace, etc.): Depression | | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: | | | | | |
| Soil Map Unit Name: Sanborg-Badriver com | | | | | |
| Are climatic / hydrologic conditions on the site typical for | • | | | | |
| | | | | | |
| Are Vegetation, Soil, or Hydrology | | | | | |
| Are Vegetation, Soil, or Hydrology | | (If needed, explain any answe | , | | |
| SUMMARY OF FINDINGS – Attach site ma | ap showing sampling poi | nt locations, transects | s, important features, etc. | | |
| Hydrophytic Vegetation Present? Yes <u>✓</u> | No Is the Sam | | | | |
| | No within a We | etland? Yes <u> </u> | No | | |
| Wetland Hydrology Present? Yes | | nal Wetland Site ID: | | | |
| Remarks: (Explain alternative procedures here or in a | a separate report.) | | | | |
| The wetland is a fresh wet meadow for the feature is dominated by reed can be seen as the feature in the feature in the feature is a fresh wet meadow for the feature in th | | • | | | |
| area. There is shallow water present | , , | | I IIOIII lile suitoutuitig | | |
| alea. There is snahow water present | . III iiie ueepesi seciion | Of the Welland. | | | |
| | | | | | |
| | | | | | |
| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | | ators (minimum of two required) | | |
| Primary Indicators (minimum of one is required; check | | Surface Soil | | | |
| | Water-Stained Leaves (B9) | Drainage Pa | | | |
| | Aquatic Fauna (B13) | | Moss Trim Lines (B16) | | |
| | Marl Deposits (B15) | | Dry-Season Water Table (C2) Crayfish Burrows (C8) | | |
| | Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living F | | | | |
| | Presence of Reduced Iron (C4) | | /isible on Aerial Imagery (C9) Stressed Plants (D1) | | |
| | Recent Iron Reduction in Tilled So | | | | |
| | Thin Muck Surface (C7) | Shallow Aqu | | | |
| | Other (Explain in Remarks) | | aphic Relief (D4) | | |
| Sparsely Vegetated Concave Surface (B8) | - 1 (— ф | <u>✓</u> FAC-Neutra | | | |
| Field Observations: | | | · , | | |
| Surface Water Present? Yes No | Depth (inches): 1 | | | | |
| Water Table Present? Yes _ 🗸 No | Depth (inches): 12 | | | | |
| Saturation Present? Yes No | Depth (inches): 10 | Wetland Hydrology Prese | nt? Yes <u>/</u> No | | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring w | vell aerial photos previous inspec | tions) if available: | | | |
| bescribe Recorded Bata (stream gauge, monitoring w | cii, acriai priotos, previous irispect | ions), ii available. | | | |
| | | | | | |
| Remarks: | A shallow water table w | use observed at 12 | inches and seturation | | |
| The hydrologic regime is saturated. | A Shallow water table w | as observed at 12 | inches and saturation | | |
| was observed at 10 inches. | | | | | |
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| VEGETATION – Use | scientific names | of plants. |
|-------------------------|------------------|------------|
|-------------------------|------------------|------------|

| Absolute | | | | |
|----------|-------------------|--|---|--|
| | Dominant Species? | | Dominance Test worksh | eet: |
| | | | Number of Dominant Spec That Are OBL, FACW, or | |
| | | | Total Number of Dominan | t |
| | | | | _ |
| | | | | |
| | | | That Are OBL, FACW, or | FAC: <u>100</u> (A/B |
| | | | Prevalence Index works | heet: |
| | | | Total % Cover of: | Multiply by: |
| 0 | = Total Co | /er | | |
| | | | * | |
| | | | · · · · · · · · · · · · · · · · · · · | |
| | | | | |
| | | | | |
| | | | | |
| | | | Prevalence Index = | B/A = 2.1752577319587627 |
| | | | Hydrophytic Vegetation | Indicators: |
| | | | I — · · · | |
| 0 | = Total Co | /er | | |
| | | | | |
| 80 | Y | FACW | | r on a separate sheet) |
| 10 | N | <u>FACU</u> | Problematic Hydrophy | ytic Vegetation ¹ (Explain) |
| 5 | N | OBL | 1 | |
| | | FAC | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | Herb – All herbaceous (no | on-woody) plants, regardless |
| | | | | |
| | | | Woody vines – All woody | vines greater than 3.28 ft in |
| 97 | = Total Co | /er | height. | |
| | | | | |
| | | | | |
| | | | | |
| | | | Hydrophytic | |
| | | | Vegetation | |
| | - | | Present? Yes | <u> </u> |
| | | 0 = Total Cov 0 = Total Cov 80 Y 10 N 5 N 2 N | 10 N FACU 5 N OBL 2 N FAC | Percent of Dominant Spec That Are OBL, FACW, or Prevalence Index works Total % Cover of: OBL species 5 FACW species 80 FAC species 10 UPL species 0 Column Totals: 97 Prevalence Index = Hydrophytic Vegetation 1 - Rapid Test for Hyd 2 - Dominance Test is 3 - Prevalence Index 4 - Morphological Ada data in Remarks o data in Remarks o Problematic Hydrophy Indicators of hydric soil a be present, unless disturb Definitions of Vegetation Tree – Woody plants 3 in. at breast height (DBH), re Sapling/shrub – Woody and greater than or equal Herb – All herbaceous (no of size, and woody plants Woody vines – All woody height. |

SOIL Sampling Point: wasa1044e_w

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | | | |
|---|---------------------------|-------------|------------|--------------|------------|------------|--------------------|------------------|------------------|---|
| Depth | | Matrix | | | | x Feature | S | | | |
| (inches) | Color (| moist) | <u></u> % | Color (r | noist) | <u>%</u> | _Type ¹ | Loc ² | <u>Texture</u> | Remarks |
| 0-3 | <u>5YR</u> | 3/1 | 100 | | | 0 | | | CL | |
| 3-20 | 5YR | 3/1 | 85 | 5YR | 4/6 | 15 | C | _M_ | C | |
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| ¹ Type: C=Co | | | etion, RM: | =Reduced I | Matrix, MS | S=Masked | Sand Gr | ains. | | =Pore Lining, M=Matrix. |
| Hydric Soil I | | | | Dobas | alua Dalas | u Curfoso | (CO) (I D | D D | | Problematic Hydric Soils ³ : |
| Histosol | oipedon (A2 | P) | | - | RA 149B) | | (S8) (LR | ĸκ, | | (A10) (LRR K, L, MLRA 149B) ie Redox (A16) (LRR K, L, R) |
| Black Hi | | -, | | | , | | RR R, M | LRA 149B) | | Peat or Peat (S3) (LRR K, L, R) |
| | n Sulfide (A | | | | - | | 1) (LRR K | (, L) | | e (S7) (LRR K, L) |
| | Layers (A | | (0.4.4) | | - | Matrix (F2 | 2) | | | selow Surface (S8) (LRR K, L) |
| | d Below Da ark Surface | | e (A11) | | ted Matrix | rface (F6) | | | | Surface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R) |
| | lucky Miner | | | | | Surface (F | | | _ | loodplain Soils (F19) (MLRA 149B) |
| _ | Sleyed Matr | | | | Depress | | , | | | lic (TA6) (MLRA 144A, 145, 149B) |
| _ | Redox (S5) | | | | | | | | | Material (F21) |
| | Matrix (S6 | | | | | | | | | w Dark Surface (TF12) |
| Dark Sui | rface (S7) (| LRR R, M | ILRA 149E | 3) | | | | | Other (Expl | ain in Remarks) |
| 3Indicators of | f hydrophyti | ic vegetati | ion and we | etland hydro | ology mus | t be prese | ent, unles | s disturbed | or problematic. | |
| Restrictive L | | | | | | | | | | |
| Type: | | | | | | | | | | |
| Depth (inc | ches): | | | | | | | | Hydric Soil Pres | ent? Yes <u> </u> |
| Remarks: | | | | | | | | | | |
| Clayey so | oils with | redox | featur | es pres | ent. | | | | | |
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wasa1044e_w_E



wasa1044e_w_w

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | |
|---|--------------------------|----------------------------|--|
| Project name: | Evaluator(s): | | |
| Line 5 Relocation Project | SBR/DGL | | |
| File #: | Date of visit(s): | | |
| wasa1044 | 2020-06-01 | | |
| Location: | Ecological Landsca | ipe: | |
| PLSS: sec 29 T047N R004W | Lake Superior Clay Plain | | |
| | Lake Superior Clay Flair | I | |
| Lat: <u>46.522776</u> Long: <u>-90.899576</u> | Watershed: | | |
| <u> </u> | LS09, Lower Bad River | | |
| County: Ashland Town/City/Village: Gingles town | | | |
| | | | |
| SITE DESCRIPTION | | | |
| Soils: | WWI Class: | | |
| Mapped Type(s): | N/A | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes | Wetland Type(s): | | |
| canong baarrer complex, a to a percent dispec | PEM - Wet meadow | | |
| Field Verified: | l Livi Wotinioa | | |
| The soils were not field verified. | Wetland Size: | Wetland Area Impacted | |
| | 0.0669 | 0.0669 | |
| | | 0.0000 | |
| | Vegetation: | Accorintian(a): | |
| Hydrology: | Plant Community D | | |
| The hydrologic regime is saturated. The major source of | | fresh wet meadow | |
| hydrology is from surface water. A shallow water table | dominated by re | ed canary grass. Timothy | |
| , 0, | grass is encroad | hing into the edges of the | |
| was observed at 12inches with saturation occurring at | • | surrounding hayfield. | |
| 10inches. | woulding iron the | , surrounding nayneld. | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| HU Y/N Potential Human Use Values: recreation, culture, education, science, natural scenic be 1 N N Used for recreation (hunting, birding, hiking, etc.). List: 2 N N Used for recreation (hunting, birding, hiking, etc.). List: 3 N N Used for educational or scientific purposes 3 N N Visually or physically accessible to public 4 N N A Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradat 5 N N In or adjacent to RED FLAG areas List: 6 N N Supports or provides habitat for endangered, threatened or special concern speciel 7 N N In or adjacent to archaeological or cultural resource site WH Wildlife Habitat 1 N N Wetland and contiguous habitat >10 acres 2 N N 3 or more strata present (>10% cover) 3 N N Within or adjacent to habitat corridor or established wildlife habitat area 4 N N 100 m buffer – natural land cover ≥50%(south) 75% (north) intact 5 N N Occurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland cor 7 N Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) Fish and Aquatic Life Habitat 1 N N Wetland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N A Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not ap Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluc water levels or high flows - if no, not applicable Storm and Floodwater Storage | plex,etc.) |
|--|------------------------|
| 2 | plex,etc.) |
| 2 | plex,etc.) |
| 3 | plex,etc.) |
| A | plex,etc.) |
| Social Provides habitat for endangered, threatened or special concern species | plex,etc.) |
| S | plex,etc.) |
| 6 N N Supports or provides habitat for endangered, threatened or special concern specie 7 N N N In or adjacent to archaeological or cultural resource site WH Wildlife Habitat 1 N N Wetland and contiguous habitat >10 acres 2 N N N 3 or more strata present (>10% cover) 3 N N Within or adjacent to habitat corridor or established wildlife habitat area 4 N N 100 m buffer − natural land cover ≥50%(south) 75% (north) intact 5 N N Cocurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland cor 7 N N N Part of a large habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) FA Fish and Aquatic Life Habitat 1 N N Wetland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not ap Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluc water levels or high flows - if no, not applicable Storm and Floodwater Storage | plex,etc.) |
| 7 N N N In or adjacent to archaeological or cultural resource site | plex,etc.) |
| WH | plex,etc.) or other |
| 1 N N Wetland and contiguous habitat >10 acres 2 N N N 3 or more strata present (>10% cover) 3 N N Within or adjacent to habitat corridor or established wildlife habitat area 4 N N 100 m buffer – natural land cover ≥50%(south) 75% (north) intact 5 N N Occurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland cor 7 N N Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) FA Fish and Aquatic Life Habitat 1 N N Wetland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not ap Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluc water levels or high flows – if no, not applicable 3 N N Densely rooted emergent or woody vegetation Storm and Floodwater Storage | plex,etc.) or other |
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| N N plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) FA Fish and Aquatic Life Habitat 1 N N Wetland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not ap 2 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluc 3 N N Densely rooted emergent or woody vegetation ST | |
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| 3 N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not ap 2 N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluc water levels or high flows – if no, not applicable 3 N N Densely rooted emergent or woody vegetation ST Storm and Floodwater Storage | |
| 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not ap Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluc water levels or high flows – if no, not applicable N N Densely rooted emergent or woody vegetation ST Storm and Floodwater Storage | |
| SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not ap 2 N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluc water levels or high flows – if no, not applicable 3 N N Densely rooted emergent or woody vegetation ST Storm and Floodwater Storage | |
| 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not ap 2 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluc water levels or high flows – if no, not applicable 3 N N Densely rooted emergent or woody vegetation ST Storm and Floodwater Storage | |
| Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluc water levels or high flows – if no, not applicable N N Densely rooted emergent or woody vegetation Storm and Floodwater Storage | |
| 2 N N water levels or high flows – if no, not applicable 3 N N Densely rooted emergent or woody vegetation ST Storm and Floodwater Storage | |
| 3 N Densely rooted emergent or woody vegetation ST Storm and Floodwater Storage | uating |
| ST Storm and Floodwater Storage | |
| | |
| | |
| 1 N Basin wetland, constricted outlet, has through-flow or is adjacent to a stream | |
| 2 N Water flow through wetland is NOT channelized | |
| 3 Y Dense, persistent vegetation | |
| 4 N N Evidence of flashy hydrology | |
| 5 Y Point or non-point source inflow | |
| 6 N N Impervious surfaces cover >10% of land surface within the watershed | |
| 7 N Within a watershed with <10% wetland | |
| 8 N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour s | orm event |
| WQ Water Quality Protection | |
| 1 N Provides substantial storage of storm and floodwater based on previous section | |
| 2 N N Basin wetland or constricted outlet | |
| 3 N N Water flow through wetland is NOT channelized | |
| 4 N Vegetated wetland associated with a lake or stream | |
| 5 Y Y Dense, persistent vegetation | |
| 6 N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth | |
| 7 Y Stormwater or surface water from agricultural land is major hydrology source | |
| 8 N N Discharge to surface water | |
| 9 N N Natural land cover in 100m buffer area < 50% | |
| GW Groundwater Processes | |
| | |
| 1 N N Springs, seeps or indicators of groundwater present | |
| 2 N N Location near a groundwater divide or a headwater wetland | |
| 3 N N Wetland remains saturated for an extended time period with no additional water input | |
| I /I I N I N I WATER OF COME OF COME | ıts |
| 4 N N Wetland soils are organic 5 N N Wetland is within a wellhead protection area | ıts |

Section 1 Comments (Refer to Section 1 numbers) WH-10/FA-2/4 the wetland had shallow water present in a small portion of the wetland at the time of the survey and could hold more water after periods of heavy water events that would provide habitat for aquatic invertebrates. ST3/WQ-5 the wetland has dense vegetation present at the time of the survey. WQ-7 the wetland is within a hay field and likely receives stormwater runoff from the surrounding field. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Avian Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 | S2 🗌 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-----------------------|-------------|------|-------------------|---|
| Phalaris arundinacea* | | | PEM | Interrupted |
| Phleum pratense | | | PEM | Rare |
| Poa pratensis | | | PEM | Rare |
| Ranunculus acris | | | PEM | Rare |
| Lotus corniculatus | | | PEM | Barren |
| Scirpus cyperinus | | | PEM | Barren |
| Trifolium hybridum | | | PEM | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low due to the high cover percentage of reed canary grass, missing strata, and the common plant community that is present.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor | |
|-------------------------|--------|----------|------------------|-------------------------|---|--|
| | | | | | Filling, berms (non-impounding) | |
| | | | | | Drainage – tiles, ditches | |
| | | | | | Hydrologic changes - high capacity wells, | |
| | | | | | impounded water, increased runoff | |
| | | | | | Point source or stormwater discharge | |
| X | Х | | М | С | Polluted runoff | |
| | | | | | Pond construction | |
| | | | | | Agriculture – row crops | |
| Х | Х | | Н | С | Agriculture – hay | |
| | | | | | Agriculture – pasture | |
| | | | | | Roads or railroad | |
| | | | | | Utility corridor (above or subsurface) | |
| | | | | | Dams, dikes or levees | |
| | | | | | Soil subsidence, loss of soil structure | |
| | | | | | Sediment input | |
| | | | | 0 | Removal of herbaceous stratum – mowing, | |
| X | X | | M | С | grading, earthworms, etc. | |
| | | | | | Removal of tree or shrub strata – logging, | |
| | | | | | unprescribed fire | |
| | | | | | Human trails – unpaved | |
| | | | | | Human trails – paved | |
| | | | | | Removal of large woody debris | |
| X | Х | | Н | С | Cover of non-native and/or invasive species | |
| | | | | | Residential land use | |
| | | | | | Urban, commercial or industrial use | |
| | | | | | Parking lot | |
| | | | | | Golf course | |
| | | | | | Gravel pit | |
| | | | | | Recreational use (boating, ATVs, etc.) | |
| | | | | | Excavation or soil grading | |
| | | | | | Other (list below): | |
| | | | | | | |
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| | | | | | | |
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^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is located within a hayfield and likely receives stormwater runoff from the surroun | ding field. Invasive |
|---|----------------------|
| species cover is high for this wetland feature. | |
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^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|----------|-------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | / | | | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | / | | | | |
| Fish and Aquatic Life Habitat | / | | | | |
| Shoreline Protection | | | | | / |
| Flood and Stormwater Storage | | ✓ | | | |
| Water Quality Protection | | / | | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | The floristic integrity is low due to the near dominance of reed canary grass and missing strata. |
| Human Use Values | The wetland is in the middle of a hay field. |
| Wildlife Habitat | The wetland is small and dominated by a single species. |
| Fish and Aquatic Life Habitat | Potential for aquatic habitats would occur after heavy rain events. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is long and linear and could hold more water than some smaller wetlands could. |
| Water Quality Protection | The wetland has is average sized and has dense vegetation throughout. |
| Groundwater Processes | The wetland receives a majority of its hydrology from surface water. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ashl | and s | Sampling Date: 2020-06-01 | | |
|--|--|-----------------------------|-------------------------------|--|--|
| Applicant/Owner: Enbridge | | | | | |
| Investigator(s): SBR/DGL | | | · - | | |
| Landform (hillslope, terrace, etc.): Depression | | | | | |
| Subregion (LRR or MLRA): Northcentral Forests L | _at: <u>46.522234</u> ı | ong: <u>-90.899404</u> | Datum: WGS84 | | |
| Soil Map Unit Name: Sanborg-Badriver co | | | | | |
| Are climatic / hydrologic conditions on the site typica | • • • • • • • | | | | |
| Are Vegetation, Soil, or Hydrology _ | | | | | |
| Are Vegetation, Soil, or Hydrology _ | | needed, explain any answers | | | |
| SUMMARY OF FINDINGS – Attach site | | | | | |
| | In the Sama | <u> </u> | , | | |
| | No Is the Samp | ied Area tland? | No | | |
| | <u> </u> | · | | | |
| Wetland Hydrology Present? Yes Remarks: (Explain alternative procedures here or | | al Wetland Site ID: | | | |
| The wetland is a fresh wet meado | w located in a small depre | ssion within a hay fie | eld. The feature is | | |
| dominated by reed canary grass a | and sedge species with tim | othy encroaching fro | om the surrounding | | |
| field. | | | | | |
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| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | Secondary Indicato | ors (minimum of two required) | | |
| Primary Indicators (minimum of one is required; ch | eck all that apply) | Surface Soil Ci | | | |
| • | Water-Stained Leaves (B9) | | Drainage Patterns (B10) | | |
| | Aquatic Fauna (B13) | Moss Trim Line | | | |
| | Marl Deposits (B15) | Dry-Season W | | | |
| | Hydrogen Sulfide Odor (C1) | Crayfish Burro | | | |
| Sediment Deposits (B2) | Oxidized Rhizospheres on Living R | oots (C3) Saturation Visi | ble on Aerial Imagery (C9) | | |
| Drift Deposits (B3) | Presence of Reduced Iron (C4) | Stunted or Stre | essed Plants (D1) | | |
| Algal Mat or Crust (B4) | Recent Iron Reduction in Tilled Soil | | | | |
| 1 · · · · · · | Thin Muck Surface (C7) | Shallow Aquita | | | |
| | Other (Explain in Remarks) | Microtopograpl | | | |
| Sparsely Vegetated Concave Surface (B8) | | <u>✓</u> FAC-Neutral T | est (D5) | | |
| Field Observations: | Donth (inches): 1 | | | | |
| | Depth (inches): 1 | | | | |
| | Depth (inches): 12 | Watland Hudnalanu Duacant |) Vaa (Na | | |
| (includes capillary fringe) | | Wetland Hydrology Present? | ? Yes <u>/</u> No | | |
| Describe Recorded Data (stream gauge, monitoring | g well, aerial photos, previous inspection | ons), if available: | | | |
| | | | | | |
| Remarks: | | | | | |
| The hydrologic regime is saturated | d. A small area of the featu | ure has shallow stand | ding water. | | |
| Saturation was observed at 10 inc | hes. | | | | |
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VEGETATION – Use scientific names of plants.

| /EGETATION – Use scientific names of plants | | | | Sampling Point: wasa1045e_w |
|---|---------|-------------|-----------------------|---|
| Tree Stratum (Plot size:30) | | | t Indicator Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC:3 (A) |
| 2 | | | | 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: |
| | 0 | = Total Co | over | OBL species <u>55</u> x 1 = <u>55</u> |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species 30 x 2 = 60 |
| 1 | _ | | | FAC species5 x 3 =15 FACU species10 x 4 =40 |
| 2 | _ | | | UPL species x 5 = 0 |
| 3 | _ | | | Column Totals: 100 (A) 170 (B) |
| 4 | _ | | | |
| 5 | _ | | | Prevalence Index = B/A =1.7 |
| 6 | _ | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | ✓ 1 - Rapid Test for Hydrophytic Vegetation |
| | 0 | = Total Co | over | 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size:) | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| 1. Scirpus cyperinus | 30 | <u>Y</u> | OBL | data in Remarks or on a separate sheet) |
| 2. Phalaris arundinacea | 30 | <u>Y</u> | <u>FACW</u> | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Carex stipata</u> | 20 | Y | OBL | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. Phleum pratense | 10 | _N_ | <u>FACU</u> | be present, unless disturbed or problematic. |
| 5. <u>Carex cf canescens</u> | 5 | N | OBL | Definitions of Vegetation Strata: |
| 6. <i>Ranunculus acris</i> | 5 | _N_ | FAC | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7 | _ | | | at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | _ | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | _ | | | of size, and woody plants less than 3.28 ft tall. |
| 12 | _ | | | Woody vines – All woody vines greater than 3.28 ft in height. |
| | 100 | = Total Co | over | neight. |
| $\underline{\text{Woody Vine Stratum}} \hspace{0.2cm} \text{(Plot size:} \underline{\hspace{0.2cm} 30} \hspace{0.2cm} \text{)}$ | | | | |
| 1 | | | | |
| 2. | | | | |
| 3 | | | | Hydrophytic |
| 4 | _ | | | Vegetation Present? Yes ✓ No |
| | 0 | = Total Co | over | 103 <u>-</u> NO |
| Remarks: (Include photo numbers here or on a separate | sheet.) | | | |
| The wetland is relatively small and the | • | • | • | • |
| Other areas are less wet with a greater | presen | ce of re | ed cana | ary and less sedge cover. |
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SOIL Sampling Point: wasa1045e_w

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | | | |
|---|---------------------------|-------------|------------|-------------|--------------------------------|-------------|--------------------|------------------|------------------|---|
| Depth | | Matrix | | | | x Feature | S | | | |
| (inches) | Color (| moist) | <u></u> % | Color (r | noist) | <u>%</u> | _Type ¹ | Loc ² | <u>Texture</u> | Remarks |
| 0-4 | <u>5YR</u> | 3/1 | 100 | | | 0 | | | CL | |
| 4-20 | 5YR | 3/1 | 85 | 5YR | 4/6 | 15 | C | _M_ | C | |
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| ¹Type: C=Co | | | etion, RM: | Reduced I | Matrix, MS | S=Masked | Sand Gr | ains. | | =Pore Lining, M=Matrix. |
| Hydric Soil I | | | | Dahaa | des Deles | | (00) (I D | | | Problematic Hydric Soils ³ : |
| Histosol | (AT) pipedon (A2 | 2) | | - | alue Belov RA 149B) | | (58) (LK) | KK, | | (A10) (LRR K, L, MLRA 149B) le Redox (A16) (LRR K, L, R) |
| Black Hi | | -, | | | , | | RR R, M | LRA 149B) | | Peat or Peat (S3) (LRR K, L, R) |
| Hydroge | n Sulfide (A | | | Loamy | y Mucky N | /lineral (F | 1) (LRR K | | Dark Surfac | e (S7) (LRR K, L) |
| | Layers (A | | | | Gleyed I | | 2) | | | selow Surface (S8) (LRR K, L) |
| | d Below Da ark Surface | | e (A11) | | ted Matrix | | | | | Surface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R) |
| | lucky Miner | | | | Dark Suited Dark S | | | | - | loodplain Soils (F19) (MLRA 149B) |
| - | leyed Matr | | | | Depress | | ' / | | | ic (TA6) (MLRA 144A, 145, 149B) |
| | edox (S5) | ` , | | | · | ` , | | | | Material (F21) |
| | Matrix (S6 | | | | | | | | | w Dark Surface (TF12) |
| Dark Su | rface (S7) (| LRR R, M | ILRA 149E | 3) | | | | | Other (Expl | ain in Remarks) |
| 3Indicators of | f hydronhyti | ic vegetati | ion and we | tland hydro | ology mus | t he nres | ent unles | s disturbed | or problematic. | |
| Restrictive I | | - | ion and we | ilana nyare | ology mas | n be pres | orit, driico | - diotarbea | or problematic. | |
| Type: | , , | , | | | | | | | | |
| | ches): | | | | | | | | Hydric Soil Pres | ent? Yes <u>/</u> No |
| Remarks: | Jileo) | | | | | | | | | |
| Clayey s | oils with | redox | prese | nt belov | v 4 inc | hes. | | | | |
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wasa1045e_w_E



wasa1045e_w_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | |
|--|---|---------------------------------|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | | |
| File #: wasa1045 | Date of visit(s): 2020-06-01 | | |
| Location: PLSS: sec 29 T047N R004W | Ecological Landsca Lake Superior Clay Plair | • | |
| Lat: 46.522221 Long: -90.899440 County: Ashland Town/City/Village: Gingles town | Watershed: LS09, Lower Bad River | | |
| SITE DESCRIPTION | | | |
| Soils: Mapped Type(s): | WWI Class: N/A | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes Field Verified: | Wetland Type(s): PEM - Wet meadow | | |
| The soils were not field verified. | Wetland Size: 0.0426 | Wetland Area Impacted 0.0426 | |
| Hydrology: | Vegetation: Plant Community Description(s): | | |
| The hydrologic regime is saturated and surface water is the main source of hydrology. Saturation was observed at 10inches. | The wetland is a fresh wet meadow composed mainly of reed canary grass and sedge species. | | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | | Functional Value Assessment |
|----|--------|-----------|--|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | N | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | Ν | N | Used for educational or scientific purposes |
| 3 | Ν | N | Visually or physically accessible to public |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| _ | | | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | | ., | Wildlife Habitat |
| 1 | N | N | Wetland and contiguous habitat >10 acres |
| 2 | N | N | 3 or more strata present (>10% cover) |
| 3 | N | N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | N | N | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | Occurs in a Joint Venture priority township |
| 6 | N | N | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| | IN | IN | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| 7 | Ν | N | plans |
| 0 | N 1 | | |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | Ν | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | Ν | N | Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable |
| 2 | | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| | Ν | N | water levels or high flows – if no, not applicable |
| 3 | Ν | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | N | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | Υ | Y | Water flow through wetland is NOT channelized |
| 3 | Y | Ý | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | N | N | Within a watershed with <10% wetland |
| 8 | N | N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | IN | IN | Water Quality Protection |
| 1 | N I | N.I | Provides substantial storage of storm and floodwater based on previous section |
| 2 | N N | N N | Basin wetland or constricted outlet |
| 3 | N | N | Water flow through wetland is NOT channelized |
| | Y | Y | |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Y | Y | Dense, persistent vegetation |
| 6 | N | N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | Y | Y | Stormwater or surface water from agricultural land is major hydrology source |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | Ζ | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | N | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | N | N | Wetland is within a wellhead protection area |
| | 1.1 | 1 1 1 | 1.1. Salana is maint a monitoda protostion area |

| | | nments (Refer to Section 1 numbers) ad shallow water present at the time of survey and could hold more water after periods of heavy rains that would provide habitat for aquatic inverteb |
|---------|-------------|---|
| | | and shallow water present at the time of survey and could hold more water after periods of nearly fails that would provide habitat for adjustic inverteble tition present at the time of the survey. WQ-7 the wetland is within a hay field and likely receives stormwater runoff from the surrounding field. |
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| | | at and Species Observation (including amphibians and reptiles) |
| | nter, etc. | oservation, tracks, scat, other sign; type of habitat: nesting, migratory, |
| *** | ilici, cio. | |
| bserved | Potential | Species/Habitat/Comments |
| Υ | Υ | Avian |
| | | |
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| | | |
| Eic | sh and Agus | atic Life Habitat and Species Observations |
| | | oservation, other sign; type of habitat: nesting, spawning, nursery areas, etc. |
| | | 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, |
| bserved | Potential | Species/Habitat |
| | Υ | Aquatic invertebrates |
| | | |
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SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 🗌 | S2 🗌 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) Mean C (optional) | <13 <u></u> | 13-23 2.4-4.2 | 23-32 4.3-4.7 | >32 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|----------------------------|-------------|------|-------------------|---|
| Phalaris arundinacea* | | | PEM | Patchy |
| Carex stipata* | | | PEM | Rare |
| Phleum pratense* | | | PEM | Rare |
| Poa pratensis* | | | PEM | Rare |
| Scirpus cyperinus | | | PEM | Rare |
| Carex castanea | | | PEM | Rare |
| Carex cf canescens | | | PEM | Rare |
| Carex gracillima | | | PEM | Rare |
| Carex vulpinoidea | | | PEM | Rare |
| Juncus effusus | | | PEM | Rare |
| Salix discolor | | | PEM | Rare |
| Fragaria virginiana | | | PEM | Barren |
| Persicaria hydropiperoides | | | PEM | Barren |
| Ranunculus acris | | | PEM | Barren |
| Spiraea alba | | | PEM | Barren |
| Viola sororia | | | PEM | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low due to the presence of a single strata and invasive species.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| , , | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| Х | Х | | М | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| Х | Х | | Н | С | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | | | | | Roads or railroad |
| | | | | | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| V | V | | М | | Removal of herbaceous stratum – mowing, |
| X | Х | | IVI | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Χ | Χ | | Н | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is within a hay field that is mowed at some point in time. Invasive species are present within the wetland |
|--|
| feature. |
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^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|--------|-------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | / | | | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | V | | | | |
| Fish and Aquatic Life Habitat | / | | | | |
| Shoreline Protection | | | | | / |
| Flood and Stormwater Storage | / | | | | |
| Water Quality Protection | ✓ | | | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|--|
| Floristic Integrity | The wetland consists of only a single strata with invasive species present. |
| Human Use Values | The wetland is within a hay field. |
| Wildlife Habitat | The wetland is small and only a single strata to provide any cover. |
| Fish and Aquatic Life Habitat | The wetland could provide habitat for aquatic invertebrates but only have periods of heavy rain. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is small and shallow. |
| Water Quality Protection | The wetland has dense vegetation but is small overall. |
| Groundwater Processes | The wetland gets a majority of its input from surface water, and serves as groundwater recharge. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: A | shland | Sampling Date: 2020-06-01 |
|--|-----------------------------------|----------------------------|---------------------------------|
| • | | | sin Sampling Point: wasa1045_u |
| Investigator(s): SBR/DGL | | | |
| Landform (hillslope, terrace, etc.): Talf | | · · | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: | 46 522102 | Long: -90 899364 | Datum: WGS84 |
| Soil Map Unit Name: Sanborg-Badriver comp | olex 0 to 6 percent s | ODES NWI classifi | cation: |
| Are climatic / hydrologic conditions on the site typical for | | | |
| Are Vegetation, Soil, or Hydrology | | | |
| | | | |
| Are Vegetation, Soil, or Hydrology | | | |
| SUMMARY OF FINDINGS – Attach site ma | ap showing sampling p | oint locations, transects | s, important features, etc. |
| Hydrophytic Vegetation Present? Yes | No Is the Sa | ampled Area | |
| | No <u>v</u> within a | Wetland? Yes | No <u> </u> |
| Wetland Hydrology Present? Yes | | tional Wetland Site ID: | |
| Remarks: (Explain alternative procedures here or in a | separate report.) | atuma amalia within a | boutiald The feeture |
| The upland is located slightly upslope | | eature and is within a | nay field. The feature |
| is dominated by Kentucky bluegrass | and weedy forbs. | | |
| | | | |
| | | | |
| | | | |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | Secondary Indic | ators (minimum of two required) |
| Primary Indicators (minimum of one is required; check | all that apply) | Surface Soil | Cracks (B6) |
| Surface Water (A1) | Water-Stained Leaves (B9) | Drainage Pa | atterns (B10) |
| High Water Table (A2) | Aquatic Fauna (B13) | Moss Trim L | ines (B16) |
| | Marl Deposits (B15) | Dry-Season | Water Table (C2) |
| | Hydrogen Sulfide Odor (C1) | Crayfish Bui | |
| | | ig Roots (C3) Saturation V | |
| 1 — · · · · · — | Presence of Reduced Iron (C4) | | Stressed Plants (D1) |
| | Recent Iron Reduction in Tilled | | Position (D2) |
| | Γhin Muck Surface (C7) | Shallow Aqu | |
| | Other (Explain in Remarks) | | aphic Relief (D4) |
| Sparsely Vegetated Concave Surface (B8) | | FAC-Neutra | Test (D5) |
| Field Observations: Surface Water Present? Yes No | Donth (inches): | | |
| | Depth (inches): | | |
| | Depth (inches): | | nt? Yes No |
| (includes capillary fringe) | | | 10 <u></u> |
| Describe Recorded Data (stream gauge, monitoring we | ell, aerial photos, previous insp | ections), if available: | |
| | | | |
| Remarks: | | | |
| No indicators of wetland hydrology w | ere observed. | | |
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VEGETATION – Use scientific names of plants.

| 00 | Absolute | | t Indicator | Dominance Test worksheet: |
|---|----------|------------|-------------|--|
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Number of Dominant Species |
| 1 | | | | That Are OBL, FACW, or FAC:(A) |
| 2 | | | <u> </u> | Total Number of Dominant |
| 3 | | | | Species Across All Strata:1 (B) |
| 4 | | | | Percent of Dominant Species |
| 5. | | | | That Are OBL, FACW, or FAC: 0 (A/B) |
| 6. | | | | |
| | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | | = Total Co | ver | OBL species 0 x 1 = 0 |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species10 x 2 =20 |
| 1 | | | | FAC species x 3 = 6 FACU species 87 x 4 = 348 |
| 2 | | | | |
| 3 | | | | UPL species 0 x 5 = 0 Column Totals: 99 (A) 374 (B) |
| 4 | | | | Column Totals: <u>99</u> (A) <u>374</u> (B) |
| 5. | | | | Prevalence Index = B/A = 3.77777777777777777777777777777777777 |
| 6. | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| ··- | | = Total Co | | 2 - Dominance Test is >50% |
| | | = Total Co | over | 3 - Prevalence Index is ≤3.0 ¹ |
| Herb Stratum (Plot size: 5) 1. <i>Poa pratensis</i> | 70 | Υ | FACU | 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. Bromus ciliatus | 4.0 | N | FACW | Problematic Hydrophytic Vegetation¹ (Explain) |
| • | | | FACU | |
| 3. <u>Lotus corniculatus</u> | | _N_ | | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. <u>Fragaria virginiana</u> | | | <u>FACU</u> | be present, unless disturbed or problematic. |
| 5. <u>Achillea millefolium</u> | 5 | N | <u>FACU</u> | Definitions of Vegetation Strata: |
| 6. <u>Viola sororia</u> | 2 | N | FAC | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7. <u>Taraxacum officinale</u> | 2 | N | <u>FACU</u> | at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9. | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11. | | | - | of size, and woody plants less than 3.28 ft tall. |
| | · · | | - | Woody vines – All woody vines greater than 3.28 ft in |
| 12 | | | | height. |
| | 99 | = Total Co | ver | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | - | | Hydrophytic |
| 4 | | | | Vegetation |
| | 0 | = Total Co | ver | Present? Yes No |
| Remarks: (Include photo numbers here or on a separate s | sheet.) | | | |
| The upland sample point is within a hay | | nd repr | esentativ | ve of the overall upland area. |
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Sampling Point: wasa1045_u

SOIL Sampling Point: wasa1045_u

| Profile Desc | ription: ([| Describe 1 | to the dep | th needed to docum | nent the i | ndicator | or confirm | n the absence of indicators.) | |
|----------------------------|-------------------------------------|------------|------------------|------------------------------|------------|--------------------|------------------|--|--------------|
| Depth | Matrix Color (moist) % | | | Redox Features | | | | | |
| (inches) | SYR | | % 100 | Color (moist) | 0 | Type ¹ | Loc ² | | |
| 0-3 | | | · · | | | | | <u> </u> | |
| <u>3-20</u> | <u>5YR</u> | 3/4 | <u>100</u> | | 0 | | | <u> </u> | |
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| 1Type: C=Cc | ncentratio | n D=Deni | etion RM | =Reduced Matrix, MS | =Masker | I Sand Gr | ains | ² Location: PL=Pore Lining, M=Matrix. | |
| Hydric Soil I | | | Ction, raivi | -reduced Matrix, Mc | -Waskee | Carla Oi | airis. | Indicators for Problematic Hydric Soils ³ : | |
| Histosol | (A1) | | | Polyvalue Below | v Surface | (S8) (LR I | R R, | 2 cm Muck (A10) (LRR K, L, MLRA 149B |) |
| | pipedon (A2 | 2) | | MLRA 149B) | | | | Coast Prairie Redox (A16) (LRR K, L, R) | - |
| Black His | | | | Thin Dark Surfa | | | | | R) |
| | n Sulfide (<i>l</i> I Layers (A | | | Loamy Mucky M Loamy Gleyed M | | | ., L) | Dark Surface (S7) (LRR K, L)Polyvalue Below Surface (S8) (LRR K, L) | |
| | d Below Da | | e (A11) | Depleted Matrix | | , | | Thin Dark Surface (S9) (LRR K, L) | |
| | ırk Surface | | , | Redox Dark Sur | | | | Iron-Manganese Masses (F12) (LRR K, L | , R) |
| - | lucky Mine | | | Depleted Dark S | | 7) | | Piedmont Floodplain Soils (F19) (MLRA 1 | |
| - | leyed Matr | ix (S4) | | Redox Depressi | ons (F8) | | | Mesic Spodic (TA6) (MLRA 144A, 145, 1 4 | 19B) |
| - | edox (S5) Matrix (S6 | ` | | | | | | Red Parent Material (F21)Very Shallow Dark Surface (TF12) | |
| | rface (S7) (| | ILRA 1491 | 3) | | | | Other (Explain in Remarks) | |
| ³ Indicators of | hydronhyt | ic vegetat | ion and we | etland hydrology mus | t ha nrase | ant unles | e dieturhad | d or problematic | |
| Restrictive L | | _ | | tiana nyarology mus | t be prese | ont, unico | s disturbed | d of problematic. | |
| Type: | , , | , | | | | | | | |
| | ches): | | | | | | | Hydric Soil Present? Yes No | _ |
| Remarks: | | | | | | | | | |
| A clayey | soil wit | h no re | dox fe | atures observe | ed. | | | | |
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wasa1045_u_E



wasa1045_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: As | hland | Sampling Date: <u>2020-06-01</u> |
|--|---|--|---|
| Applicant/Owner: Enbridge | | | |
| Investigator(s): SBR/DGL | Section, Township | p, Range: sec 29 T047 | N R004W |
| Landform (hillslope, terrace, etc.): <u>Depression</u> Subregion (LRR or MLRA): <u>Northcentral Forests</u> Landform (hillslope, terrace, etc.): <u>Depression</u> | Local relief (concave | , convex, none): Concav | e Slope (%): <u>0-2%</u> |
| Soil Map Unit Name: Sanborg-Badriver co | | | |
| Are climatic / hydrologic conditions on the site typical | • | • | |
| Are Vegetation, Soil, or Hydrology | | | |
| Are Vegetation, Soil, or Hydrology | | (If needed, explain any answ | |
| SUMMARY OF FINDINGS – Attach site | map showing sampling po | int locations, transect | s, important features, etc. |
| | No within a W No If yes, option a separate report.) | npled Area Vetland? Yes onal Wetland Site ID: field. The feature is | |
| canary grass across the entire feat areas having more cover of timothy | ture with the wettest area | | - |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | Secondary India | cators (minimum of two required) |
| Primary Indicators (minimum of one is required; che | | Surface So | |
| | _ Water-Stained Leaves (B9) | Drainage P | |
| | _ Aquatic Fauna (B13) | Moss Trim | |
| | _ Marl Deposits (B15) | | n Water Table (C2) |
| | _ Hydrogen Sulfide Odor (C1) | | urrows (C8) |
| | Oxidized Rhizospheres on LivingPresence of Reduced Iron (C4) | | Visible on Aerial Imagery (C9) Stressed Plants (D1) |
| | Recent Iron Reduction in Tilled So | | |
| | Thin Muck Surface (C7) | olis (Co) <u>v</u> Geomorphi Shallow Aq | |
| _ , , , , | _ Other (Explain in Remarks) | | graphic Relief (D4) |
| Sparsely Vegetated Concave Surface (B8) | | FAC-Neutra | |
| Field Observations: | | | a. 1001 (20) |
| Surface Water Present? Yes ✔ No | Depth (inches): 2 | | |
| | Depth (inches): 1 | | |
| | Depth (inches): 0 | Wetland Hydrology Prese | ent? Yes ✔ No |
| (includes capillary fringe) | | | |
| Describe Recorded Data (stream gauge, monitoring | ر well, aerial photos, previous inspec | tions), if available: | |
| | | | |
| Remarks: | | | |
| The hydrologic regime is saturated | with standing water pre | sent in the deeper | portions of the |
| wetland. Saturation observed at the | e surface. | | |
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VEGETATION – Use scientific names of plants.

| EGETATION – Use scientific names of plants | • | | | Sampling Point: wasa1046e_w |
|---|----------|----------------------|-------------|---|
| Tree Stratum (Plot size:30) | Absolute | Dominant Species? | | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC:1 (A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata:1 (B) |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC:100 (A/B) |
| 5. | | | | That Are OBL, FACW, or FAC: (A/B) |
| 6 | | | | Prevalence Index worksheet: |
| 7 | _ | | | Total % Cover of: Multiply by: |
| Sapling/Shrub Stratum (Plot size:15) | | = Total Co | ver | OBL species 30 x 1 = 30 FACW species 50 x 2 = 100 |
| | | | | FAC species2 x3 =6 |
| 1 | | | | FACU species15 x 4 =60 |
| 2 | | | | UPL species0 x 5 =0 |
| 3 | | | | Column Totals: <u>97</u> (A) <u>196</u> (B) |
| 4 5 | | | | Prevalence Index = B/A = 2.020618556701031 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | _ | = Total Cov | ver | ∠ 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:5) | | | | ✓ 3 - Prevalence Index is ≤3.0¹ |
| 1. Phalaris arundinacea | 50 | Y | <u>FACW</u> | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. Phleum pratense | 15 | N | FACU | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. <u>Scirpus cyperinus</u> | | N | OBL | 1 |
| 4. <u>Carex stipata</u> | | N | OBL | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. <u>Ranunculus acris</u> | _ 2 | N | FAC | Definitions of Vegetation Strata: |
| 6 | | | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7 | | | | at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 11 | | | | |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in height. |
| 00 | 97 | = Total Co | ver | |
| Woody Vine Stratum (Plot size:30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 4 | | | | Hydrophytic Vegetation |
| | | = Total Co | | Present? Yes V No |
| * | Λ | = Total Cov | ıρr | |

SOIL Sampling Point: wasa1046e_w

| nches) | Color (m | Matrix | % | Color (r | | x Features % | Type ¹ | Loc ² | Texture | Remarks |
|-------------|-------------------------------|------------|------------|--------------|-----------------------|-----------------------------|-------------------|------------------|----------------|--|
| 200 | | | | | | | Туре | | | Nemans |
|)-20 | <u>5YR</u> | 3/2 | 90 | DIK | 3/4 | _10_ | | <u> </u> | SIC | |
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| | | | | | | | | | 2, ,, | |
| | ncentration ndicators: | , D=Depl | etion, RM | =Reduced I | Matrix, MS | S=Masked | Sand Gr | ains. | | PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : |
| Histosol | | | | Polyva | alue Belov | w Surface | (S8) (LRI | RR, | | uck (A10) (LRR K, L, MLRA 149B) |
| Histic Ep | pipedon (A2) | , | | MLI | RA 149B) |) | | | Coast F | Prairie Redox (A16) (LRR K, L, R) |
| Black His | | 4) | | | | | | LRA 149B) | | ucky Peat or Peat (S3) (LRR K, L, R |
| | n Sulfide (A I Layers (A5 | | | | - | /lineral (F1 Matrix (F2) | | , L) | | urface (S7) (LRR K, L) ue Below Surface (S8) (LRR K, L) |
| | Below Darl | | e (A11) | - | ted Matrix | | | | - | ark Surface (S9) (LRR K, L) |
| | ırk Surface (| | | Redox | | | | | | anganese Masses (F12) (LRR K, L, F |
| - | lucky Minera Ileyed Matrix | | | | ted Dark S Depress | Surface (F | 7) | | | ont Floodplain Soils (F19) (MLRA 149 Spodic (TA6) (MLRA 144A, 145, 149I |
| - | edox (S5) | ((34) | | Nedox | Depless | 10115 (1 0) | | | | rent Material (F21) |
| Stripped | Matrix (S6) | | | | | | | | Very SI | nallow Dark Surface (TF12) |
| _ Dark Sur | rface (S7) (L | .RR R, M | ILRA 149I | B) | | | | | Other (| Explain in Remarks) |
| dicators of | hvdrophvtic | c vegetati | ion and w | etland hydro | oloav mus | t be prese | nt. unles: | s disturbed | or problematic | |
| | ayer (if obs | - | | | 3) | | -, | | | |
| Туре: | | | | | | | | | | |
| Depth (inc | ches): | | | | | | | | Hydric Soil | Present? Yes <u>/</u> No |
| marks: | | | | | | | | | | |
| | | | . 46 ~ ~ " | afila wit | h redo | y conc | entrati | ons pre | | |



wasa1046e_w_NE



wasa1046e_w_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | |
|--|--|------------------------------|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | |
| File #: wasa1046 | Date of visit(s): 2020-06-01 | |
| Location: PLSS: sec 29 T047N R004W | Ecological Landsca | • |
| Lat: 46.521990 Long: -90.898531 County: Ashland Town/City/Village: Gingles town | Watershed: LS09, Lower Bad River | |
| SITE DESCRIPTION | | |
| Soils: Mapped Type(s): | WWI Class: N/A | |
| Sanborg-Badriver complex, 0 to 6 percent slopes Field Verified: | Wetland Type(s): PEM - Wet mea | dow |
| The soils were not field verified. | Wetland Size: 0.1162 | Wetland Area Impacted 0.1162 |
| Hydrology: The hydrologic regime is saturated with standing | Vegetation: Plant Community Description(s): The wetland is a wet meadow dominated by reed canary grass across the entire feature, sedges are present in the wetter areas, and encroaching Timothy grass from the surrounding hay field is present within the less wet sections of the wetland feature. | |
| water present in parts of the feature. The major source of hydrology is from surface water inputs. | | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | | Functional Value Assessment |
|----|-----|-----------|---|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | Ν | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | Ν | N | Used for educational or scientific purposes |
| 3 | Ν | N | Visually or physically accessible to public |
| 4 | Ν | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| _ | | | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | | ., | Wildlife Habitat |
| 1 | N | N | Wetland and contiguous habitat >10 acres |
| 2 | N | N | 3 or more strata present (>10% cover) |
| 3 | N | N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | N | N | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | Occurs in a Joint Venture priority township |
| 6 | N | N | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| | IN | IN | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| 7 | Ν | N | plans |
| 0 | | | |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | Y | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | Υ | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | N | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | Ν | N | Along shoreline of a stream, lake, pond or open water area (<a>2 1 acre) - if no, not applicable |
| 2 | N.I | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| | N | N | water levels or high flows – if no, not applicable |
| 3 | Ν | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | N | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | Υ | Υ | Water flow through wetland is NOT channelized |
| 3 | Y | Y | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | N | N | Within a watershed with <10% wetland |
| 8 | N | N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | | | Water Quality Protection |
| 1 | N | N | Provides substantial storage of storm and floodwater based on previous section |
| 2 | N | N | Basin wetland or constricted outlet |
| 3 | Y | Y | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Y | Y | Dense, persistent vegetation |
| 6 | | N N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | N | | Stormwater or surface water from agricultural land is major hydrology source |
| | Y | Y | |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | Ν | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | Ν | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | Ν | N | Wetland is within a wellhead protection area |
| | | | |

| | | nments (Refer to Section 1 numbers) |
|---------------|---|---|
| | en frog was observed water runoff from the | d during the time of the survey. ST3/WQ-5 the wetland has dense vegetation present at the time of the survey. WQ-7 the wetland is within a hay field and exprounding field. |
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| | | |
| | | at and Species Observation (including amphibians and reptiles) |
| | st: | oservation, tracks, scat, other sign; type of habitat: nesting, migratory, |
| | | Species/Habitat/Comments |
| Observed Y | Potential Y | Species/Habitat/Comments Amphibians |
| <u>'</u> | Y | Avian |
| Υ | Y | Small mammal |
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| | | atic Life Habitat and Species Observations |
| Lis | st: direct of | oservation, other sign; type of habitat: nesting, spawning, nursery areas, etc. |
| Observed | Detential | Charles II labitat |
| Observed | Potential Y | Species/Habitat Aquatic invertebrates |
| | Ť | Aqualic invertebrates |
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SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | inty intogrity (on olo) | | | |
|--|--|---|--|--|
| | Low | Medium | High | Exceptional |
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 | S2 🗌 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-----------------------|-------------|------|-------------------|---|
| Phalaris arundinacea* | | | PEM | Patchy |
| Phleum pratense* | | | PEM | Rare |
| Scirpus cyperinus | | | PEM | Rare |
| Carex gracillima | | | PEM | Rare |
| Carex stipata | | | PEM | Rare |
| Carex vulpinoidea | | | PEM | Rare |
| Juncus effusus | | | PEM | Rare |
| Ranunculus acris | | | PEM | Rare |
| Fragaria virginiana | | | PEM | Barren |
| Trifolium hybridum | | | PEM | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low due to missing strata, high cover percentage of invasive species, and the common plant community.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| | Х | | M | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| Х | Х | | Н | С | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | | | | | Roads or railroad |
| | | | | | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | ., | | | | Removal of herbaceous stratum – mowing, |
| X | X | | M | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Х | Х | | Н | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
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^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is located within an infrequently mowed hay field and likely receives polluted runoff from said field | J. |
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^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|--------|-------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | / | | | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | V | | | | |
| Fish and Aquatic Life Habitat | / | | | | |
| Shoreline Protection | | | | | / |
| Flood and Stormwater Storage | / | | | | |
| Water Quality Protection | ✓ | | | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | The presence of invasives and missing strata limit floristic integrity. |
| Human Use Values | The wetland is within a hay field. |
| Wildlife Habitat | The wetland is small and has a high presence of invasives. |
| Fish and Aquatic Life Habitat | A frog was observed during the survey but the area is small and likely only supports habitat for a limited number of aquatic fauna. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is relatively small and thus limited in its storage capacity. |
| Water Quality Protection | The wetland has dense vegetation but is relatively small in size. |
| Groundwater Processes | The wetland receives most of its input from surface water. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/Co | ounty: Ashland | Sampling Date: | 2020-06-01 |
|--|---|-------------------------------|---|----------------------|
| Applicant/Owner: Enbridge | | | | |
| Investigator(s): SBR/DGL | | | | |
| Landform (hillslope, terrace, etc.): Rise | | | | be (%): 0-2% |
| Subregion (LRR or MLRA): Northcentral Forests Lat | 46.521927 | Long: -90.89 | 98319 Datum | n: WGS84 |
| Soil Map Unit Name: Sanborg-Badriver com | nplex 0 to 6 per | cent slopes | NWI classification: | |
| Are climatic / hydrologic conditions on the site typical f | | | | |
| Are Vegetation, Soil, or Hydrology | - | | | ✓ No |
| Are Vegetation, Soil, or Hydrology | | | | 110 |
| | | | | |
| SUMMARY OF FINDINGS – Attach site n | nap showing samp | oling point locations | , transects, important fe | atures, etc. |
| Hydrophytic Vegetation Present? Yes | | Is the Sampled Area | | |
| Hydric Soil Present? Yes | NO | within a Wetland? | Yes No | |
| | | If yes, optional Wetland Site | e ID: | |
| Remarks: (Explain alternative procedures here or in The upland is within a hay field and | a separate report.) | / Kentucky hluears | ass and smooth brome | o with |
| weedy forbs present. | is dominated by | rentucky bluegie | iss and smooth bronk | 5 WILLI |
| weday forbs present. | | | | |
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| HYDROLOGY | | | | |
| Wetland Hydrology Indicators: | | | condary Indicators (minimum of t | <u>two required)</u> |
| Primary Indicators (minimum of one is required; chec | | | Surface Soil Cracks (B6) | |
| | Water-Stained Leaves Aquatic Fauna (B13) | | Drainage Patterns (B10) Moss Trim Lines (B16) | |
| | Marl Deposits (B15) | <u> </u> | | |
| | Hydrogen Sulfide Odor | | | |
| | | | Saturation Visible on Aerial Ima | agery (C9) |
| | Presence of Reduced | - | Stunted or Stressed Plants (D1 | |
| 1 - | Recent Iron Reduction | • • | Geomorphic Position (D2) | , |
| | Thin Muck Surface (C7 | | Shallow Aquitard (D3) | |
| | Other (Explain in Rema | | Microtopographic Relief (D4) | |
| Sparsely Vegetated Concave Surface (B8) | | , <u> </u> | FAC-Neutral Test (D5) | |
| Field Observations: | | | | |
| Surface Water Present? Yes No | Depth (inches): | | | |
| Water Table Present? Yes No | _ Depth (inches): | | | |
| | _ Depth (inches): | Wetland Hydr | ology Present? Yes | No <u>~</u> |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring | well, aerial photos, previ | ious inspections), if availab | le: | |
| | , , , , , , | , ,, | | |
| | | | | |
| Remarks: No indicators of wetland hydrology | were observed | | | |
| The maleatore of Wolland Tryarology | word about vou. | | | |
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VEGETATION – Use scientific names of plants.

| EGETATION – Use scientific names of plants. | | | | Sampling Point: <u>wasa1046_</u> u |
|---|------------------|----------------------|---------------------|--|
| Tree Stratum (Plot size:30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC:(A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata: 2 (B) |
| 4 | | | | Percent of Dominant Species |
| 5 | | | | That Are OBL, FACW, or FAC: 0 (A/B |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | 0 | = Total Co | ver | OBL species0 x 1 =0 |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species0 x 2 =0 |
| 1 | | - | | FAC species4 x 3 =12 |
| 2 | | | | FACU species <u>67</u> x 4 = <u>268</u> |
| 3 | | | | UPL species $22 \times 5 = 110$ |
| 1. | | | | Column Totals: <u>93</u> (A) <u>390</u> (B) |
| 5. | | | | Prevalence Index = B/A = 4.193548387096774 |
| 5. | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| · · | _ | = Total Co | vor | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:5) | | - Total Co | VCI | 3 - Prevalence Index is ≤3.0 ¹ |
| | 45 | V | EACH | 4 - Morphological Adaptations (Provide supporting |
| 1. <u>Poa pratensis</u> | | | <u>FACU</u> | data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. <u>Bromus inermis</u> | | | UPL | 1 Toblematic Hydrophytic Vegetation (Explain) |
| 3. <u>Lotus corniculatus</u> | _ | N | FACU | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. <u>Carex gracillima</u> | | N | FACU | be present, unless disturbed or problematic. |
| 5. <u>Achillea millefolium</u> | - | N | <u>FACU</u> | Definitions of Vegetation Strata: |
| 3. <u>Hieracium aurantiacum</u> | | _N_ | | Tree – Woody plants 3 in. (7.6 cm) or more in diamete |
| 7. <u>Fragaria virginiana</u> | | | <u>FACU</u> | at breast height (DBH), regardless of height. |
| 8. <u>Antennaria cf parlinii</u> | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| e. <u>Viola sororia</u> | 2 | N | FAC | and greater than or equal to 3.28 ft (1 m) tall. |
| 10. <u>Taraxacum officinale</u> | | N | <u>FACU</u> | Herb – All herbaceous (non-woody) plants, regardless |
| 11. Rhamnus cathartica | 2 | N | <u>FAC</u> | of size, and woody plants less than 3.28 ft tall. |
| 12. <u>Leucanthemum vulgare</u> | 2 | N | UPL | Woody vines – All woody vines greater than 3.28 ft in height. |
| | 100 | = Total Co | ver | neight. |
| Noody Vine Stratum (Plot size:) | | | | |
| l | | | | |
| 2. | | | | |
| 3 | | | | Hydrophytic |
| 4. | | | | Vegetation |
| | | = Total Co | ver | Present? Yes No/_ |
| Remarks: (Include photo numbers here or on a separate s The vegetation at the sample point is re | 0 sheet.) | = Total Co | | Present? Yes No |

SOIL Sampling Point: wasa1046_u

| Profile Desc | ription: ([| Describe t | to the dep | th needed | to docun | nent the i | indicator | or confirm | the absence of | of indicators.) |
|---------------------------|----------------------------|------------|-------------|--------------|--------------------------|------------|-------------------|------------------|-----------------|--|
| Depth | | Matrix | | | | | | . 2 | | |
| (inches) | Color (| | <u>%</u> | Color (r | noist) | | Type' | Loc ² | <u>Texture</u> | Remarks |
| _0-17_ | 5YR | 3/4 | <u>100</u> | | | 0 | | | CL | |
| <u> 17-20</u> | <u>5YR</u> | 4/4 | _98_ | <u>5YR</u> | 4/2 | 2 | _C_ | _M_ | C | |
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| 1- 0.0 | | | | | | | | | 21 (1 | Di B. IIII MANI |
| ¹ Type: C=Co | | | etion, RIVI | =Reduced I | Matrix, MS | s=Masked | Sand Gr | ains. | | PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : |
| Histosol | | | | Polyva | alue Belov | v Surface | (S8) (LRI | ₹R, | | uck (A10) (LRR K, L, MLRA 149B) |
| | oipedon (A2 | 2) | | | RA 149B) | | | | | Prairie Redox (A16) (LRR K, L, R) |
| Black Hi | stic (A3) en Sulfide (A | ۸۸) | | | oark Surfa Mucky M | | | LRA 149B) | | ucky Peat or Peat (S3) (LRR K, L, R) Irface (S7) (LRR K, L) |
| | d Layers (A | | | | y Mucky IV y Gleyed N | | | , L) | | ue Below Surface (S8) (LRR K, L) |
| Depleted | d Below Da | rk Surface | e (A11) | Deple | ted Matrix | (F3) | | | Thin Da | rk Surface (S9) (LRR K, L) |
| | ark Surface | | | | Dark Sur | . , | | | | nganese Masses (F12) (LRR K, L, R) |
| - | Mucky Mine Gleyed Matr | | | | ted Dark S Depressi | | -7) | | | nt Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) |
| - | Redox (S5) | () | | | | () | | | | rent Material (F21) |
| | Matrix (S6 | | | | | | | | | nallow Dark Surface (TF12) |
| Dark Su | rface (S7) (| LRR R, N | ILRA 1491 | 3) | | | | | Other (E | Explain in Remarks) |
| ³ Indicators o | f hydrophyt | ic vegetat | ion and we | etland hydro | ology mus | t be prese | ent, unles | s disturbed | or problematic. | |
| Restrictive I | Layer (if ob | oserved): | | | | | | | | |
| Type: | | | | | | | | | | |
| Depth (in | ches): | | | | | | | | Hydric Soil F | Present? Yes No |
| Remarks: | olovov. | بير مانم | ith oon | o rodo | | ontroti | 000 01 | agent fo | r down in | the profile |
| Reduisii | clayey | SOIIS W | illi Son | ie redo | K CONCE | entratio | ons pre | esentia | i down in | the profile. |
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wasa1046_u_E



wasa1046_u_SW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ash | ıland | Sampling Date: 2020-06-02 |
|--|---|----------------------------------|---|
| Applicant/Owner: Enbridge | | | |
| Investigator(s): SBR/DGL | | | · - |
| Landform (hillslope, terrace, etc.): Depression | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46 | | | |
| Soil Map Unit Name: Sanborg-Badriver complex | | | |
| | • | | |
| Are climatic / hydrologic conditions on the site typical for this | | | |
| Are Vegetation, Soil, or Hydrology si | | | |
| Are Vegetation, Soil, or Hydrology na | | If needed, explain any ansv | |
| SUMMARY OF FINDINGS – Attach site map s | showing sampling poi | nt locations, transect | ts, important features, etc. |
| Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative procedures here or in a sep | within a Wo If yes, optio | etland? Yes nal Wetland Site ID: | |
| The wetland is a wet meadow located in is dominated by reed canary grass. Star | | | |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | Secondary Indi | icators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all the | | Surface So | |
| | er-Stained Leaves (B9) | Drainage F | |
| | atic Fauna (B13) | Moss Trim | |
| | Deposits (B15) | | on Water Table (C2) |
| | rogen Sulfide Odor (C1) | | urrows (C8) |
| | lized Rhizospheres on Living Fence of Reduced Iron (C4) | | Visible on Aerial Imagery (C9) Stressed Plants (D1) |
| | ent Iron Reduction in Tilled So | | nic Position (D2) |
| | Muck Surface (C7) | Shallow Ac | |
| | er (Explain in Remarks) | | graphic Relief (D4) |
| Sparsely Vegetated Concave Surface (B8) | ·· (=/p···································· | <u>✓</u> FAC-Neutr | |
| Field Observations: | | | , , |
| Surface Water Present? Yes 🔽 No Dep | oth (inches): 1 | | |
| Water Table Present? Yes No _ ✓ Dep | | | |
| Saturation Present? Yes No Dep | oth (inches): | Wetland Hydrology Pres | ent? Yes <u>/</u> No |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, a | erial photos, previous inspect | rions) if available: | |
| Describe Necotada Data (Stream gaage, memoring, 2 | icilai pilotoo, piovioso iliopos. | ions, ii avanasis. | |
| | | | |
| The hydrologic regime is saturated with survey. | standing water pres | sent throughout the | e feature at the time of |
| | | | |
| | | | |

VEGETATION – Use scientific names of plants.

| A book ito | | | | |
|------------|-------------------|-------------------------------------|--|--|
| | Dominant Species? | | Dominance Test workshee | et: |
| | | | Number of Dominant Specie That Are OBL, FACW, or FA | |
| | | | Total Number of Dominant | |
| | | | Species Across All Strata: | 1 (B) |
| | | | | |
| | | | That Are OBL, FACW, or FA | AC: <u>100</u> (A/B |
| | | | Prevalence Index workshe | eet: |
| | | | Total % Cover of: | Multiply by: |
| 0 | = Total Cov | /er | | |
| | | | | |
| | | | | <u></u> |
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| - | | | | |
| | | | * | |
| 0 | = Total Cov | /er | | |
| | | | 4 - Morphological Adapt | tations ¹ (Provide supporting |
| | <u>Y</u> | | | |
| | | | Problematic Hydrophytic | c Vegetation' (Explain) |
| | | | ¹ Indicators of hydric soil and | wetland hydrology must |
| | | | be present, unless disturbed | I or problematic. |
| | | | Definitions of Vegetation S | Strata: |
| | | | | |
| | | | at breast height (DBH), rega | irdless of height. |
| | | | , , , | |
| | | | | |
| · | | | | |
| | | | Woody vines - All woody v | ines areater than 3.28 ft in |
| 07 | | | height. | ines greater than 5.25 it in |
| <u> </u> | = Total Cov | /er | | |
| | | | | |
| | | | | |
| | | | Usalnomb 45 | |
| | | | Hydrophytic Vegetation | |
| | | | Vegetation | |
| | | 0 = Total Cov 75 Y 15 N 5 N 2 N | | Species Across All Strata: Percent of Dominant Specie That Are OBL, FACW, or FA Prevalence Index workshe Total % Cover of: OBL species 2 FACW species 5 FAC species 15 UPL species 0 Column Totals: 97 Prevalence Index = B Hydrophytic Vegetation In 1 - Rapid Test for Hydro 2 - Dominance Test is > 3 - Prevalence Index is 4 - Morphological Adapt data in Remarks or or dependent of the present, unless disturbed be present. |

SOIL Sampling Point: wasa1047e_w

| Profile Desc | ription: (Describe to | the depth | n needed to docum | ent the in | ndicator | or confirm | the absence of inc | dicators.) |
|---|------------------------|-------------|---|--|-----------------------|------------------|---|--|
| Depth | Matrix | | | Features | | | | |
| (inches) | Color (moist) | | Color (moist) | | Type ¹ | Loc ² | Texture | Remarks |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | oncentration, D=Deple | etion, RM=F | Reduced Matrix, MS | =Masked | Sand Gra | ains. | | Pore Lining, M=Matrix. |
| Hydric Soil I | | | | | | | | roblematic Hydric Soils ³ : |
| Black His Hydroge Stratified Depleted Thick Da Sandy M Sandy G Sandy R Stripped | ipedon (A2) | - - - | Polyvalue Below MLRA 149B) Thin Dark Surfac Loamy Mucky M Loamy Gleyed M Depleted Matrix Redox Dark Surf Depleted Dark S Redox Depression | ce (S9) (L ineral (F1 Matrix (F2) (F3) face (F6) surface (F | RR R, ML) (LRR K, | -RA 149B) | Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark Si Iron-Mangar Piedmont Fle Mesic Spodi | A10) (LRR K, L, MLRA 149B) e Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L) elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R) oodplain Soils (F19) (MLRA 149B) oc (TA6) (MLRA 144A, 145, 149B) Material (F21) w Dark Surface (TF12) ain in Remarks) |
| | hydrophytic vegetation | on and wetl | and hydrology must | be prese | nt, unless | disturbed | or problematic. | |
| | .ayer (if observed): | | | | | | | |
| Type: Depth (inc | :hes): | | | | | | Hydric Soil Prese | ent? Yes <u> </u> |
| | | • | | | | | | de ditch. The soils are nydrologic indicators. |
| | | | | | | | | |



wasa1047e_w_N



wasa1047e_w_S

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | |
|---|--------------------------|-----------------------|
| Project name: | Evaluator(s): | |
| Line 5 Relocation Project | SBR/DGL | |
| File #: | Date of visit(s): | |
| wasa1047 | 2020-06-02 | |
| Location: | Ecological Landsca | ape: |
| PLSS: sec 32 T047N R004W | Lake Superior Clay Plair | |
| | Lake Superior Clay Flair | I |
| Lat: <u>46.507559</u> Long: -90.885696 | Watershed: | |
| • | LS10, White River | |
| County: Ashland Town/City/Village: Gingles town | | |
| | | |
| SITE DESCRIPTION | | |
| Soils: | WWI Class: | |
| Mapped Type(s): | N/A | |
| Sanborg-Badriver complex, 0 to 6 percent slopes | Wetland Type(s): | |
| | PEM Weť meád | OW |
| Field Verified: | | |
| The soils were not field verified. | Wetland Size: | Wetland Area Impacted |
| | 0.0085 | 0.0085 |
| | Vegetation: | |
| | Plant Community D | Description(s): |
| Hydrology: | _ | a wet meadow that is |
| The hydrolgic regime is saturated and surface water | | |
| runoff is the main source of hydrology. Surface water | dominated by re | ed canary grass. |
| , 0, | | |
| is present at the time of the survey. | | |
| | | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | | Functional Value Assessment |
|----|------|-----------|---|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | N | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | Ν | N | Used for educational or scientific purposes |
| 3 | Υ | Υ | Visually or physically accessible to public |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| _ | | | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | Ν | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | | ., | Wildlife Habitat |
| 1 | N | N | Wetland and contiguous habitat >10 acres |
| 2 | N | N | 3 or more strata present (>10% cover) |
| 3 | N | N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | N | N | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | Occurs in a Joint Venture priority township |
| 6 | N | N | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| | IN | IN | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| 7 | Ν | N | plans |
| 0 | N.I. | | |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | Y | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | Υ | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | N | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | Ν | N | Along shoreline of a stream, lake, pond or open water area (<a>2 1 acre) - if no, not applicable |
| 2 | N.I | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| | N | N | water levels or high flows – if no, not applicable |
| 3 | Ν | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | Υ | Υ | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | N | N | Water flow through wetland is NOT channelized |
| 3 | Υ | Υ | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | Y | Y | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | N | N | Within a watershed with <10% wetland |
| 8 | N | N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | | | Water Quality Protection |
| 1 | N | N | Provides substantial storage of storm and floodwater based on previous section |
| 2 | Y | Y | Basin wetland or constricted outlet |
| 3 | N | N | Water flow through wetland is NOT channelized |
| 4 | N | N N | Vegetated wetland associated with a lake or stream |
| 5 | Y | Y | Dense, persistent vegetation |
| 6 | | N N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | N | | Stormwater or surface water from agricultural land is major hydrology source |
| | N | N | |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | Ν | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | Ν | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | Ν | N | Wetland is within a wellhead protection area |
| | | | |

Section 1 Comments (Refer to Section 1 numbers) HU-3 the wetland is in a roadside ditch and is visible from the road. WH-10/FA-2/4 the wetland has standing water at the time of the survey and likely provides habitat for at least aquatic invertebrates. ST-1/WQ-2 the wetland drains to a culvert. ST-3/WQ-5 the wetland has dense vegetation, though mowing of the ditch could affect this. ST-5 the wetland likely receives polluted runoff from the upslope paved road. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Rabbit/small mammals Υ Amphibians Avian Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | inty intogrity (on olo) | | | |
|--|--|---|--|--|
| | Low | Medium | High | Exceptional |
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 | S2 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-----------------------|-------------|------|-------------------|---|
| Phalaris arundinacea* | | | PEM | Interrupted |
| Poa pratensis* | | | PEM | Rare |
| Equisetum arvense | | | PEM | Barren |
| Juncus effusus | | | PEM | Barren |
| Plantago major | | | PEM | Barren |
| Taraxacum officinale | | | PEM | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The florisitc integrity is low based on the dominance of invasives, the presence of only one strata, and the common plant community.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| Х | Х | | М | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| | | | | | Agriculture – pasture |
| Х | Х | | Н | С | Roads or railroad |
| | | | | | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| V | V | | Н | 110 | Removal of herbaceous stratum – mowing, |
| X | Х | | " | UC | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| X | Χ | | Н | С | Cover of non-native and/or invasive species |
| | Χ | | М | UC | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| species cover is high for this feature. |
|---|
| |
| |
| |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | SIGNIFICANCE | | | | | | | | | |
|-------------------------------|--------------|----------|------|-------------|----------|--|--|--|--|--|
| | Low | Medium | High | Exceptional | NA | | | | | |
| Floristic Integrity | V | | | | | | | | | |
| Human Use Values | V | | | | | | | | | |
| Wildlife Habitat | / | | | | | | | | | |
| Fish and Aquatic Life Habitat | ✓ | | | | | | | | | |
| Shoreline Protection | | | | | / | | | | | |
| Flood and Stormwater Storage | | / | | | | | | | | |
| Water Quality Protection | V | | | | | | | | | |
| Groundwater Processes | ✓ | | | | | | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | The wetland is dominated by reed canary grass. |
| Human Use Values | The wetland is found in a roadside ditch. |
| Wildlife Habitat | The wetland is small and is likely often mowed. |
| Fish and Aquatic Life Habitat | There is standing water present at the time of survey but mowing likely disturbs the feature. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is small but is a basin wetland that diverts to a culvert. There is dense persistent vegetation and the feature collects stormwater runoff from the road. |
| Water Quality Protection | The wetland has dense vegetation and diverts to a culvert but is small and likely can only filter small amounts of water. |
| Groundwater Processes | The wetlands main input is from surface water. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ashla | and Sampl | ling Date: 2020-06-02 | | | | |
|---|---|--|-------------------------|--|--|--|--|
| • | | State: Wisconsin San | | | | | |
| <u> </u> | Section, Township, Range: Sec 32 T047N R004W | | | | | | |
| Landform (hillslope, terrace, etc.): Talf | | | | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46.5 | | | | | | | |
| Soil Map Unit Name: Sanborg-Badriver complex, | | | | | | | |
| Are climatic / hydrologic conditions on the site typical for this ti | | | | | | | |
| Are Vegetation, Soil, or Hydrology sign | | | | | | | |
| Are Vegetation, Soil, or Hydrology nat | | | | | | | |
| | | | | | | | |
| SUMMARY OF FINDINGS – Attach site map sh | owing sampling point | locations, transects, impo | ortant features, etc. | | | | |
| Hydrophytic Vegetation Present? Yes No _ | | | | | | | |
| Hydric Soil Present? Yes No _ | | and? Yes No |) <u> </u> | | | | |
| Wetland Hydrology Present? Yes No _ | | I Wetland Site ID: | | | | | |
| Remarks: (Explain alternative procedures here or in a separ The upland is located upslope from the w | ate report.) vetland within a mow | ed lawn. The area is do | ominated by | | | | |
| Kentucky bluegrass and common weedy | | rea lawn. The area is a | offiliated by | | | | |
| Remacky blacgrass and common weedy | iawii ioibs. | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| HYDROLOGY | | | | | | | |
| Wetland Hydrology Indicators: | | Secondary Indicators (m | inimum of two required) | | | | |
| Primary Indicators (minimum of one is required; check all that | | | | | | | |
| | Stained Leaves (B9) | Drainage Patterns (E | | | | | |
| | c Fauna (B13) | Moss Trim Lines (B1 | | | | | |
| | eposits (B15) | Dry-Season Water T | | | | | |
| | gen Sulfide Odor (C1) | Crayfish Burrows (C | • | | | | |
| | • | ots (C3) Saturation Visible or | | | | | |
| | nce of Reduced Iron (C4) t Iron Reduction in Tilled Soils | Stunted or Stressed(C6) Geomorphic Position | | | | | |
| | uck Surface (C7) | Shallow Aquitard (D | | | | | |
| | (Explain in Remarks) | Microtopographic Re | | | | | |
| Sparsely Vegetated Concave Surface (B8) | Explain in Remarks) | FAC-Neutral Test (D | | | | | |
| Field Observations: | | 1 AO-Neutiai 1est (E | 7.5) | | | | |
| Surface Water Present? Yes No <u>✓</u> Depth | (inches): | | | | | | |
| Water Table Present? Yes No _v Depth | | | | | | | |
| Saturation Present? Yes No _v Depth | | Vetland Hydrology Present? Ye | es No <u>/</u> _ | | | | |
| (includes capillary fringe) | d-1 -1 -4 | | | | | | |
| Describe Recorded Data (stream gauge, monitoring well, aer | iai priotos, previous inspectior | is), if available: | | | | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| No indicators of wetland hydrology were | observed. | | | | | | |
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VEGETATION – Use scientific names of plants.

| /EGETATION – Use scientific names of plants | | | | Sampling Point: wasa1047_u |
|--|---------------------|------------|-----------------------|---|
| Tree Stratum (Plot size:30) | Absolute % Cover | | t Indicator Status | Dominance Test worksheet: |
| 1. <u>Populus tremuloides</u> | | | | Number of Dominant Species That Are OBL, FACW, or FAC:1 (A) |
| 2. <u>Pinus strobus</u> | | | | , , |
| 3. | | | | Total Number of Dominant Species Across All Strata: (B) |
| 4. | | | | Percent of Dominant Species |
| 5. | | | | That Are OBL, FACW, or FAC: 33 (A/B) |
| 6. | | | | Prevelence Index weeks to |
| 7. | | | | Prevalence Index worksheet: Total % Cover of: Multiply by: |
| | | = Total Co | | OBL species 0 x 1 = 0 |
| Sapling/Shrub Stratum (Plot size:15) | | | | FACW species0 x 2 =0 |
| 1 | | | | FAC species <u>8</u> x 3 = <u>24</u> |
| 2 | | | | FACU species102 x 4 =408 |
| 3. | | | | UPL species0 x 5 =0 |
| | | | | Column Totals: <u>110</u> (A) <u>432</u> (B) |
| 4 | | | | Prevalence Index = B/A = 3.9272727272727272 |
| 5 | | | | Hydrophytic Vegetation Indicators: |
| 6 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| 7 | | | | 2 - Dominance Test is >50% |
| | | = Total Co | over | 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: 5) 1. Poa pratensis | 70 | Y | FACU | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| Carex gracillima | | N | FACU | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. Taraxacum officinale | | NI | FACU | |
| 4. Ranunculus acris | | N | FAC | ¹ Indicators of hydric soil and wetland hydrology must |
| 5. Trifolium pratense | | | FACU | be present, unless disturbed or problematic. |
| 6. Achillea millefolium | | | FACU | Definitions of Vegetation Strata: |
| | | | FACU | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7. Fragaria virginiana | | | FACU | at breast height (DBH), regardless of height. |
| Lotus corniculatus | | | TACO | 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. |
| 11. | | | | Woody vines – All woody vines greater than 3.28 ft in |
| 12 | 100 | = Total Co | | height. |
| Wasadu Vina Charlena (Dlat sina) | 100 | = Total Co | over | |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | | |
| 2. | | | | |
| 3 | | - | | Hydrophytic Vegetation |
| 4 | | | | Present? Yes No v |
| | | = Total Co | over | |
| Remarks: (Include photo numbers here or on a separate The sample point is somewhat represe | | of the u | pland ar | ea. Tree cover is patchy. |
| | | | | |
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SOIL Sampling Point: wasa1047_u

| Profile Description | n: (Describe to | the depth r | | | | or confirm | the absence | of indicators.) | |
|---|-----------------|--------------|------------------|------------|-------------------|---|----------------|---|-------------|
| Depth | Matrix | | | K Features | | . 2 | | | |
| (inches) Co | olor (moist) | % | Color (moist) | | | Loc ² | Texture | Remarks | |
| | | | | | | | | | |
| | | | | | | | | | |
| ¹ Type: C=Concent | | tion, RM=Re | duced Matrix, MS | =Masked | Sand Gra | ains. | | PL=Pore Lining, M=Ma for Problematic Hydric | |
| 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) | | | | | .RA 149B) , L) | 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) | | | |
| Indicators of hydro Restrictive Layer (| | n and wetlar | ia nyarology mus | t be prese | ent, uniess | aisturbea | or problematic | - | |
| Type: | | | - | | | | Hydric Soil | Present? Yes | No <u> </u> |
| | private re | sidence. | The soils a | | | | | owed lawn in clos cased on the lan | |



wasa1047_u_N



wasa1047_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relo | cation Proiec | t | City/C | ounty: Ash | land | Samp | pling Date: 2 | 020-06-02 |
|--|---------------------------------------|--------|---|---------------|----------------|--|---------------|------------------|
| Applicant/Owner: Enbridge | | | | | | | | |
| Investigator(s): SBR/DGL | | | | | | | | |
| Landform (hillslope, terrace, et | | | | | | | | (%): 0-2% |
| Subregion (LRR or MLRA): No. | | | | | | | | |
| Soil Map Unit Name: Sanbo | | | | | | | | |
| | • | | • | • | | | | |
| Are climatic / hydrologic condit | | | - | | | | | NI- |
| Are Vegetation, Soil | | | | | | | | NO |
| Are Vegetation, Soil | , or Hydrology | ′ | naturally problema | atic? (| If needed, e | xplain any answers in R | lemarks.) | |
| SUMMARY OF FINDING | 3S – Attach si | te m | ap showing sam | npling poi | nt locatio | ns, transects, imp | ortant feat | ures, etc. |
| Hydrophytic Vegetation Present? | Yes | ~ | No | | etland? | Yes <u></u> ✓ N | | |
| Wetland Hydrology Present? Remarks: (Explain alternativ | | | _ No | If yes, optio | nal Wetland | Site ID: | | |
| relatively short but is upland point wasa1 | | g fro | om a wet mead | low to an | alder s | wamp. This feat | ure snare | ·S |
| HYDROLOGY | | | | | | | | |
| Wetland Hydrology Indicate | | | | | | Secondary Indicators (n | | o required) |
| Primary Indicators (minimum | of one is required; | | | | | Surface Soil Cracks | | |
| Surface Water (A1) High Water Table (A2) | | | Water-Stained Leave: Aquatic Fauna (B13) | | | Drainage Patterns (Moss Trim Lines (B | | |
| Saturation (A3) | | | Marl Deposits (B15) | | | Dry-Season Water | | |
| Water Marks (B1) | | | Hydrogen Sulfide Odd | or (C1) | | Crayfish Burrows (0 | | |
| Sediment Deposits (B2) | | | Oxidized Rhizosphere | | | Saturation Visible of | | ery (C9) |
| Drift Deposits (B3) | | | Presence of Reduced | _ | | Stunted or Stressed | _ | , , |
| Algal Mat or Crust (B4) | | | Recent Iron Reduction | | | ✓ Geomorphic Position | | |
| Iron Deposits (B5) | | | Thin Muck Surface (C | 27) | | Shallow Aquitard (E | D3) | |
| Inundation Visible on Ae | rial Imagery (B7) | (| Other (Explain in Ren | narks) | | Microtopographic R | Relief (D4) | |
| Sparsely Vegetated Con | cave Surface (B8) | | | | | FAC-Neutral Test (| D5) | |
| Field Observations: | | | | | | | | |
| Surface Water Present? | | | Depth (inches): | | | | | |
| Water Table Present? | · · · · · · · · · · · · · · · · · · · | | Depth (inches): | | | | | |
| Saturation Present? (includes capillary fringe) | Yes No _ | | Depth (inches): | | Wetland H | lydrology Present? Y | es <u>/</u> | No |
| Describe Recorded Data (str | eam gauge, monito | ring w | ell, aerial photos, pre | vious inspect | ions), if avai | ilable: | | |
| | | | | | | | | |
| Remarks: | | | | | | | | |
| The hydrologic regir | me is saturat | ed. | | | | | | |
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| VEGETATION | Use scientific names | of plants |
|--------------|----------------------|------------|
| VEGETATION - | use scienilic names | or biants. |

| EGETATION – Use scientific names of plants | | | | Sampling Point: wasa1049e_w |
|---|---------------------|----------------------|-------------|---|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC: (A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata:3(B) |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC:67 (A/B) |
| 5 | | | | That Are OBL, FACW, or FAC:67 (A/B) |
| 6 | | | | Prevalence Index worksheet: |
| 7 | _ | | | Total % Cover of: Multiply by: |
| | 0 | = Total Cov | /er | OBL species 0 x 1 = 0 |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species |
| 1. <u>Alnus incana</u> | _ <u>15</u> | <u> </u> | <u>FACW</u> | FAC species0 x 3 =0 FACU species14 x 4 =56 |
| 2 | | | | UPL species x 5 = 0 |
| 3 | | | | Column Totals: <u>84</u> (A) <u>196</u> (B) |
| 4 | | | | |
| 5 | | | | Prevalence Index = B/A =2.33 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | 15 | = Total Cov | /er | 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size:) | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| 1. <u>Alnus incana</u> | 35 | <u>Y</u> | <u>FACW</u> | data in Remarks or on a separate sheet) |
| 2. <u>Solidago gigantea</u> | 10 | <u>N</u> | FACW | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Rubus pubescens</u> | 10 | N | FACW | The disease of brodein and continued brodes and according |
| 4. <u>Carex sp.</u> | | Y | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. <u>Carex gracillima</u> | 10 | N | <u>FACU</u> | Definitions of Vegetation Strata: |
| 6. <u>Potentilla simplex</u> | _ 2 | N | <u>FACU</u> | |
| 7. <u>Agrimonia gryposepala</u> | 2 | N | <u>FACU</u> | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12. | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | 79 | = Total Cov | /er | height. |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | | |
| 2. | | | | |
| 3. | | | | Hydrophytic |
| 4. | | | | Vegetation |
| · · | | = Total Cov | /er | Present? Yes V No No |
| Remarks: (Include photo numbers here or on a separate | | 1000 | | <u> </u> |
| The sample point is within the small pa | itch of s | | | |
| as leaf litter covers the ground in some | | | | the feature have reduced cover of |
| alder with a greater prevalence of facu | Itative u | pland sc | ecies. | |

US Army Corps of Engineers

SOIL Sampling Point: wasa1049e_w

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | | | |
|---|-------------------------------|----------|---------------|--------------|--------------------------------|-------------|-------------------|------------------|------------------------|---|
| Depth Matrix Redox Features | | | | | | | | | | |
| (inches) | Color (mo | oist) | % | Color (m | | % | Type ¹ | Loc ² | <u>Texture</u> | Remarks |
| 0-12 | 2.5YR 4 | 4/2 | _95_ | 2.5YR | 4/4 | _5_ | _C_ | _M_ | _SIC_ | |
| 12-20 | 2.5YR 4 | 4/4_ | 90 | <u>2.5YR</u> | 4/6 | _10_ | _ <u>C</u> _ | _M_ | C | |
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| | oncentration, | D=Depl | etion, RM | =Reduced N | Matrix, MS | S=Masked | Sand Gr | ains. | ² Location: | PL=Pore Lining, M=Matrix. |
| Hydric Soil | | | | Dahasa | los Dalas | | (00) (I DI | | | for Problematic Hydric Soils ³ : |
| Histosol | pipedon (A2) | | | - | iue Belov R A 149B) | v Surface | (58) (LRI | ΧК, | | luck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) |
| | istic (A3) | | | | , | | RR R, M | LRA 149B) | | lucky Peat or Peat (S3) (LRR K, L, R) |
| | en Sulfide (A4) |) | | | - | Mineral (F1 | | , L) | | urface (S7) (LRR K, L) |
| | d Layers (A5) d Below Dark | Surface | (Δ11) | | Gleyed I ed Matrix | Matrix (F2 |) | | | lue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L) |
| | ark Surface (A | | , (, (, 1, 1, | | | face (F6) | | | | anganese Masses (F12) (LRR K, L, R) |
| - | /lucky Mineral | | | | | Surface (F | 7) | | Piedmo | ont Floodplain Soils (F19) (MLRA 149B) |
| - | Bleyed Matrix | (S4) | | Redox | Depress | ions (F8) | | | | Spodic (TA6) (MLRA 144A, 145, 149B) |
| | Redox (S5) I Matrix (S6) | | | | | | | | | arent Material (F21) hallow Dark Surface (TF12) |
| | rface (S7) (LF | RR R, M | LRA 149 | В) | | | | | | Explain in Remarks) |
| ³ Indicators o | f hydronhytic y | venetati | on and w | etland hydro | loav mus | t he nrese | ent unless | s disturbed : | or problematic | |
| | Layer (if obse | - | 011 0110 11 | otiana nyaro | logy mac | 1 20 p. 000 | Jiit, aimoot | o diotal bod | or problematic | • |
| Type: | | | | | | | | | | |
| | ches): | | | | | | | | Hydric Soil | Present? Yes No |
| Remarks: | | م مادنی | | | | 4 4 1 | £:I | _ | | |
| Red clay | ey soils v | vitn re | eaox p | resent tr | nrougr | out the | e profii | e. | | |
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wasa1049e_w_N



wasa1049e_w_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | | |
|---|--|------------------------------|--|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | | | |
| File #: wasa1049 | Date of visit(s): 2020-06-02 | | | |
| Location: PLSS: sec 32 T047N R004W | Ecological Landsca Lake Superior Clay Plair | • | | |
| Lat: 46.507569 Long: -90.886560 County: Ashland Town/City/Village: Gingles town | Watershed: LS10, White River | | | |
| SITE DESCRIPTION | | | | |
| Soils: Mapped Type(s): | WWI Class: N/A | | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes Field Verified: | Wetland Type(s): PEM Wet meadow | | | |
| The soils were not field verified. | Wetland Size: 0.0404 | Wetland Area Impacted 0.0404 | | |
| Hydrology: The hydrolgic regime is saturated and surface water is the main source of input. | Vegetation: Plant Community Description(s): The wetland is a wet meadow transitioning to an alder swamp and is dominated by speckled alder in the herbaceous layer. Outside of the cover of the alder, more herbaceous species that are tolerant of sun and slightly drier conditions are found. | | | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| HU Y/N Potential Human Usa Values: recreation, culture, education, science, natural scenic beauty | | | | Functional Value Assessment | | | |
|--|----|-----|-------|---|--|--|--|
| 2 N N Used for educational or scientific purposes 3 Y Y Vsuality or physically accessible to public 4 N N A Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation 5 N N List 6 N N Supports or provides habitat for endangered, threatened or special concern species 7 N N N In or adjacent to archaeological or cultural resource site WHH WHH Widtlife Habitat 1 N N Wetland and contitiguous habitat >10 acres 2 N N 3 or more strata present (-10% cover) 3 N N Within or adjacent to habitat comidor or established wildlife habitat area 4 N N 100 m buffer - natural land cover ±50% (south) 75% (north) infact 5 N N Occurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) 7 N N Supports or provides habitat for SCCN or birds listed in the WI Ali-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ±45 days 110 N N Standing water provides habitat for amphibians and aquatic invertebrates 111 N N Seasonally exposed mudflats present 112 N N Portides habitat scarce in the area (urban, agricultural, etc.) 113 Fish and Aquatic Life Habitat 114 N N Vegetation is inundated in spring 115 Shortline Protection 116 N N Standing water provides habitat for amphibians and aquatic invertebrates 117 N N Standing water provides habitat for amphibians and aquatic invertebrates 118 N N N Rotard Heritage Inventory (NHI) listed aquatic species within aquatic system 119 N N Standing water provides habitat for amphibians and aquatic invertebrates 110 N N Standing water provides habitat for amphibians and aquatic invertebrates 111 N N N Standing water provides habitat for amphibians and aquatic invertebrates 112 N N N Standing water provides habitat for amphibians and aquatic invertebrates 118 N N N N Rotard Heritage Inventory (NHI) listed aquatic species within aquatic system 119 N N Standing water provides habitat for amphibians and aquatic in | | | | | | | |
| 3 | | N | | | | | |
| N | 2 | Ν | N | Used for educational or scientific purposes | | | |
| S | 3 | Υ | Υ | Visually or physically accessible to public | | | |
| S | 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation | | | |
| N N N List. | _ | | | | | | |
| 7 | 5 | N | N | | | | |
| 7 | 6 | N | N | | | | |
| WH | | | | | | | |
| 1 N N Welland and contiguous habitat >10 acres 2 N N N 3 or more strata present (>10% cover) 3 N N N Within or adjacent to habitat corridor or established wildlife habitat area 4 N N N 100 m buffer – natural land cover ≥50%(south) 75% (north) intact 5 N N Occurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex,etc.) 7 N N Supports or provides habitat for SGCN or brids listed in the WI All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N N Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflast present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) Fish and Aquatic Life Habitat 1 N N Welland is connected or contiguous with perennial stream or lake 2 N N N Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N N Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, take, pond or open water area (≥1 acre) - if no, not applicable 2 N N N Along shoreline of a stream, take, pond or open water area (≥1 acre) - if no, not applicable 3 N N D Poesely rosted emergent or woody vegetation 5 Storm and Floodwater Storage 1 N N D Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 4 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable 3 N N D Dense, persistent vegetation 5 Storm and Floodwater Storage 1 N N D Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 4 N N Potential to hold > 10% of the runoff from contributing area from a 2-year 24-hour storm event 4 N N N Wetland to hold > 10% of the runoff from contributing area from a 2-year 24-hour storm event 5 V Y Dense, | | IN | 111 | | | | |
| 2 | | N | NI | | | | |
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| 4 N N Occurs in a Joint Venture priority township 6 N N Occurs in a Joint Venture priority township 7 N N Docurs in a Joint Venture priority township 8 N N Densely rovides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N N Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 11 N N Seasonally exposed mudflats present 11 N N Provides habitat scarce in the area (urban, agricultural, etc.) 11 N N Provides habitat scarce in the area (urban, agricultural, etc.) 11 N N Welland is connected or contiguous with perennial stream or lake 11 N N Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Standing water provides habitat for amphibians and aquatic invertebrates 12 N N Standing water provides habitat for amphibians and aquatic invertebrates 13 N N N Standing water provides habitat for amphibians and aquatic invertebrates 14 N N Vegetation is inundated in spring 15 Shoreline Protection 16 N N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 17 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable 18 N N Densely rooted emergent or woody vegetation 19 N N Basin welland, constricted outlet, has through-flow or is adjacent to a stream 20 Y Y Water flow through wetland is NOT channelized 21 N N Dense, persistent vegetation 22 N N N Evidence of flashy hydrology 23 Y Y Dense, persistent vegetation 24 N N N Evidence of Itashy hydrology 25 Y Y Water flow through wetland is NOT channelized 26 N N N Impervious surfaces cover >10% of land surface within the watershed 27 N N N Wetland is constricted outlet 28 N N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event 26 N N N Satural land cover in 100m b | | | | | | | |
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| 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | 4 | N | N | Vegetated wetland associated with a lake or stream | | | |
| 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N Wetland soils are organic | 5 | | | | | | |
| 7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% | | | | | | | |
| 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% | - | | | | | | |
| 9 N N Natural land cover in 100m buffer area < 50% Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | | | | |
| GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | | | | |
| 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | - | I N | IN | | | | |
| 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | N.I | N 1 | | | | |
| 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | | | | |
| 4 N N Wetland soils are organic | | | | | | | |
| | - | | | | | | |
| 5 N N Wetland is within a wellhead protection area | | N | N | | | | |
| | 5 | N | N | Wetland is within a wellhead protection area | | | |

| Wi | Idlife Habita | at and Species Observation (including amphibians and reptiles) |
|---------------|----------------|---|
| Lis | st: direct ob | oservation, tracks, scat, other sign; type of habitat: nesting, migratory, |
| | nter, etc. | |
| bserved | Potential | Species/Habitat/Comments |
| | Y | Avian Small mammals |
| | Y | Smail mammals |
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| | | <u> </u> |
| | | |
| Fis | sh and Agua | atic Life Habitat and Species Observations |
| | | oservation, other sign; type of habitat: nesting, spawning, nursery areas, etc. |
| | | |
| bserved | Potential | Species/Habitat |
| | | |
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Section 1 Comments (Refer to Section 1 numbers)

HU-3 the small wetland is still visible from the road. ST-3/WQ-5 the wetland has dense vegetation in the shrub layer ST-5 the wetland likely receives polluted runoff from the nearby mowed lawn.

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 🗌 | S2 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant [| Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of C | Plant communities | Comments (Estimate of % Cover, Abundance) |
|----------------------|-------------|-----------|-------------------|---|
| Alnus incana* | | | PEM | Patchy |
| Poa pratensis* | | | PEM | Rare |
| Carex gracillima* | | | PEM | Rare |
| Solidago gigantea | | | PEM | Rare |
| Carex sp | | | PEM | Rare |
| Juncus effusus | | | PEM | Rare |
| Phalaris arundinacea | | | PEM | Rare |
| Salix discolor | | | PEM | Rare |
| Carex castanea | | | PEM | Barren |
| Potentilla simplex | | | PEM | Barren |
| Ranunculus acris | | | PEM | Barren |
| Rubus pubescens | | | PEM | Barren |
| Salix petiolaris | | | PEM | Barren |
| Achillea millefolium | | | PEM | Barren |
| Agrimonia pubescens | | | PEM | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is moderate due to low invasive species cover, missing strata, and the less abundant plant community.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| | | | | | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | Х | | М | С | Roads or railroad |
| | | | | | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | | | | 110 | Removal of herbaceous stratum – mowing, |
| | Х | | M | UC | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| X | Х | | L | С | Cover of non-native and/or invasive species |
| | Х | | М | UC | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
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^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is small and located next to a two track used to move heavy machinery and a mowed lawn of a personal |
|--|
| residence. |
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^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | SIGNIFICANCE | | | | | |
|-------------------------------|--------------|----------|------|-------------|----------|--|
| | Low | Medium | High | Exceptional | NA | |
| Floristic Integrity | | ✓ | | | | |
| Human Use Values | V | | | | | |
| Wildlife Habitat | V | | | | | |
| Fish and Aquatic Life Habitat | / | | | | | |
| Shoreline Protection | | | | | / | |
| Flood and Stormwater Storage | ✓ | | | | | |
| Water Quality Protection | / | | | | | |
| Groundwater Processes | ✓ | | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | The wetland is small with low species diversity, but few invasives. |
| Human Use Values | The wetland is a small patch of growing shrubs. |
| Wildlife Habitat | The wetland provides some cover but is small. |
| Fish and Aquatic Life Habitat | There is no water present at the time of survey and the shallowness of the feature limited its ability to hold water and provide habitat. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is small and shallow and likely can not hold much water. |
| Water Quality Protection | The wetland is not channelized and has persistent vegetation, but is small and shallow. |
| Groundwater Processes | The wetland does not appear to influence groundwater processes. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | ct City/C | ounty: Ashland | Sampling Date: <u>2020-06-02</u> | | |
|--|--|---------------------------------------|---|--|--|
| - | | | State: Wisconsin Sampling Point: wasa1050s_w | | |
| Investigator(s): SBR/DGL | | | | | |
| | | | ne): <u>Concave</u> Slope (%): <u>0-2%</u> | | |
| | | | 0.886929 Datum: WGS84 | | |
| | | | NWI classification: | | |
| Are climatic / hydrologic conditions on the site typ | • | • | | | |
| | - | | | | |
| | | | Circumstances" present? Yes No | | |
| Are Vegetation, Soil, or Hydrolog | y naturally problema | atic? (If needed, e | explain any answers in Remarks.) | | |
| SUMMARY OF FINDINGS - Attach si | ite map showing sam | pling point locatio | ns, transects, important features, etc. | | |
| Hydric Soil Present? Yes _ | v No v No | Is the Sampled Area within a Wetland? | Yes <u> </u> | | |
| Wetland Hydrology Present? Yes _ Remarks: (Explain alternative procedures here | | If yes, optional Wetland | Site ID: | | |
| areas of sparse vegetation and I | • | lder in the shrub | layer. The herbaceous layer has | | |
| HYDROLOGY | | | O d d d di d (ini n d d d d d d d | | |
| Wetland Hydrology Indicators: | abaalaall that analah | | Secondary Indicators (minimum of two required) | | |
| Primary Indicators (minimum of one is required; | | | · | | |
| Surface Water (A1) High Water Table (A2) | Water-Stained Leave Aquatic Fauna (B13) | | Drainage Patterns (B10) Moss Trim Lines (B16) | | |
| Saturation (A3) | Marl Deposits (B15) | | Moss Trim Lines (BTo) Dry-Season Water Table (C2) | | |
| Water Marks (B1) | Hydrogen Sulfide Od | or (C1) | Crayfish Burrows (C8) | | |
| Sediment Deposits (B2) | Oxidized Rhizosphere | | Saturation Visible on Aerial Imagery (C9) | | |
| Drift Deposits (B3) | Presence of Reduced | = : : | Stunted or Stressed Plants (D1) | | |
| Algal Mat or Crust (B4) | Recent Iron Reductio | | ✓ Geomorphic Position (D2) | | |
| Iron Deposits (B5) | Thin Muck Surface (C | (7) | Shallow Aquitard (D3) | | |
| Inundation Visible on Aerial Imagery (B7) | Other (Explain in Rer | narks) | Microtopographic Relief (D4) | | |
| Sparsely Vegetated Concave Surface (B8) | | | FAC-Neutral Test (D5) | | |
| Field Observations: | | | | | |
| | ✓ Depth (inches): | | | | |
| | Depth (inches): 8 | | | | |
| Saturation Present? Yes No _ (includes capillary fringe) | Depth (inches): 6 | Wetland H | lydrology Present? Yes v No | | |
| Describe Recorded Data (stream gauge, monitor | oring well, aerial photos, pre | vious inspections), if ava | ilable: | | |
| | | | | | |
| Remarks: | | | | | |
| The hydrologic regime is saturat | ed. Saturation was | s observed at 6 ir | nches. | | |
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| VEGETATION - | Use scientific nar | mes of plants. |
|---------------------|--------------------|----------------|
| | | |

| /EGETATION – Use scientific names of plants | | | | Sampling Point: wasa1050s_w |
|---|-------------|-------------------|-------------|--|
| Tree Stratum (Plot size:30) | | Dominant Species? | | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC:3(A) |
| 2 | | | | 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: |
| | 0 | = Total Co | ver | OBL species0 x 1 =0 |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species140 x 2 =280 |
| 1. <u>Alnus incana</u> | 90 | <u>Y</u> | <u>FACW</u> | FAC species 0 x 3 = 0 |
| 2 | | | | FACU species 25 x 4 = 100 |
| 3 | _ | | | UPL species $0 \times 5 = 0$ Column Totals: 165×6 (A) 380×6 (B) |
| 4 | _ | | | Column Totals. 105 (A) 380 (B) |
| 5 | | | | Prevalence Index = B/A = <u>2.30303030303030303</u> |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | 90 | = Total Co | ver | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:5 | | | | ✓ 3 - Prevalence Index is ≤3.0 ¹ |
| 1. Phalaris arundinacea | 25 | Y | FACW | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. <u>Equisetum pratense</u> | 15 | Υ | FACW | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Solidago canadensis</u> | | N | FACU | 1 |
| 4. <u>Carex gracillima</u> | | N | FACU | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. <u>Spiraea alba</u> | | N | FACW | Definitions of Vegetation Strata: |
| 6. <u>Fragaria virginiana</u> | | N | FACU | - |
| 7 | | | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8 | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12. | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | - <u> </u> | = Total Co | ver | height. |
| Woody Vine Stratum (Plot size:) | | • | | |
| 1 | | | | |
| 2. | | | | |
| 3 | | | | Hydrophytic |
| 4. | | | | Vegetation |
| | _ | | ver | Present? Yes No |
| Remarks: (Include photo numbers here or on a separate | sheet.) | | | <u> </u> |
| The sample point is fairly representativ | e of the | | | |
| beneath the speckled alder as some le | af litter i | is cover | ing the (| ground. |
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SOIL Sampling Point: wasa1050s_w

| Profile Desc | ription: ([| Describe 1 | to the dep | th needed | to docun | nent the i | ndicator | or confirm | the absence of | of indicators.) |
|-------------------------|---------------------------|------------|----------------|----------------|--------------------------|----------------------|--------------------|------------------|------------------------|--|
| Depth | | Matrix | | Redox Features | | | | . 2 | - . | |
| (inches) 0-17 | Color (| 3/1 | <u>%</u> 05 | Color (r | 4/6 | 5 | Type ¹ | Loc ² | SIC | Remarks |
| 17-20 | | | | | 4/6 | | C | M | | |
| 11-20 | <u> </u> | 4/2 | _00_ | <u> 31K</u> | 4/0 | | | <u> </u> | | |
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| ¹ Type: C=Ce | oncentratio | n, D=Depl | etion, RM | =Reduced I | Matrix, MS | S=Masked | I Sand Gr | ains. | ² Location: | PL=Pore Lining, M=Matrix. |
| Hydric Soil | | | , | | • | | | | Indicators f | or Problematic Hydric Soils ³ : |
| Histosol | (A1) pipedon (A2 | 2) | | - | alue Belov RA 149B) | v Surface | (S8) (LR I | RR, | | uck (A10) (LRR K, L, MLRA 149B) rairie Redox (A16) (LRR K, L, R) |
| | stic (A3) | <u>~)</u> | | | , | | .RR R, M | LRA 149B) | | ucky Peat or Peat (S3) (LRR K, L, R) |
| | en Sulfide (A | | | | - | Mineral (F1 | | , L) | | urface (S7) (LRR K, L) |
| | d Layers (A d Below Da | | e (A11) | | y Gleyed I ted Matrix | Matrix (F2 : (F3) |) | | - | ue Below Surface (S8) (LRR K, L) rk Surface (S9) (LRR K, L) |
| - | ark Surface | | (* 11 1) | | | face (F6) | | | | nganese Masses (F12) (LRR K, L, R) |
| - | Mucky Mine | | | | | Surface (F | 7) | | | nt Floodplain Soils (F19) (MLRA 149B) |
| - | Gleyed Matr Redox (S5) | 1X (S4) | | Redox | Depress | ions (F8) | | | | podic (TA6) (MLRA 144A, 145, 149B) rent Material (F21) |
| Stripped | Matrix (S6 | | | | | | | | Very Sh | allow Dark Surface (TF12) |
| Dark Su | rface (S7) (| LRR R, N | ILRA 149 | 3) | | | | | Other (E | Explain in Remarks) |
| | | - | | etland hydro | ology mus | t be prese | ent, unles | s disturbed | or problematic. | |
| Restrictive | Layer (if ob | oserved): | | | | | | | | |
| Type: | | | | | | | | | Hydric Soil F | Present? Yes <u> </u> |
| Remarks: | cnes): | | | | | | | | Tiyuric 30ii i | resent: res_v NO |
| The soils | are cla | ıvev wi | th redo | x throu | ahout. | | | | | |
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wasa1050s_w_S



wasa1050s_w_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project City/County: Ashland Sampling Date: 2020-0 | | | | | Sampling Date: 2020-06-02 | |
|--|------------------------|--------------------------|---|--------------------------|---------------------------------|--|
| Applicant/Owner: Enbridge | | | | State: Wiscon | sin Sampling Point: wasa1050e_w | |
| Investigator(s): SBR/DGL | | on, Township, Ra | ange: sec 32 T0471 | N R004W | | |
| - ' ' | | | | = | Slope (%): <u>0-2%</u> | |
| | | | | | Datum: WGS84 | |
| | | | | | cation: | |
| Are climatic / hydrologic condition | = | | - | | | |
| | | - | | | present? Yes No | |
| Are Vegetation, Soil | | | | eeded, explain any answe | | |
| SUMMARY OF FINDINGS | - Attach site m | nap showing sam | npling point I | ocations, transects | s, important features, etc. | |
| Hydrophytic Vegetation Present | ? Yes ✔ | No | Is the Sample | | | |
| Hydric Soil Present? | | No | within a Wetla | nd? Yes 🗸 | No | |
| Wetland Hydrology Present? | Yes | No | If yes, optional | Wetland Site ID: | | |
| Remarks: (Explain alternative p | rocedures here or in a | a separate report.) | | | | |
| The wetland is a wet | • | • | | | | |
| meadow has standing | | | | | , , | |
| Some sections of the | wet meadow h | nave encroachi | ng young s | peckled alder fro | m the associated | |
| alder swamp. | | | | | | |
| | | | | | | |
| HYDROLOGY | | | | | | |
| Wetland Hydrology Indicators | i: | | | Secondary Indica | ators (minimum of two required) | |
| Primary Indicators (minimum of | one is required; check | k all that apply) | | Surface Soil | Surface Soil Cracks (B6) | |
| ∠ Surface Water (A1) | _ | Water-Stained Leave | ter-Stained Leaves (B9) Drainage Patterns (B10) | | | |
| <u>✓</u> High Water Table (A2) | | Aquatic Fauna (B13) | | Moss Trim L | ines (B16) | |
| ∠ Saturation (A3) | | Marl Deposits (B15) | | | Water Table (C2) | |
| Water Marks (B1) | | Hydrogen Sulfide Od | | Crayfish Bur | | |
| Sediment Deposits (B2) | | Oxidized Rhizosphere | | | isible on Aerial Imagery (C9) | |
| Drift Deposits (B3) | | Presence of Reduced | | | Stressed Plants (D1) | |
| Algal Mat or Crust (B4) | | Recent Iron Reductio | | | | |
| Iron Deposits (B5) Inundation Visible on Aerial | | Thin Muck Surface (C | • | Shallow Aqu | | |
| | - · · · — | Other (Explain in Rer | narks) | | aphic Relief (D4) | |
| Sparsely Vegetated Concar Field Observations: | 7e Surface (Bo) | | 1 | <u>✓</u> FAC-Neutra | Trest (D3) | |
| | Yes <u> </u> | Denth (inches): 1 | | | | |
| | Yes <u>/</u> No | | | | | |
| | Yes _ No | | | etland Hydrology Prese | nt? Yes <u>/</u> No | |
| (includes capillary fringe) | | | | | | |
| Describe Recorded Data (stream | n gauge, monitoring w | vell, aerial photos, pre | vious inspections | s), if available: | | |
| | | | | | | |
| Remarks: | | | | | | |
| The hydrolgic regime | is saturated wi | ith standing wa | ater present | : throughout most | t of the feature. | |
| Saturation observed a | at 2 inches. | | | | | |
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| VEGETATION | Use scientific names | of plants |
|--------------|----------------------|--------------|
| VEGETATION - | use scienilic names | i oi bianis. |

| | | | Sampling Point: wasa1050e_v | | | |
|-----|----------------------|-------------|---|--|--|--|
| | Dominant Species? | | Dominance Test worksheet: | | | |
| | | | Number of Dominant Species That Are OBL, FACW, or FAC:3(A) | | | |
| | | | Total Number of Dominant | | | |
| | | | Species Across All Strata:3 (B) | | | |
| | | | Percent of Dominant Species | | | |
| | | | That Are OBL, FACW, or FAC:100 (A/B) | | | |
| | | | Prevalence Index worksheet: | | | |
| | | | Total % Cover of: Multiply by: | | | |
| 0 | = Total Co | ver | OBL species 20 x 1 = 20 | | | |
| | | | FACW species 92 x 2 = 184 | | | |
| | | | FAC species 5 x 3 = 15 FACU species 3 x 4 = 12 | | | |
| 5 | <u>Y</u> | <u>FACW</u> | UPL species x 5 = | | | |
| | | | Column Totals: 120 (A) 231 (B) | | | |
| | | | | | | |
| | | | Prevalence Index = B/A =1.925 | | | |
| | | | Hydrophytic Vegetation Indicators: | | | |
| | | | 1 - Rapid Test for Hydrophytic Vegetation | | | |
| _20 | = Total Co | ver | _v 2 - Dominance Test is >50% | | | |
| | | | 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting | | | |
| 70 | Y | FACW | data in Remarks or on a separate sheet) | | | |
| 10 | N | OBL | Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Vegetation Strata: | | | |
| | N | OBL | | | | |
| | N | FAC | | | | |
| | | FACU | | | | |
| | | | | | | |
| | | | Tree – Woody plants 3 in. (7.6 cm) or more in diamete 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 | | | |
| 100 | = Total Co | ver | height. | | | |
| 100 | - 10tal 00 | VCI | | | | |
| | | | | | | |
| | | | | | | |
| | | | 1 | | | |
| | | | | | | |
| | | | Hydrophytic Vegetation | | | |
| | | | | | | |

SOIL Sampling Point: wasa1050e_w

| Profile Desc | ription: (D | Describe t | to the dep | th needed | to docun | nent the i | ndicator | or confirm | the absence o | f indicators.) |
|----------------------------|----------------------------|-----------------------|------------|--------------|--------------------------------|--------------|-------------------|------------------|------------------------|---|
| Depth | | Matrix Redox Features | | | | | | | _ | |
| (inches) | Color (| | <u>%</u> | Color (r | | <u>%</u> | Type ¹ | Loc ² | Texture | Remarks |
| 0-16 | | | _95_ | <u>5YR</u> | 4/6 | 5 | <u>C</u> | _M_ | _SIC_ | |
| <u>16-20</u> | <u>5YR</u> | 4/2 | <u>85</u> | <u>5YR</u> | 4/6 | <u> 15</u> | C | _M_ | <u> </u> | |
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| | | | | | | | | | | |
| ¹ Type: C=Co | oncentration | n. D=Depl | etion. RM | =Reduced I | Matrix. MS | S=Masked | Sand Gr | ains. | ² Location: | PL=Pore Lining, M=Matrix. |
| Hydric Soil | | | , | | , | | | | | or Problematic Hydric Soils³: |
| Histosol | | | | - | | w Surface | (S8) (LR | R R, | | ick (A10) (LRR K, L, MLRA 149B) |
| Histic Ep | oipedon (A2 stic (A3) | 2) | | | RA 149B) Dark Surfa | | RRR M | LRA 149B) | | rairie Redox (A16) (LRR K, L, R) ucky Peat or Peat (S3) (LRR K, L, R) |
| | n Sulfide (A | \ 4) | | | | /lineral (F | | | | rface (S7) (LRR K, L) |
| | d Layers (A | | | | | Matrix (F2 | 2) | | | ie Below Surface (S8) (LRR K, L) |
| | d Below Da ark Surface | | e (A11) | | ted Matrix | | | | | rk Surface (S9) (LRR K, L) |
| | lucky Miner | | | | c Dark Sui ted Dark S | Surface (F6) | | | | nganese Masses (F12) (LRR K, L, R) nt Floodplain Soils (F19) (MLRA 149B) |
| | Bleyed Matr | | | | Depress | | ., | | | podic (TA6) (MLRA 144A, 145, 149B) |
| Sandy R | Redox (S5) | | | | | | | | | ent Material (F21) |
| | Matrix (S6 rface (S7) (| | ILRA 1491 | 3) | | | | | | allow Dark Surface (TF12) explain in Remarks) |
| ³ Indicators of | f hydrophyti | ic vegetati | ion and we | etland hydro | ology mus | t be prese | ent, unles | s disturbed | or problematic. | |
| Restrictive I | _ayer (if ob | served): | | - | | | | | | |
| Type: | | | | | | | | | | |
| | ches): | | | | | | | | Hydric Soil P | resent? Yes <u>/</u> No |
| Remarks: | ملائيين مائم | | | | 46 | ال مامي | . 46.0.0 | ofile | | |
| Clayey s | OIIS WILI | redox | CONCE | miration | เร เทเงเ | ugnoui | . the pi | one. | | |
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wasa1050e_w_S



wasa1050e_w_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | | |
|---|--|------------------------------|--|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | | | |
| File #: wasa1050 | Date of visit(s): 2020-06-02 | | | |
| Location: PLSS: sec 32 T047N R004W | Ecological Landsca Lake Superior Clay Plair | • | | |
| Lat: <u>46.507304</u> Long: <u>-90.886833</u> | Watershed: LS10, White River | | | |
| County: Ashland Town/City/Village: Gingles town | | | | |
| SITE DESCRIPTION | | | | |
| Soils: Mapped Type(s): | WWI Class: N/A | | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes Field Verified: | Wetland Type(s): PEM - Wet mead | dow/ PSS - alder swamp | | |
| The soils were not field verified. | Wetland Size: 0.6047 | Wetland Area Impacted 0.6047 | | |
| Hydrology: The hydrologic regime is saturated. Standing water is present in the wet meadow feature and not so within the alder swamp. The major source of input is from surface | Vegetation: Plant Community Description(s): The wetland is a wet meadow/alder swamp complex. The wet meadow is mostly dominated by reed canary grass and the alder swamp is dominated by speckled alder. The reed canary grass also extends into herbaceous layer of | | | |
| water. | the alder swamp. | , | | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | ECTION 1: | Functional Value Assessment |
|----|-------|-----------|--|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | Ν | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | N | N | Used for educational or scientific purposes |
| 3 | Υ | Y | Visually or physically accessible to public |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| | - ' ' | - 1 | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | - 11 | IN | Wildlife Habitat |
| 1 | N | N | Wetland and contiguous habitat >10 acres |
| 2 | N | Y | 3 or more strata present (>10% cover) |
| 3 | N | N N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | | | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | |
| | N | N | Occurs in a Joint Venture priority township |
| 6 | Υ | Y | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| 7 | N | N | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| | | | plans |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | Υ | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | Υ | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | N | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | N | Υ | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | N | N | Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable |
| | | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| 2 | N | N | water levels or high flows – if no, not applicable |
| 3 | N | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | N | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | Y | Y | Water flow through wetland is NOT channelized |
| 3 | Y | Y | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | N | N | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | | | Within a watershed with <10% wetland |
| 8 | N | N N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | N | N | Water Quality Protection |
| | N. | N 1 | |
| 1 | N | N | Provides substantial storage of storm and floodwater based on previous section |
| 2 | N | N | Basin wetland or constricted outlet |
| 3 | Y | Y | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Υ | Y | Dense, persistent vegetation |
| 6 | N | N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | N | N | Stormwater or surface water from agricultural land is major hydrology source |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | <u></u> | Groundwater Processes |
| 1 | N | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | N | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | N | N | Wetland is within a wellhead protection area |
| | IN | l IN | Troduction to within a wominous protocitori area |

| | | at and Species Observation (including amphibians and reptiles) servation, tracks, scat, other sign; type of habitat: nesting, migratory, |
|----------|---------------|--|
| | nter, etc. | |
| Observed | Potential | Species/Habitat/Comments |
| Υ | Υ | Avian |
| | Υ | Amphibians |
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| | | atic Life Habitat and Species Observations |
| LIS | st: airect on | oservation, other sign; type of habitat: nesting, spawning, nursery areas, etc. |
| Observed | Potential | Species/Habitat |
| | Y | Aquatic invertebrates |
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Section 1 Comments (Refer to Section 1 numbers)

HU-3 the wetland is visible from the road. WH-6 the wetland is part of a wet meadow/alder swamp complex. ST-3/WQ-5 the wetland has dense vegetation in the shrub and herbaceous layers.

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | inty intogrity (on olo) | | | |
|--|--|---|--|--|
| | Low | Medium | High | Exceptional |
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 🗌 | S2 🗌 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗌 | Common | Uncommon | Rare |
| FQI (optional) Mean C (optional) | <13 <2.4 | 13-23 2.4-4.2 | 23-32 4.3-4.7 | >32 <u> </u> |
| · · · · · · · · · · · · · · · · · · · | | | · · · · · · · · · · · · · · · · · · · | |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-----------------------|-------------|------|-------------------|---|
| Alnus incana | | | PSS | Interrupted |
| Phalaris arundinacea* | | | PEM/PSS | Interrupted |
| Salix petiolaris | | | PSS | Rare |
| Carex gracillima | | | PEM | Rare |
| Equisetum pratense | | | PEM/PSS | Rare |
| Scirpus cyperinus | | | PEM | Rare |
| Solidago canadensis | | | PSS | Rare |
| Alnus incana | | | PEM/PSS | Rare |
| Carex stipata | | | PEM | Rare |
| Salix petiolaris | | | PEM | Rare |
| Solidago gigantea | | | PEM | Rare |
| Spiraea alba | | | PSS | Barren |
| Fragaria virginiana | | | PSS | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low based on invasive species cover and overall low diversity.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| • | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| | | | | | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | Х | | L | С | Roads or railroad |
| | | | | | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | | | | 0 | Removal of herbaceous stratum – mowing, |
| | Х | | L | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Х | Х | | Н | С | Cover of non-native and/or invasive species |
| | Х | | L | UC | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
| | | | | | |
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^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is within sight of the road and a personal residence with a mowed lawn. There is a high cover of | |
|--|--|
| invasive species. | |
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^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|----------|--------------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | / | | | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | | | V | | |
| Fish and Aquatic Life Habitat | | ✓ | | | |
| Shoreline Protection | | | | | ' |
| Flood and Stormwater Storage | / | | | | |
| Water Quality Protection | / | | | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | The herbaceous layer and shrub layer are dominated by only a few species. |
| Human Use Values | The area is not conducive to recreational activities. |
| Wildlife Habitat | There is cover across multiple strata that would appeal to different wildlife species. The wetland is also a large feature and a complex. |
| Fish and Aquatic Life Habitat | The wet meadow portion has standing water that could provide habitat for aquatic fauna. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland has dense persistent vegetation but is shallow and can not hold much water |
| Water Quality Protection | The wetland has dense vegetation and is not channelized but offers little more to help filter any runoff. |
| Groundwater Processes | The wetland does not appear to influence groundwater processes. |

Section 4: Project Impact Assessment

| Brief Project Description | | |
|--|--|--|
| Enbridge Line 5 pipeline route analysis. | | |
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Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) | | |
|--|---|----------------------------------|--|--|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low | | |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Medium | | |
| Cumulative Impacts | Operational vegetation maintenance. | Low | | |
| Spatial/Habitat Integrity | Temporary construction impacts. | Medium | | |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A | | |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocat | ion Project | City/C | County: Ash | nland | Sai | mpling Date: 20 | <u>020-06-02</u> |
|---|---------------------|---|---|---------------------|----------------------------------|-------------------|------------------|
| Applicant/Owner: Enbridge | • | | | | | | |
| Investigator(s): SBR/DGL | | Section | on, Township | , Range: <u>SeC</u> | 32 T047N R | 004W | |
| | | | Local relief (concave, convex, none): None Slope (%): 0 | | | | (%): <u>0-2%</u> |
| Subregion (LRR or MLRA): Northo | | | | | | | |
| Soil Map Unit Name: Sanborg | | | | | | | |
| Are climatic / hydrologic conditions | on the site typical | for this time of year? Y | ∕es <u> </u> N | No (If n | o, explain in Rema | arks.) | |
| Are Vegetation, Soil | _, or Hydrology | significantly distur | rbed? | Are "Normal Cir | cumstances" prese | ent? Yes <u> </u> | No |
| Are Vegetation, Soil | _, or Hydrology | naturally problema | atic? (| (If needed, expl | ain any answers in | Remarks.) | |
| SUMMARY OF FINDINGS - | - Attach site | map showing san | npling poi | nt locations | , transects, im | nportant feat | tures, etc. |
| Hydrophytic Vegetation Present? | Yes | No <u></u> | Is the Sam | pled Area | | | |
| Hydric Soil Present? | Yes | No | within a We | etland? | Yes | No <u>~</u> | |
| Wetland Hydrology Present? | | No | If yes, optio | nal Wetland Sit | e ID: | | |
| Remarks: (Explain alternative pro | | | voto rocio | 4000 | | _ | |
| The upland is on the ed | age or a med | adow near a pri | Vale resid | dence. | | | |
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| HYDROLOGY | | | | | | | |
| Wetland Hydrology Indicators: | | | | <u>Se</u> | condary Indicators | (minimum of tw | o required) |
| Primary Indicators (minimum of o | ne is required; che | | | | Surface Soil Crac | ` ' | |
| Surface Water (A1) | _ | _ Water-Stained Leave | | | Drainage Pattern | | |
| High Water Table (A2) | | _ Aquatic Fauna (B13) | | | Moss Trim Lines | | |
| Saturation (A3) | | _ Marl Deposits (B15) | | | Dry-Season Wate | | |
| Water Marks (B1) | | _ Hydrogen Sulfide Od | | | Crayfish Burrows | | = : (OO) |
| Sediment Deposits (B2) | | _ Oxidized Rhizospher | | Roots (C3) | Saturation Visible | _ | ery (C9) |
| Drift Deposits (B3) Algal Mat or Crust (B4) | | Presence of ReducedRecent Iron Reduction | | | Stunted or Stress Geomorphic Pos | , , | |
| Iron Deposits (B5) | | Thin Muck Surface (| | | Shallow Aquitard | | |
| Inundation Visible on Aerial I | · | Other (Explain in Rer | • | | Microtopographic | | |
| Sparsely Vegetated Concave | | 00101 (Explain | nano, | | FAC-Neutral Tes | | |
| Field Observations: | , ourided (25) | | | | _ 17.0 1.000.0 | (100) | |
| | es No 🗸 | Depth (inches): | [| | | | |
| | | Depth (inches): | | | | | |
| | | Depth (inches): | | Wetland Hyd | rology Present? | Yes | No <u> </u> |
| (includes capillary fringe) | | | | | | | |
| Describe Recorded Data (stream | gauge, monitoring | g well, aerial photos, pre | evious inspect | tions), if availab | le: | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| No indicators of wetlan | d hydrology | were observed | | | | | |
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VEGETATION – Use scientific names of plants.

| EGETATION – Use scientific names of plants | | | | | | | oint: wasa | |
|--|------------|----------------------|---|--|--------------------------|--------------------------|----------------|-----------|
| Tree Stratum (Plot size: 30) | | Dominant Species? | | Dominance Test | workshee | et: | | |
| 1 | | | | Number of Dominion That Are OBL, FA | | | 1 | (A) |
| 2. | | | | Total Number of D | Ominant | | | |
| 3 | | | | Species Across A | | | 4 | (B) |
| 4. <u> </u> | | | | Percent of Domina | ant Specie | es | | |
| 5 | | | | That Are OBL, FA | CW, or FA | AC: | 25 | (A/B |
| 5 | | | | Prevalence Index | workshe | et: | | |
| 7 | | - | | Total % Cove | | | ıltiply by: | |
| | 0 | = Total Co | ver | OBL species _ | 0 | _ x 1 = _ | 0 | |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species _ | | | | _ |
| . <u>Alnus incana</u> | 5 | Y | <u>FACW</u> | FAC species | | | | _ |
| 2. | | | | FACU species _ | | | | _ |
| 3 | | | | UPL species | | | | (D) |
| l | | | | Column Totals: _ | 104 | _ (A) _ | 301 | (b) |
| 5 | | | | Prevalence | Index = B | /A = 3.721 | 115384615384 | 63 |
| 5 | | | | Hydrophytic Veg | etation In | dicators | | |
| 7. | | | | 1 - Rapid Tes | t for Hydro | ophytic Ve | egetation | |
| | | = Total Co | | 2 - Dominanc | e Test is > | >50% | | |
| Herb Stratum (Plot size: 5 | | 10141 00 | • | 3 - Prevalence | | | | |
| 1. <u>Poa pratensis</u> | 30 | Υ | FACU | 4 - Morpholog | jical Adap marks or o | tations¹ (F on a sena | Provide sup | oporting |
| 2. <u>Carex gracillima</u> | | Y | FACU | | | | | |
| 3. <u>Bromus inermis</u> | | | UPL | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | |
| 4. <u>Solidago canadensis</u> | | N | FACU | | | | | |
| 5. <u>Carex castanea</u> | | N | FACW | | | | | |
| 5. <u>Solidago gigantea</u> | | | FACW | - Deminions of Vegetation Strata. | | | | |
| | | N | FACU | Tree – Woody pla | | | | amete |
| 7. <u>Fragaria virginiana</u> | | N N | FAC | at breast height (D |)вн), rega | ardless of | neignt. | |
| 8. <u>Cornus racemosa</u> 9. Taraxacum officinale | _ | | | Sapling/shrub – Vand greater than of | | | | BH |
| | _ <u></u> | N | FACW | | | | | |
| 10. <u>Salix petiolaris</u> | _ <u> </u> | N | FACU | Herb – All herbac of size, and wood | | | | ardless |
| 11. Achillea millefolium | _ <u></u> | N | FACU | Woody vines A | ll woody y | inos aros | tor than 2 1 | 20 ft in |
| 12. <u>Potentilla simplex</u> | | <u>N</u> | <u>FACU</u> | Woody vines – A height. | ii woody v | illes grea | ter triair 3.2 | 20 11 111 |
| 00 | 99 | = Total Co | ver | | | | | |
| Woody Vine Stratum (Plot size:) | | | | | | | | |
| 1 | | | | | | | | |
| 2. | | - | | | | | | |
| 3 | | | | Hydrophytic | | | | |
| 4 | | - | · | Vegetation Present? Yes No | | | | |
| | 0 | = Total Co | ver | | | | | |

SOIL Sampling Point: wasa1050_u

| Profile Desc | cription: (Describe | to the dept | h needed to docum | ent the i | indicator | or confirm | the absence of indica | ators.) | | |
|---------------------------|--|-------------|---------------------------------------|------------|--------------------|------------------|---|---|--|--|
| Depth | Matrix | | | (Feature | | . 2 | _ | | | |
| (inches) 0-15 | 7.5YR 4/3 | 100 | Color (moist) | 0 | _Type' | Loc ² | SICL | Remarks | | |
| | · | | | | | | | | | |
| <u>15-20</u> | 7.5YR 3/3 | 100 | | | · | | _SICL_ | | | |
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| | | | | | | | | | | |
| ¹Type: C=C | oncentration, D=Depl | etion. RM= | Reduced Matrix, MS | =Masked | Sand Gr | ains. | ² Location: PL=Poi | re Lining, M=Matrix. | | |
| Hydric Soil | | | · · · · · · · · · · · · · · · · · · · | | | | Indicators for Prob | lematic Hydric Soils ³ : | | |
| Histosol | | | Polyvalue Below | / Surface | (S8) (LR I | RR, | | () (LRR K, L, MLRA 149B) | | |
| | pipedon (A2) istic (A3) | | MLRA 149B) Thin Dark Surface | ne (SQ) (I | RRR M | I R A 149R) | | edox (A16) (LRR K, L, R) at or Peat (S3) (LRR K, L, R) | | |
| | en Sulfide (A4) | • | Loamy Mucky M | | | | Dark Surface (S | | | |
| | d Layers (A5) | | Loamy Gleyed N | | 2) | | = | v Surface (S8) (LRR K, L) | | |
| - | d Below Dark Surface ark Surface (A12) | e (A11) | Depleted Matrix Redox Dark Sur | | | | Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) | | | |
| | Mucky Mineral (S1) | | Depleted Dark S | | | | _ | plain Soils (F19) (MLRA 149B) | | |
| | Gleyed Matrix (S4) | • | Redox Depressi | | , | | Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | | | |
| | Redox (S5) | | | | | | Red Parent Mat | | | |
| | d Matrix (S6) Irface (S7) (LRR R, N | ILRA 149B |) | | | | Very Shallow Da | ark Surface (TF12) n Remarks) | | |
| ³ Indicators o | f hydrophytic vegetat | ion and we | tland hydrology musi | t be prese | ent. unles: | s disturbed | or problematic. | | | |
| | Layer (if observed): | | aa, a. o.og,ao | . 20 p. 00 | , | | | | | |
| Type: | | | | | | | | | | |
| | ches): | | | | | | Hydric Soil Present | ? Yes No <u>/</u> | | |
| Remarks: | , loom soils wi | th no ro | day absarvad | | | | | | | |
| Silly Clay | loam soils wi | uiiioie | dox observed | • | | | | | | |
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wasa1050_u_NE



wasa1050_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ash | land | Sampling Date: 2020-06-02 |
|---|--|--|------------------------------------|
| Applicant/Owner: Enbridge | | | |
| Investigator(s): SBR/DGL | Section, Township | , Range: <u>sec 32 T04</u> | 7N R004W |
| Landform (hillslope, terrace, etc.): Depression | Local relief (concave, | convex, none): Conca | ve Slope (%): <u>0-2%</u> |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 4 | 46.507290 | Long: <u>-90.885755</u> | Datum: WGS84 |
| Soil Map Unit Name: Sanborg-Badriver comp | | | |
| Are climatic / hydrologic conditions on the site typical for | · | | |
| Are Vegetation, Soil, or Hydrology | | | |
| Are Vegetation, Soil, or Hydrology | | If needed, explain any ans | |
| SUMMARY OF FINDINGS – Attach site ma | | nt locations, transec | cts, important features, etc. |
| Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes Yes | No Within a Wo | pled Area etland? Yes nal Wetland Site ID: | |
| Remarks: (Explain alternative procedures here or in a sea The wetland is an alder swamp located roughly 75% cover. The ground layer litter. | ed beside a road. Spe | | - |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | Secondary Inc | dicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check a | all that apply) | Surface S | Soil Cracks (B6) |
| | /ater-Stained Leaves (B9) | | Patterns (B10) |
| | quatic Fauna (B13) | Moss Trir | |
| | larl Deposits (B15) | | on Water Table (C2) |
| | ydrogen Sulfide Odor (C1) | | Burrows (C8) |
| | oxidized Rhizospheres on Living I | | n Visible on Aerial Imagery (C9) |
| | resence of Reduced Iron (C4) | | or Stressed Plants (D1) |
| | ecent Iron Reduction in Tilled So hin Muck Surface (C7) | | hic Position (D2) |
| | other (Explain in Remarks) | Shallow A | ographic Relief (D4) |
| Sparsely Vegetated Concave Surface (B8) | mer (Explain in Nemarks) | | tral Test (D5) |
| Field Observations: | | <u> </u> | Trust (D3) |
| Surface Water Present? Yes No [| Depth (inches): | | |
| Water Table Present? Yes _ ✓ No [| · · · — | | |
| Saturation Present? Yes _ No [| · · · — | Wetland Hydrology Pre | sent? Yes ✓ No |
| (includes capillary fringe) | | | |
| Describe Recorded Data (stream gauge, monitoring we | II, aerial photos, previous inspec | tions), if available: | |
| | | | |
| Remarks: The hydrologic regime is saturated. W | Vater table was observ | ed at 16 with sati | uration at 14 inches. |
| | | | |

| | VEGETATION - | Use | scientific | names | of | plants. |
|--|---------------------|-----|------------|-------|----|---------|
|--|---------------------|-----|------------|-------|----|---------|

| EGETATION – Use scientific names of plants | | | | Sampling Point: wasa1048s_w |
|---|----------|-------------------|---------------------------------------|---|
| Tree Stratum (Plot size: 30) | | Dominant Species? | | Dominance Test worksheet: |
| 1. <i>Pinus banksiana</i> | 5 | Y | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC:4 (A) |
| 2. <u>Ulmus americana</u> 3 | | Y | FACW | Total Number of Dominant Species Across All Strata: (B) |
| 4 5 | <u> </u> | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) |
| 6. | | | | Description as Index weather act. |
| 7 | | | | Prevalence Index worksheet: Total % Cover of: Multiply by: |
| | | = Total Cov | | OBL species x1 = |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species 118 x 2 = 236 |
| 1. <u>Alnus incana</u> | 80 | Υ | FACW | FAC species 10 x 3 = 30 |
| 2. Salix petiolaris | | N | FACW | FACU species5 x 4 =20 |
| 3. <u>Salix bebbiana</u> | | | FACW | UPL species0 x 5 =0 |
| | | | | Column Totals: <u>183</u> (A) <u>336</u> (B) |
| 4 5 | | | | Prevalence Index = B/A = 1.8360655737704918 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | | = Total Cov | ver | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:5 | | | | 3 - Prevalence Index is ≤3.0 ¹ |
| 1. <u>Calamagrostis canadensis</u> | 50 | Υ | OBL | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. Alnus incana | | Y | FACW | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. Rhamnus cathartica | | N | FAC | |
| 4. Equisetum arvense | | | FAC | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. <i>Ribes sp.</i> | | | 17.0 | · |
| 6. <u>Rubus pubescens</u> | | | FACW | Definitions of Vegetation Strata: |
| 7 | | | · · · · · · · · · · · · · · · · · · · | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8. | | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9. | | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10. | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12. | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | | = Total Cov | ver | height. |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3. | | | | Hudnonlostic |
| | | | | Hydrophytic Vegetation |
| 4 | | = Total Cov | | Present? Yes <u>/</u> No |
| Remarks: (Include photo numbers here or on a separate | | - 10tal C0\ | v CI | |
| The sample point is fairly representstiv | | entire fe | eature. ⁻ | The wetland extends outside of the |
| alder thicket and into a roadside ditch v | | | | |
| | | | | |

SOIL Sampling Point: wasa1048s_w

| Profile Des | cription: (Describe t | o the de | oth needed | to docun | nent the i | ndicator | or confirm | the absence | of indicators.) |
|---------------------------|---|------------|--------------|--------------------------------|-------------------|--------------------|------------------|----------------|--|
| Depth | Matrix | | | | x Features | - | | | |
| (inches) | Color (moist) | <u>%</u> | Color (m | | <u>%</u> | Type ¹ | Loc ² | Texture | Remarks |
| 0-8 | 7.5YR 3/1 | 90 | 7.5YR | | 10 | <u>C</u> | _M_ | SIC | |
| 8-20 | 7.5YR 3/1 | 85 | <u>7.5YR</u> | 4/6 | <u>15</u> | <u>C</u> | <u> </u> | | , |
| | - | - | | | | | | | |
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| 1Typo: C=C | oncentration, D=Depl | otion DN | I=Doduced N | Antrix MC | | Sand Cr | | 2l coation: | PL=Pore Lining, M=Matrix. |
| Hydric Soil | | elion, Kiv | i–Reduced iv | ialiix, ivic | 5-IVIASKEU | Saliu Gi | ali i5. | Indicators | for Problematic Hydric Soils ³ : |
| Histoso | | | - | | v Surface | (S8) (LR I | R R, | | luck (A10) (LRR K, L, MLRA 149B) |
| | pipedon (A2) istic (A3) | | | R A 149B) ark Surfa | | RRR M | LRA 149B) | | Prairie Redox (A16) (LRR K, L, R) lucky Peat or Peat (S3) (LRR K, L, R) |
| | en Sulfide (A4) | | | | lineral (F1 | | | | urface (S7) (LRR K, L) |
| | d Layers (A5) | (4.44) | | - | Matrix (F2 |) | | - | ue Below Surface (S8) (LRR K, L) |
| | d Below Dark Surface ark Surface (A12) | (A11) | | ed Matrix Dark Sur | (F3) face (F6) | | | | ark Surface (S9) (LRR K, L) anganese Masses (F12) (LRR K, L, R) |
| | Mucky Mineral (S1) | | | | Surface (F | 7) | | | ont Floodplain Soils (F19) (MLRA 149B) |
| - | Gleyed Matrix (S4) | | Redox | Depressi | ions (F8) | | | | Spodic (TA6) (MLRA 144A, 145, 149B) |
| - | Redox (S5) d Matrix (S6) | | | | | | | | arent Material (F21) hallow Dark Surface (TF12) |
| | urface (S7) (LRR R, M | LRA 149 | B) | | | | | | Explain in Remarks) |
| ³ Indicators o | of hydrophytic vegetati | on and w | etland hydro | logy mus | t be prese | ent, unles | s disturbed | or problematic | |
| Restrictive | Layer (if observed): | | | | | | | | |
| Type: | | | | | | | | | |
| Depth (in | iches): | | | | | | | Hydric Soil | Present? Yes <u>/</u> No |
| Remarks: | oils with redox | ohse | ved thro | uahoi | it the n | rofile | | | |
| Clayby S | ons with redox | ODSCI | ved tille | agrioc | it tille p | nonic. | | | |
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wasa1048s_w_S1



wasa1048s_w_S2



wasa1048s_w_SW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relo | cation Proiec | t | City/C | ounty: Ash | land | Sam | npling Date: 2 | 020-06-02 |
|--|---------------------|--------|--------------------------|----------------|-----------------|------------------------|----------------|--------------|
| Applicant/Owner: Enbridge | - | | | | | | | |
| Investigator(s): SBR/DGL | | | | | | | | |
| Landform (hillslope, terrace, et | | | | | | | | (%)· 0-2% |
| Subregion (LRR or MLRA): No | | | | | | | | |
| Soil Map Unit Name: Sanbo | | | | | | | | |
| Are climatic / hydrologic condit | • | | • | • | | | | |
| · · · · | | | - | | | | | Ma |
| Are Vegetation, Soil | | | | | | | | NO |
| Are Vegetation, Soil | , or Hydrology | | naturally problema | atic? (| If needed, e | explain any answers in | Remarks.) | |
| SUMMARY OF FINDING | 3S – Attach si | te m | nap showing sam | pling poi | nt locatio | ns, transects, im | portant fea | tures, etc. |
| Hydrophytic Vegetation Pres Hydric Soil Present? | Yes | ~ | No | | etland? | Yes <u> </u> | | |
| Wetland Hydrology Present? Remarks: (Explain alternativ | | | _ No | If yes, optio | nal Wetland | Site ID: | | |
| through the wetland | | | is placed dowr | to facilit | tate mov | ement of neavy | y macnine | ·ry |
| HYDROLOGY Wetland Hydrology Indicate | ore: | | | | | Secondary Indicators | (minimum of tw | vo roquirod) |
| Primary Indicators (minimum | | chec | k all that annly) | | | Surface Soil Cracl | | io required) |
| Surface Water (A1) | or one is required, | | Water-Stained Leave | | | Drainage Patterns | | |
| High Water Table (A2) | | | Aquatic Fauna (B13) | | | Moss Trim Lines (| | |
| Saturation (A3) | | | Marl Deposits (B15) | | | Dry-Season Wate | | |
| Water Marks (B1) | | | Hydrogen Sulfide Odd | or (C1) | | Crayfish Burrows | | |
| Sediment Deposits (B2) | | | Oxidized Rhizosphere | es on Living F | Roots (C3) | Saturation Visible | on Aerial Imag | gery (C9) |
| Drift Deposits (B3) | | | Presence of Reduced | l Iron (C4) | | Stunted or Stresse | ed Plants (D1) | |
| Algal Mat or Crust (B4) | | | Recent Iron Reduction | | | Geomorphic Posit | | |
| Iron Deposits (B5) | | | Thin Muck Surface (C | | | Shallow Aquitard | | |
| Inundation Visible on Ae | | | Other (Explain in Ren | narks) | | Microtopographic | | |
| Sparsely Vegetated Con Field Observations: | cave Surface (B8) | | | | | FAC-Neutral Test | (D5) | |
| Surface Water Present? | Ves No | , | Depth (inches): | | | | | |
| Water Table Present? | | | Depth (inches): | | | | | |
| Saturation Present? | | | Depth (inches): | | Wetland H | lydrology Present? | Yes ✓ | No |
| (includes capillary fringe) | | | | | | | | |
| Describe Recorded Data (str | eam gauge, monito | ring v | well, aerial photos, pre | vious inspect | tions), if avai | ilable: | | |
| | | | | | | | | |
| Remarks: The hydrologic regi | me is saturat | ed. | | | | | | |
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| | VEGETATION - | Use scientific r | names of plants |
|--|---------------------|------------------|-----------------|
|--|---------------------|------------------|-----------------|

| | 3. | | | Sampling Point: wasa1048 |
|---|---------------------|----------------------|------|---|
| Tree Stratum (Plot size:30) | Absolute % Cover | Dominant Species? | | Dominance Test worksheet: |
| l | | | | Number of Dominant Species That Are OBL, FACW, or FAC:1(|
| 2 | | | | Total Number of Dominant |
| i | | | | Species Across All Strata: 2 (I |
| l | | | | Percent of Dominant Species |
| j | | | | That Are OBL, FACW, or FAC: |
| 3 | | | | Prevalence Index worksheet: |
| · | | | | Total % Cover of: Multiply by: |
| | 0 | = Total Co | ver | OBL species10 x 1 =10 |
| Sapling/Shrub Stratum (Plot size:) | | | | FACW species50 x 2 =100 |
| i. | | | | FAC species0 x 3 =0 |
| 2. | | | | FACU species 20 x 4 = 80 |
| 3. | | | | UPL species 0 x 5 = 0 |
| 1. | | | | Column Totals: <u>80</u> (A) <u>190</u> |
| | | | | Prevalence Index = B/A = 2.375 |
| 5. | | | | Hydrophytic Vegetation Indicators: |
| S | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| 7 | | | | 2 - Dominance Test is >50% |
| Laste Otractions (Distriction | | = Total Co | ver | 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size: <u>5</u>) 1. <i>Phalaris arundinacea</i> | 30 | Υ | FACW | 4 - Morphological Adaptations ¹ (Provide suppo data in Remarks or on a separate sheet) |
| 2. <u>Poa pratensis</u> | | Y | FACU | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. <u>Carex projecta</u> | | | FACW | |
| 4. <u>Carex castanea</u> | | N | FACW | ¹ Indicators of hydric soil and wetland hydrology mu |
| | | N N | OBL | be present, unless disturbed or problematic. |
| 5. Carex stipata | | | | Definitions of Vegetation Strata: |
| 3. <u>Juncus effusus</u> 7 | | | OBL | Tree – Woody plants 3 in. (7.6 cm) or more in diam at breast height (DBH), regardless of height. |
| 8. | | | | |
| 9. | | | | Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. |
| 10. | | | | Herb – All herbaceous (non-woody) plants, regardl |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12. | | | | Woody vines – All woody vines greater than 3.28 f |
| | 80 | = Total Co | ver | height. |
| Noody Vine Stratum (Plot size:30) | | - 10tai 00 | VCI | |
| | | | | |
| l | | | | |
| 2. | | | | |
| 3 | | | | Hydrophytic Vegetation |
| 4 | | - | | Present? Yes No |
| | 0 | = Total Co | ver | |

SOIL Sampling Point: wasa1048e_w

| Depth | | Matrix | o the dep | | | x Features | | . 2 | | |
|--|--|--|------------|--|--|---|--------------------|------------------|--|--|
| (inches) | Color (| | <u>%</u> | Color (n | | <u> </u> | Type ¹ | Loc ² | <u>Texture</u> | Remarks |
| 0-16 | | 4/2 | | <u>5YR</u> | 4/6 | 5 | <u> </u> | <u> </u> | <u> </u> | |
| 16-20 | 2.5YR | 4/4 | 90 | 2.5YR | 4/8 | 10 | C | _M_ | C | |
| | | | | | | | | | | |
| Tyne: C=C | oncentration | n D=Denk | etion RM | =Reduced N | Matrix M9 | | Sand Gr | ains | ² Location: P | L=Pore Lining, M=Matrix. |
| lydric Soil | | | elion, riv | -Neduced I | viau ix, ivic | -iviaskeu | Saliu Gi | allis. | | Problematic Hydric Soils ³ : |
| Black Hi Hydroge Stratified Depleted Thick Da Sandy N Sandy F Stripped Dark Su | pipedon (A2 stic (A3) en Sulfide (A d Layers (Ad d Below Da ark Surface Mucky Miner Gleyed Matr tedox (S5) Matrix (S6 rface (S7) (| A4) 5) rk Surface (A12) ral (S1) ix (S4) LRR R, M c vegetati | ILRA 149 | MLi Thin D Loamy Loamy Deplet Redox Deplet Redox | RA 149B) park Surfa Mucky M Gleyed I ed Matrix Dark Sur ed Dark S Depress | ce (S9) (L dineral (F1 Matrix (F2) (F3) face (F6) Surface (F dions (F8) | RR R, M) (LRR K) | LRA 149B) | Coast Pra 5 cm Mucl Dark Surfa Polyvalue Thin Dark Iron-Mang Piedmont Mesic Spo Red Parer Very Shall | k (A10) (LRR K, L, MLRA 149B) irie Redox (A16) (LRR K, L, R) ky Peat or Peat (S3) (LRR K, L, R) ace (S7) (LRR K, L) Below Surface (S8) (LRR K, L) Surface (S9) (LRR K, L) panese Masses (F12) (LRR K, L, R) Floodplain Soils (F19) (MLRA 149B) odic (TA6) (MLRA 144A, 145, 149B) nt Material (F21) low Dark Surface (TF12) plain in Remarks) |
| Restrictive Type: | Layer (if or | served): | | | | | | | | |
| Depth (in | ahoo): | | | | | | | | Hydric Soil Pre | esent? Yes <u>v</u> No |
| Remarks: Clay soil | s with re | edox fe | atures | through | nout th | e profi | le. | | | |



wasa1048e_w_N



wasa1048e_w_W

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | | |
|---|---|------------------------------|--|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | | | |
| File #: wasa1048 | Date of visit(s): 2020-06-02 | | | |
| Location: PLSS: sec 32 T047N R004W | Ecological Landsca Lake Superior Clay Plair | • | | |
| Lat: <u>46.507322</u> Long: <u>-90.885788</u> | Watershed: LS10, White River | | | |
| County: Ashland Town/City/Village: Gingles town | | | | |
| SITE DESCRIPTION | | | | |
| Soils: Mapped Type(s): | WWI Class: N/A | | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes Field Verified: | Wetland Type(s): PSS - Alder swamp/ PEM - wet meadow | | | |
| The soils were not field verified. | Wetland Size: 0.2290 | Wetland Area Impacted 0.2290 | | |
| Hydrology: The hydrologic regime is saturated and surface water is the main source of hydrology for this wetland feature. | Vegetation: Plant Community Description(s): The wetland is an alder swamp/wet meadow complex. The alder swamp is dominated by speckled alder in the shrub layer. Bluejoint is the most common plant in the herbaceous layer with some areas devoid of growth with just leaf litter present. The wet meadow feature has a mixture of reed canary grass and sedge species. The wet meadow portion is disturbed by black rubber mats placed through the wetland to facilitate movement of heavy machinery through the wettest areas. | | | |

| SITE MAP | | |
|----------|--|--|
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SECTION 1: Functional Value Assessment

| | | | Functional Value Assessment |
|----|-----|-----------|--|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | N | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | Ν | N | Used for educational or scientific purposes |
| 3 | Υ | Υ | Visually or physically accessible to public |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| _ | | | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | | ., | Wildlife Habitat |
| 1 | N | N | Wetland and contiguous habitat >10 acres |
| 2 | Y | Y | 3 or more strata present (>10% cover) |
| 3 | N | N | Within or adjacent to habitat corridor or established wildlife habitat area |
| 4 | N | N | 100 m buffer – natural land cover >50%(south) 75% (north) intact |
| 5 | N | N | Occurs in a Joint Venture priority township |
| 6 | Y | Y | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| | Y | Y | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| 7 | Ν | N | |
| | | | plans |
| 8 | N | N | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present > 45 days |
| 10 | N | N | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | N | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | N | N | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | Ν | N | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | Ν | N | Vegetation is inundated in spring |
| SP | | | Shoreline Protection |
| 1 | N | N | Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable |
| | | | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| 2 | Ν | N | water levels or high flows – if no, not applicable |
| 3 | N | N | Densely rooted emergent or woody vegetation |
| ST | | | Storm and Floodwater Storage |
| 1 | N | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | N | N | Water flow through wetland is NOT channelized |
| 3 | Y | Y | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | N | Y | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | N | N | Within a watershed with <10% wetland |
| 8 | N | N N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | IN | IN | Water Quality Protection |
| 1 | N.I | N1 | Provides substantial storage of storm and floodwater based on previous section |
| | N | N | Basin wetland or constricted outlet |
| 2 | Y | Y | |
| 3 | N | N | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Y | Y | Dense, persistent vegetation |
| 6 | N | N | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | N | N | Stormwater or surface water from agricultural land is major hydrology source |
| 8 | N | N | Discharge to surface water |
| 9 | N | N | Natural land cover in 100m buffer area < 50% |
| GW | | | Groundwater Processes |
| 1 | Ν | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | N | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | N | N | Wetland is within a wellhead protection area |
| J | IN | IN | rvenana is within a weiliteau protection area |

Section 1 Comments (Refer to Section 1 numbers) HU-3 the wetland is in part in a roadside ditch and extends into an alder swamp. Both are visible from the road. WH-6 the wetland is part of a complex but the wet meadow section is small and is disturbed by heavy machinery moving through. ST-1/WQ-2 the wetland drains to a culvert. ST-3/WQ-5 the wetland has dense vegetation in the shrub layer ST-5 the wetland likely receives polluted runoff from the upslope paved road. Wildlife Habitat and Species Observation (including amphibians and reptiles) List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc. Observed Potential Species/Habitat/Comments Deer Υ Rabbit/small mammals Avian (red winged black bird and nest) Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc. Observed Potential Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4 | S3 🗸 | S2 🗌 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant [| Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of C | Plant communities | Comments (Estimate of % Cover, Abundance) |
|---------------------------|-------------|-----------|-------------------|---|
| Equisetum arvense | | | PSS | |
| Alnus incana* | | | PSS | Interrupted |
| Calamagrostis canadensis* | | | PSS | Patchy |
| Poa pratensis | | | PEM | Rare |
| Phalaris arundinacea | | | PEM | Rare |
| Carex stipata | | | PEM | Rare |
| Pinus banksiana | | | PSS | Rare |
| Populus tremuloides | | | PSS | Rare |
| Rhamnus cathartica | | | PSS | Rare |
| Rubus pubescens | | | PSS | Rare |
| Carex projecta | | | PEM | Barren |
| Ribes sp | | | PSS | Barren |
| Carex castanea | | | PEM | Barren |
| Juncus effusus | | | PEM | Barren |
| Salix bebbiana | | | PSS | Barren |
| Salix petiolaris | | | PSS | Barren |
| Taraxacum officinale | | | PEM | Barren |
| Ulmus americana | | | PSS | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The florisitc integrity is average based on the amount of invasive species present, the three strata that are present, and the plant community.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|----------|----------|------------------|-------------------------|---|
| • | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| Х | Х | | L | С | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| | | | | | Agriculture – pasture |
| Х | Х | | М | С | Roads or railroad |
| | | | | | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| V | Х | | М | | Removal of herbaceous stratum – mowing, |
| X | X | | IVI | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| X | Χ | | М | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| paved road collects. | from the |
|----------------------|----------|
| paved road collects. | |
| | |
| | |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | SIGNIFICANCE | | | | | |
|-------------------------------|--------------|----------|------|-------------|----------|--|
| | Low | Medium | High | Exceptional | NA | |
| Floristic Integrity | | ✓ | | | | |
| Human Use Values | V | | | | | |
| Wildlife Habitat | | / | | | | |
| Fish and Aquatic Life Habitat | V | | | | | |
| Shoreline Protection | | | | | ' | |
| Flood and Stormwater Storage | V | | | | | |
| Water Quality Protection | ✓ | | | | | |
| Groundwater Processes | ✓ | | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | Three strata are represented, with a low amount of invasive species coverage, and a less abundant plant community. |
| Human Use Values | The area is a dense swamp. |
| Wildlife Habitat | There are three layers that provide different cover and food options for various wildlife species. The shrub layer is dominated by a single species though. |
| Fish and Aquatic Life Habitat | There is no standing water present and the feature is very shallow which wouldn't allow for enough water to stand and provide habitat after heavy rains. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The feature is average is size and has dense persistent vegetation but is shallow and likely can not hold much water before it flows over. |
| Water Quality Protection | The wetland filters to a culvert and has dense vegetation at the shrub layer but offers little else to help filter water. |
| Groundwater Processes | The wetland does not seem to influence groundwater processes. |

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Medium |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Medium |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

| Project/Site: Line 5 Relo | cation Proiec | t | City/0 | County: Ash | nland | Sam | pling Date: 2 | <u>:020-06-02</u> |
|---|---------------------|--------|--|-----------------|-----------------|---|---------------|-------------------|
| Applicant/Owner: Enbridg | • | | | | | | | |
| Investigator(s): SBR/DGI | | | | | | | | |
| Landform (hillslope, terrace, e | | | | | | | | · (%): 0-2% |
| Subregion (LRR or MLRA): N | orthcentral Forests | S Lat | 46 507576 | (| Long: -90 |).886301 | Datum: | WGS84 |
| Soil Map Unit Name: Sanb | org-Badriver | com | nlex 0 to 6 pe | rcent slor | 165 | NWI classification: | | |
| Are climatic / hydrologic condi | • | | | • | | | | |
| Are Vegetation, Soil _ | | | - | | | | | No |
| _ | | | | | | | | NO |
| Are Vegetation, Soil _ | | | | | | | | |
| SUMMARY OF FINDIN | GS – Attach si | te m | ap showing san | npling poi | nt locatio | ons, transects, imp | portant fea | tures, etc. |
| Hydrophytic Vegetation Pres | sent? Yes _ | | _ No <u> </u> | Is the Sam | | | | |
| Hydric Soil Present? | | | No 🔽 | within a W | etland? | Yes | No <u>/</u> | |
| Wetland Hydrology Present? | | | _ No <u> </u> | If yes, optio | nal Wetland | Site ID: | | |
| Remarks: (Explain alternative The upland is on the control of the | | | | ontoine K | antucky | bluograss and | othor wo | ody Jawa |
| forbs. This upland p | • | | | | • | J | | |
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| | | | | | | | | |
| HYDROLOGY | | | | | | | | |
| Wetland Hydrology Indicat | | | | | | Secondary Indicators (| | vo required) |
| Primary Indicators (minimum | of one is required; | | | | | Surface Soil Crack | | |
| Surface Water (A1) | | | Water-Stained Leave | | | Drainage Patterns | | |
| High Water Table (A2) | | | Aquatic Fauna (B13) | | | Moss Trim Lines (I Dry-Season Water | | |
| Saturation (A3) Water Marks (B1) | | | Marl Deposits (B15) Hydrogen Sulfide Oc | | | | | |
| Sediment Deposits (B2) | | | Oxidized Rhizospher | | Poots (C3) | Crayfish Burrows (Saturation Visible | | aony (CO) |
| Sediment Deposits (B2) | | | Presence of Reduce | _ | Roots (C3) | | | |
| Algal Mat or Crust (B4) | | | Recent Iron Reduction | | sile (C6) | Stunted or StresseGeomorphic Positi | | |
| Iron Deposits (B5) | | | Thin Muck Surface (| | nis (CO) | Shallow Aquitard (| | |
| Inundation Visible on A | orial Imagory (P7) | | Other (Explain in Re | | | Microtopographic | | |
| Sparsely Vegetated Cor | | _ | Other (Explain in Ne | iliaiks) | | | | |
| Field Observations: | icave Surface (B6) | | | | | FAC-Neutral Test | (D3) | |
| Surface Water Present? | Yes No | ~ | Depth (inches): | | | | | |
| Water Table Present? | | | Depth (inches): | | | | | |
| Saturation Present? | Yes No _ | ~ | Depth (inches): | | Wetland H | lydrology Present? ` | Yes | No <u> </u> |
| (includes capillary fringe) Describe Recorded Data (str | ream gauge monito | ring w | vell aerial photos pre | avious inspec | tions) if ava | ilahla: | | |
| Describe Necolded Data (St | leam gauge, monito | nng w | veii, aeriai priotos, pre | evious irispeci | 110115), 11 ava | liable. | | |
| | | | | | | | | |
| Remarks: | | | | | | | | |
| No indicators of we | tland hydrolo | gy v | vere observed | | | | | |
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VEGETATION – Use scientific names of plants.

| | | | | Sampling Point: wasa1 | |
|--|----|-------------------|-------------|---|---------|
| Tree Stratum (Plot size:30) | | Dominant Species? | | Dominance Test worksheet: | |
| , ,, ,, ,, ,, ,, ,,, , | | | | Number of Dominant Species That Are OBL, FACW, or FAC: () | (A) |
| 2 | | | | Total Number of Dominant | ` ' |
| 3 | | | | Species Across All Strata: 1 | (B) |
| 1 | | | | Percent of Dominant Species | |
| 5 | | | | That Are OBL, FACW, or FAC: | (A/B) |
| 5 | | | | Prevalence Index worksheet: | |
| 7 | | | | Total % Cover of: Multiply by: | _ |
| | 0 | = Total Co | ver | OBL species0 x 1 =0 | _ |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species0 x 2 =0 | _ |
| l | | | | FAC species x 3 = 6 | _ |
| 2. | | | | FACU species87 x 4 =348 | _ |
| 3. | | | | UPL species 10 x 5 = 50 | _ |
| i. | | | | Column Totals: <u>99</u> (A) <u>404</u> | _ (B) |
| ·- 5 | | | | Prevalence Index = B/A = 4.080808080808080 | 18 |
| S | | | | Hydrophytic Vegetation Indicators: | |
| | | | | 1 - Rapid Test for Hydrophytic Vegetation | |
| 7 | | = Total Co | | 2 - Dominance Test is >50% | |
| | | = Total Co | ver | 3 - Prevalence Index is ≤3.0¹ | |
| Herb Stratum (Plot size: 5) | 60 | V | EACH | 4 - Morphological Adaptations (Provide sup | porting |
| 1. <u>Poa pratensis</u> | 60 | <u>Y</u> | FACU | data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain | n) |
| 2. <u>Bromus inermis</u> | | N | UPL | Problematic Hydrophytic Vegetation (Explai | 11) |
| 3. <u>Carex gracillima</u> | | _N_ | FACU | ¹ Indicators of hydric soil and wetland hydrology n | nust |
| Lotus corniculatus | | _N_ | <u>FACU</u> | be present, unless disturbed or problematic. | |
| s. <u>Taraxacum officinale</u> | | N | <u>FACU</u> | Definitions of Vegetation Strata: | |
| 6. <u>Fragaria virginiana</u> | | | <u>FACU</u> | Tree – Woody plants 3 in. (7.6 cm) or more in dia | amete |
| 7. Rhamnus cathartica | | | <u>FAC</u> | at breast height (DBH), regardless of height. | |
| 8. <u>Tanacetum vulgare</u> | | | <u>FACU</u> | Sapling/shrub – Woody plants less than 3 in. Diand greater than or equal to 3.28 ft (1 m) tall. | ВН |
| 9 10. | _ | | | | rdlaga |
| 11 | | | | Herb – All herbaceous (non-woody) plants, regal of size, and woody plants less than 3.28 ft tall. | ruless |
| 12. | | | | Woody vines – All woody vines greater than 3.2 | 8 ft in |
| | 99 | = Total Co | ver | height. | |
| Noody Vine Stratum (Plot size:) | | | | | |
| l | | | | | |
| 2. | | | | | |
| 3. | | | <u> </u> | Hydrophytic | |
| | | | | Vegetation | |
| 4. | | = Total Co | | Present? Yes No | |

SOIL Sampling Point: wasa1048_u

| Profile Desc | cription: (Describe | to the dep | th needed to docum | ent the i | ndicator | or confirm | the absence of indicators.) |
|----------------|---------------------------------------|-------------|--------------------------------|--------------------|------------------------|------------------|---|
| Depth (inches) | Matrix Color (moist) | % | Color (moist) | Feature % | s Type ¹ | Loc ² | Texture Remarks |
| 0-16 | 7.5YR 4/3 | 100 | Color (molec) | 0 | Турс | | SICL |
| 16-20 | 7.5YR 3/3 | 100 | | 0 | | | SICL |
| | | | | | | | |
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| | | | | | | | |
| ¹Type: C=C | oncentration, D=Depl | letion, RM= | Reduced Matrix, MS | =Masked | Sand Gr | ains. | ² Location: PL=Pore Lining, M=Matrix. |
| Hydric Soil | | | | | | | Indicators for Problematic Hydric Soils ³ : |
| Histosol | (A1) pipedon (A2) | | Polyvalue Below MLRA 149B) | Surface | (S8) (LRI | RR, | 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) |
| | istic (A3) | | Thin Dark Surface | ce (S9) (I | RR R, M | LRA 149B) | |
| | en Sulfide (A4) | | Loamy Mucky M | | | , L) | Dark Surface (S7) (LRR K, L) |
| | d Layers (A5) d Below Dark Surface | e (A11) | Loamy Gleyed M Depleted Matrix | | (.) | | Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) |
| | ark Surface (A12) | (****) | Redox Dark Surf | | | | Iron-Manganese Masses (F12) (LRR K, L, R) |
| - | Mucky Mineral (S1) | | Depleted Dark S | | 7) | | Piedmont Floodplain Soils (F19) (MLRA 1498 |
| - | Gleyed Matrix (S4) Redox (S5) | | Redox Depression | ons (F8) | | | Mesic Spodic (TA6) (MLRA 144A, 145, 149B Red Parent Material (F21) |
| | Matrix (S6) | | | | | | Very Shallow Dark Surface (TF12) |
| Dark Su | rface (S7) (LRR R, N | ILRA 149E | 3) | | | | Other (Explain in Remarks) |
| | | | tland hydrology must | be prese | ent, unles | s disturbed | or problematic. |
| | Layer (if observed): | | | | | | |
| Type: | | | | | | | Hydric Soil Present? Yes No |
| | ches): | | | | | | nyaric Soil Present? Tes No |
| Remarks: | c features were | e obser | ved in a silty o | lay lo | am soi | l. | |
| | | | | | | | |
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wasa1048_u_N



wasa1048_u_W

| Project/Site: Line 5 Relocation Project | City/Co | ounty: Ashland | Sam | pling Date: 2020-06-02 | |
|---|--|------------------------------|-------------------------------------|-----------------------------|--|
| Applicant/Owner: Enbridge | | | State: Wisconsin Sa | ampling Point: wasa1051e_w1 | |
| Investigator(s): SBR/DGL | Section | n, Township, Range: <u>S</u> | ec 32 T047N R0 | 04W | |
| Landform (hillslope, terrace, etc.): Depression | | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat | | | | | |
| Soil Map Unit Name: Sanborg-Badriver com | | | | | |
| Are climatic / hydrologic conditions on the site typical f | or this time of year? Ye | es No | (If no, explain in Remark | ks.) | |
| Are Vegetation, Soil, or Hydrology | significantly disturb | ed? Are "Norma | al Circumstances" preser | nt? Yes 🗸 No | |
| Are Vegetation, Soil, or Hydrology | | | explain any answers in F | | |
| SUMMARY OF FINDINGS - Attach site n | nap showing sam | pling point location | ons, transects, imp | portant features, etc. | |
| Hydric Soil Present? Yes | No | | Yes <u> </u> | | |
| Wetland Hydrology Present? Yes Remarks: (Explain alternative procedures here or in | | If yes, optional Wetlan | d Site ID: | | |
| The wetland is a wet meadow in a loby reed canary grass. The shrub lay within the herbaceous layer. | , , | | | | |
| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | | Secondary Indicators (| minimum of two required) | |
| Primary Indicators (minimum of one is required; chec | | | Surface Soil Crack | s (B6) | |
| | Water-Stained Leaves | (B9) | Drainage Patterns | | |
| ✓ High Water Table (A2) ✓ Aquatic Fauna (B13) ✓ Moss Trim Lines (B16) | | | | | |
| | Marl Deposits (B15) | (3.1) | Dry-Season Water | | |
| | Hydrogen Sulfide Odo | | Crayfish Burrows (| | |
| | Oxidized Rhizospheres | | | on Aerial Imagery (C9) | |
| | Presence of Reduced | | Stunted or Stresse | | |
| | Recent Iron Reduction Thin Muck Surface (C7) | | Geomorphic Positi | | |
| | Other (Explain in Rem | • | Shallow Aquitard (Microtopographic | | |
| Sparsely Vegetated Concave Surface (B8) | Other (Explain in Nem | arks) | FAC-Neutral Test | | |
| Field Observations: | | | V 1 AC-Neutral Test | (00) | |
| | Depth (inches): | | | | |
| | Depth (inches): 6 | | | | |
| | Depth (inches): 4 | | Hydrology Present? ` | Yes <u> </u> | |
| (includes capillary fringe) | | | | | |
| Describe Recorded Data (stream gauge, monitoring | well, aerial photos, prev | ious inspections), if ava | ailable: | | |
| | | | | | |
| Remarks: | | | | | |
| The hydrologic regime is saturated. | Saturation was | observed at 4 i | nches. | | |
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VEGETATION – Use scientific names of plants.

| Point: wasa1051e_w1 |
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| (A) |
| 3 (B) |
| (b) |
| 100 (A/B) |
| (;:=) |
| |
| lultiply by: |
| <u>5</u> 174 |
| 174 75 |
| 12 |
| 0 |
| 266 (B) |
| |
| 2.22 |
| s: |
| /egetation |
| |
| (Provide supporting |
| arate sheet) |
| ation¹ (Explain) |
| |
| d hydrology must lematic. |
| |
| |
| or more in diameter of height. |
| than 3 in. DBH |
| (1 m) tall. |
| plants, regardless |
| 3.28 ft tall. |
| ater than 3.28 ft in |
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SOIL Sampling Point: wasa1051e_w1

| Profile Desc | ription: (D | escribe t | o the de | oth needed | to docun | nent the i | ndicator | or confirm | the absence | of indicators.) |
|----------------------------|-----------------------------|------------|-----------|----------------|------------|----------------------|--------------------|------------------|----------------|--|
| Depth | | Matrix | | | Redo | x Features | S | | | |
| (inches) | Color (r | moist) | % | Color (n | | % | Type ¹ | Loc ² | Texture | Remarks |
| <u>0-14</u> | <u>10YR</u> | 3/1 | 95 | <u>7.5YR</u> | 3/4 | 5 | _C_ | _M_ | SICL | |
| 14-20 | <u>10YR</u> | 4/4 | 90 | <u>10YR</u> | 4/6 | _10_ | _C_ | _M_ | C | |
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| | | | | | | | | | | |
| ¹ Type: C=Co | | n, D=Depl | etion, RM | =Reduced N | Matrix, MS | S=Masked | Sand Gr | ains. | | PL=Pore Lining, M=Matrix. |
| Hydric Soil I | | | | Polyva | lua Ralov | v Surface | (S8) (I D I | D D | | for Problematic Hydric Soils ³ : uck (A10) (LRR K, L, MLRA 149B) |
| | oipedon (A2 |) | | - | RA 149B) | | (50) (EIXI | ιι, | | Prairie Redox (A16) (LRR K, L, R) |
| Black Hi | stic (A3) | | | | | | | LRA 149B) |) 5 cm M | ucky Peat or Peat (S3) (LRR K, L, R) |
| | n Sulfide (A | | | | - | Mineral (F1 | | , L) | | urface (S7) (LRR K, L) |
| | d Layers (Ad d Below Dai | | e (A11) | | ed Matrix | Matrix (F2 : (F3) |) | | | ue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L) |
| | ark Surface | | | <u> </u> Redox | | | | | | inganese Masses (F12) (LRR K, L, R) |
| - | lucky Miner | | | | | Surface (F | 7) | | | ant Floodplain Soils (F19) (MLRA 149B) |
| - | Bleyed Matri Redox (S5) | x (S4) | | Redox | Depress | ions (F8) | | | | Spodic (TA6) (MLRA 144A, 145, 149B) rent Material (F21) |
| | Matrix (S6) |) | | | | | | | | nallow Dark Surface (TF12) |
| | rface (S7) (| | ILRA 149 | B) | | | | | | Explain in Remarks) |
| ³ Indicators of | f hydrophyti | c vegetati | ion and w | etland hydro | loav mus | t be prese | ent unless | s disturbed | or problematic | |
| Restrictive I | | | | .,,, | .09, | | J. 1.1, G. 11.1001 | | | |
| Type: | | | | | | | | | | |
| Depth (inc | ches): | | | | | | | | Hydric Soil | Present? Yes <u> </u> |
| Remarks: | CI I | | ı | | | | | | • | |
| The soil | profile h | as red | ox and | a claye | y texti | ure thre | ougho | Jt. | | |
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wasa1051e_w1_NW



wasa1051e_w1_SW

| Project/Site: Line 5 Reloc | cation Proiect | | City/Co | ounty: Ashl | land | Sar | mpling Date: 2 | <u> 2020-06-02</u> |
|--|---------------------|-----------------|---------------------------------|-----------------|----------------|----------------------------------|----------------|--------------------|
| Applicant/Owner: Enbridge | - | | | | | | | |
| Investigator(s): SBR/DGL | | | | | | | | |
| Landform (hillslope, terrace, et | | | | | | | | · (%)· 0-2% |
| Subregion (LRR or MLRA): No. | | | | | | | | |
| Soil Map Unit Name: Sanbo | | | | | | | | |
| | ŭ | • | • | • | | | | |
| Are climatic / hydrologic condit | | | | | | | | |
| Are Vegetation, Soil | | | | | | | | No |
| Are Vegetation, Soil | , or Hydrology | natu | irally problemat | ntic? (If | f needed, e | xplain any answers in | Remarks.) | |
| SUMMARY OF FINDING | S - Attach sit | te map sh | owing sam | pling poin | t locatio | ns, transects, im | portant fea | tures, etc. |
| Hydrophytic Vegetation Prese Hydric Soil Present? | Yes | V No_ V No_ | | | tland? | Yes | | |
| Wetland Hydrology Present? Remarks: (Explain alternative) | | | | If yes, option | nal Wetland | Site ID: | | |
| dominated by speck reed canary grass, (| | | | • | r. The h | erbaceous laye | ∍r is domir | nated by |
| HYDROLOGY | | | | | | | | |
| Wetland Hydrology Indicato | | | | | | Secondary Indicators | | vo required) |
| Primary Indicators (minimum | of one is required; | | | | | Surface Soil Crac | | |
| Surface Water (A1) | | | Stained Leaves | | | Drainage Patterns | | |
| High Water Table (A2) | | | Fauna (B13) | | | Moss Trim Lines | | |
| Saturation (A3) Water Marks (B1) | | | eposits (B15) en Sulfide Odo | or (C1) | | Dry-Season Wate Crayfish Burrows | | |
| Sediment Deposits (B2) | | | d Rhizosphere | | | Saturation Visible | | nery (C9) |
| Occument Deposits (B2) Drift Deposits (B3) | | | ce of Reduced | _ | | Stunted or Stress | | |
| Algal Mat or Crust (B4) | | · | Iron Reduction | , , | | ✓ Geomorphic Posi | | |
| Iron Deposits (B5) | | | uck Surface (C | | | Shallow Aquitard | | |
| Inundation Visible on Ae | rial Imagery (B7) | | Explain in Rem | | | Microtopographic | | |
| Sparsely Vegetated Con- | • • • • | ` | • | , | | ✓ FAC-Neutral Test | | |
| Field Observations: | | | | | | | | |
| Surface Water Present? | Yes No _ | <u>✓</u> Depth | (inches): | | | | | |
| Water Table Present? | Yes No _ | <u></u> ✓ Depth | (inches): | | | | | |
| Saturation Present? | Yes No _ | <u></u> ✓ Depth | (inches): | | Wetland H | ydrology Present? | Yes | No |
| (includes capillary fringe) Describe Recorded Data (stre | eam gauge monitor | ring well aeri | al photos prev | vious inspectio | ons) if avai | ilable. | | |
| Describe Necorded Bala (silv | zam gaage, monto | ing wen, den | ai priotos, prov | vious iriopeou | 0110), 11 avai | idolo. | | |
| | | | | | | | | |
| Remarks: The hydrologic regir | ne is saturate | ed. | | | | | | |
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| VEGETATION — Use sciennic names of biants | VEGETATION - | Use scientific names | of plants. |
|---|---------------------|----------------------|------------|
|---|---------------------|----------------------|------------|

| • | | | | Sampling Point: wasa1051s_v |
|--------------------------------------|-------|-------------------|-------------|---|
| Tree Stratum (Plot size: 30) | | Dominant Species? | | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC:3(A) |
| 2. | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata:4 (B) |
| 4 | | | | Percent of Dominant Species |
| 5 | · | | | That Are OBL, FACW, or FAC: |
| 3 | | | | Prevalence Index worksheet: |
| 7 | . ——— | | | Total % Cover of: Multiply by: |
| | 0 | = Total Co | ver | OBL species0 x 1 =0 |
| Sapling/Shrub Stratum (Plot size:15) | | | | FACW species135 x 2 =270 |
| 1. <u>Alnus incana</u> | 85 | <u>Y</u> | <u>FACW</u> | FAC species 10 x 3 = 30 |
| 2. <u>Lonicera morrowii</u> | 5 | N | <u>FACU</u> | FACU species <u>45</u> x 4 = <u>180</u> |
| 3 | | | | UPL species $0 \times 5 = 0$ Column Totals: $190 \times 6 \times 6 \times 6$ |
| 4 | | | | Coldifili Totals. 190 (A) 480 (B) |
| 5 | | | | Prevalence Index = B/A = 2.526315789473684 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | | = Total Co | ver | ∠ 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:5) | _30_ | - Total Co | VCI | v 3 - Prevalence Index is ≤3.01 |
| 1. <u>Solidago gigantea</u> | 25 | V | FACW | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| | | | FACU | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. <u>Carex gracillima</u> | | | | 1 Toblematic Hydrophytic Vegetation (Explain) |
| 3. <u>Phalaris arundinacea</u> | | Y | FACW | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. <u>Poa pratensis</u> | | _N_ | FACU | be present, unless disturbed or problematic. |
| 5. <u>Ranunculus acris</u> | | N | <u>FAC</u> | Definitions of Vegetation Strata: |
| 6. <u>Equisetum pratense</u> | | | FACW | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7. <u>Cornus racemosa</u> | | N | FAC | at breast height (DBH), regardless of height. |
| 8. <u>Solidago canadensis</u> | | | <u>FACU</u> | Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. |
| 9. 10. | | | . —— | |
| 10 11 | | | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 12. | | | | Woody vines – All woody vines greater than 3.28 ft in |
| | 100 | = Total Co | ver | height. |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | | |
| 2. | | | | |
| 3 | | | | Hydrophytic |
| | | | | Vegetation |
| 4 | | - Total Co | | Present? Yes <u> </u> |
| | 0 | = Total Co | ver | Present? Yes V No No |

SOIL Sampling Point: wasa1051s_w

| Profile Desc | cription: (Describe t | o the de | oth needed | to docun | nent the i | ndicator | or confirm | the absence o | f indicators.) |
|---------------------------|---------------------------------------|-----------|--------------|------------------------------------|---------------|-------------------|------------------|------------------------|--|
| Depth | Matrix | | | | x Feature: | S | | | |
| (inches) | Color (moist) | <u>%</u> | Color (m | | <u>%</u> | Type ¹ | Loc ² | <u>Texture</u> | Remarks |
| 0-12 | 2.5YR 4/2 | | <u>2.5YR</u> | | 2 | <u>C</u> | <u> </u> | _SIC_ | |
| 12-20 | 2.5YR 5/2 | _90 | <u>2.5YR</u> | 4/4 | <u>10</u> | <u> </u> | <u> </u> | C | |
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| ¹Type: C=C | oncentration, D=Depl | etion, RM | =Reduced N | Matrix, MS | S=Masked | Sand Gr | ains. | ² Location: | PL=Pore Lining, M=Matrix. |
| Hydric Soil | | | | | | | | | or Problematic Hydric Soils ³ : |
| Histosol | (A1) pipedon (A2) | | - | lue Belov RA 149B) | w Surface | (S8) (LR | R R, | · | uck (A10) (LRR K, L, MLRA 149B) rairie Redox (A16) (LRR K, L, R) |
| | stic (A3) | | | , | | RR R, M | LRA 149B) | | ucky Peat or Peat (S3) (LRR K, L, R) |
| | en Sulfide (A4) | | | | /lineral (F | | (, L) | Dark Su | rface (S7) (LRR K, L) |
| | d Layers (A5) d Below Dark Surface | Δ (Δ11) | - | [,] Gleyed I ed Matrix | Matrix (F2 |) | | | ue Below Surface (S8) (LRR K, L) rk Surface (S9) (LRR K, L) |
| | ark Surface (A12) | , (////) | | | rface (F6) | | | | nganese Masses (F12) (LRR K, L, R) |
| | Mucky Mineral (S1) | | | | Surface (F | 7) | | | nt Floodplain Soils (F19) (MLRA 149B) |
| | Gleyed Matrix (S4) Redox (S5) | | Redox | Depress | ions (F8) | | | | podic (TA6) (MLRA 144A, 145, 149B) rent Material (F21) |
| - | Matrix (S6) | | | | | | | | allow Dark Surface (TF12) |
| | rface (S7) (LRR R, M | LRA 149 | B) | | | | | | Explain in Remarks) |
| ³ Indicators o | f hydrophytic vegetati | on and w | etland hydro | logy mus | st be prese | ent, unles | s disturbed | or problematic. | |
| | Layer (if observed): | | | | • | | | | |
| Type: | | | | | | | | | |
| | ches): | | | | | | | Hydric Soil F | Present? Yes <u>/</u> No |
| Remarks: | wow ooil with r | odov f | anturan t | hroug | hout | | | | |
| A red Cla | yey soil with r | euox i | eatures t | inoug | nout. | | | | |
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wasa1051s_w_N



wasa1051s_w_S

| Project/Site: Line 5 Relocation Project | City/County: Ash | land | Sampling Date: 2020-06-06 | |
|---|--|-----------------------------|---------------------------------|--|
| Applicant/Owner: Enbridge | | | | |
| Investigator(s): SBR/DGL | Section, Township, | Range: sec 32 T047N | N R004W | |
| Landform (hillslope, terrace, etc.): Depression | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46 | | | | |
| Soil Map Unit Name: Sanborg-Badriver comple | | | | |
| Are climatic / hydrologic conditions on the site typical for th | · | | | |
| | | | | |
| Are Vegetation, Soil, or Hydrology | | | | |
| Are Vegetation, Soil, or Hydrology | | f needed, explain any answe | | |
| SUMMARY OF FINDINGS – Attach site map | showing sampling poin | t locations, transects | s, important features, etc. | |
| Hydrophytic Vegetation Present? Yes ✓ 1 | No Is the Samp | | | |
| Hydric Soil Present? Yes ✓ 1 | islain a Ma | tland? Yes <u> </u> | No | |
| Wetland Hydrology Present? Yes 1 | | nal Wetland Site ID: | _ | |
| Remarks: (Explain alternative procedures here or in a se | eparate report.) | | | |
| The wetland is a small hardwood swar | | • | • | |
| including wet meadow, alder swamp, | | • | is the main | |
| herbaceous species in the sparsely ve | getateu ground iayer. | | | |
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| HYDROLOGY | | | | |
| Wetland Hydrology Indicators: | | Secondary Indica | ators (minimum of two required) | |
| Primary Indicators (minimum of one is required; check all | that apply) | Surface Soil | | |
| | ater-Stained Leaves (B9) | Drainage Pa | | |
| ✓ High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) | | | | |
| | rl Deposits (B15) | | Water Table (C2) | |
| | drogen Sulfide Odor (C1) | Crayfish Bur | | |
| | idized Rhizospheres on Living R | | isible on Aerial Imagery (C9) | |
| | esence of Reduced Iron (C4) cent Iron Reduction in Tilled Soil | | tressed Plants (D1) | |
| | in Muck Surface (C7) | Shallow Aqu | | |
| <u> </u> | ner (Explain in Remarks) | Microtopogra | | |
| Sparsely Vegetated Concave Surface (B8) | ioi (Explain in Romano) | <u> </u> FAC-Neutral | | |
| Field Observations: | | | | |
| Surface Water Present? Yes No _ 🗸 De | epth (inches): | | | |
| Water Table Present? Yes _ v _ No De | epth (inches): 12 | | | |
| Saturation Present? Yes _ v No De | epth (inches): 10 | Wetland Hydrology Preser | nt? Yes <u>/</u> No | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, | acrial photos, provious inspecti | one) if available: | | |
| Describe Recorded Data (stream gauge, monitoring well, | aeriai priotos, previous irispecti | ons), ii avaliable. | | |
| | | | | |
| Remarks: | · I - II - · · · · · · · · · · · · · · · | | Leading the setumotion | |
| The hydrologic regime is saturated. A | shallow water table w | as observed at 121 | inches with saturation | |
| occurring at 10 inches. | | | | |
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| VEGETATION — Use sciennic names of biants | VEGETATION - | Use scientific names | of plants. |
|---|---------------------|----------------------|------------|
|---|---------------------|----------------------|------------|

| /EGETATION – Use scientific names of plants | | | | Sampling Point: wasa1051f_w |
|--|------------------|-------------------|-------------|--|
| Tree Stratum (Plot size:30) | Absolute % Cover | Dominant Species? | | Dominance Test worksheet: |
| 1. <u>Acer rubrum</u> | 25 | <u>Y</u> | FAC | Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A) |
| 2. <u>Populus tremuloides</u> | | Y | FAC | Total Number of Dominant |
| 3. <u>Pinus resinosa</u> | | _N_ | <u>FACU</u> | Species Across All Strata: |
| 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: |
| | 45 | = Total Co | /er | OBL species15 x 1 =15 |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species50 x 2 =100 |
| 1. <u>Alnus incana</u> | 20 | <u>Y</u> | <u>FACW</u> | FAC species <u>50</u> x 3 = <u>150</u> |
| 2. <u>Ilex verticillata</u> | 5 | _N | <u>FACW</u> | FACU species 10 x 4 = 40 |
| 3. <u>Acer rubrum</u> | 5 | _N_ | FAC | UPL species 0 $x = 0$ Column Totals: 125 (A) 305 (B) |
| 4. <u>Fraxinus nigra</u> | 5 | _N | <u>FACW</u> | |
| 5 | | . <u></u> | | Prevalence Index = B/A = 2.44 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | 35 | = Total Co | /er | 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size:5 | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| 1. <u>Scirpus cyperinus</u> | 15 | Y | OBL | data in Remarks or on a separate sheet) |
| 2. <u>Equisetum pratense</u> | 10 | <u>Y</u> | <u>FACW</u> | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Equisetum sylvaticum</u> | 5 | _N | <u>FACW</u> | ¹ Indicators of hydric soil and wetland hydrology must |
| 4. <u>Frangula alnus</u> | 5 | _N | FAC | be present, unless disturbed or problematic. |
| 5. <u>Carex gracillima</u> | 5 | <u>N</u> | <u>FACU</u> | Definitions of Vegetation Strata: |
| 6. <u>Cardamine pensylvanica</u> | 5 | _N_ | <u>FACW</u> | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7 | | | | at breast height (DBH), regardless of height. |
| 8 | _ | | | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9 | _ | | | and greater than or equal to 3.28 ft (1 m) tall. |
| 10 | | | | Herb – All herbaceous (non-woody) plants, regardless |
| 11 | | | | of size, and woody plants less than 3.28 ft tall. |
| 12 | | · | | Woody vines – All woody vines greater than 3.28 ft in height. |
| | <u>45</u> | = Total Co | /er | No.grid |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic |
| 4 | | · | | Vegetation Present? Yes No |
| | | = Total Co | /er | |
| Remarks: (Include photo numbers here or on a separate The sample point is fairly representativ due to recent inundation. | | feature | . Bare a | reas with leaf litter are present likely |
| | | | | |

SOIL Sampling Point: wasa1051f_w

| Profile Desc | ription: (D | escribe t | o the dep | th needed | to docun | nent the ir | ndicator | or confirm | the absence | of indicators.) | |
|-------------------------|------------------------------|--|-----------|--------------|------------|----------------------------|--------------------|---------------|-------------------------------|--|--|
| Depth | | Matrix Redox Features (moist) % Color (moist) % Type¹ Loc² | | | | Texture | Remarks | | | | |
| (inches) | 7.5YR | | 90 | 7.5YR | | 10 | С | M | SICL | Remarks | |
| 11-20 | | | | 5YR | | | | M | C | | |
| 11-20 | <u> </u> | <u> </u> | _00_ | <u> </u> | J/ U | _ 10 _ | | | | | |
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| ¹ Type: C=Co | | | etion, RM | =Reduced N | Matrix, MS | S=Masked | Sand Gr | ains. | | PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : | |
| Histosol | | | | Polyva | lue Belov | v Surface (| (S8) (LR I | R R. | | luck (A10) (LRR K, L, MLRA 149B) | |
| Histic Ep | oipedon (A2 |) | | MLF | RA 149B) | | | | Coast F | Prairie Redox (A16) (LRR K, L, R) | |
| Black Hi | | .4) | | | | | | LRA 149B) | | lucky Peat or Peat (S3) (LRR K, L, R) | |
| | en Sulfide (A d Layers (A | | | | - | 1ineral (F1 Matrix (F2) | | x, ∟) | | urface (S7) (LRR K, L) ue Below Surface (S8) (LRR K, L) | |
| <u> </u> Depleted | d Below Dai | k Surface | e (A11) | Deplet | ed Matrix | (F3) | | | Thin Da | ark Surface (S9) (LRR K, L) | |
| | ark Surface | | | | | face (F6) | 7) | | | anganese Masses (F12) (LRR K, L, R) | |
| | lucky Miner Gleyed Matri | | | | Depress | Surface (Filions (F8) | <i>(</i>) | | | ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) | |
| Sandy R | Redox (S5) | | | | • | , | | | Red Pa | rent Material (F21) | |
| | Matrix (S6) | | U D A 440 | 3 \ | | | | | | hallow Dark Surface (TF12) | |
| Dark Su | rface (S7) (| LKK K, W | ILKA 149 | 3) | | | | | Other (| Explain in Remarks) | |
| | | _ | on and w | etland hydro | logy mus | t be prese | nt, unles | s disturbed | or problematic | | |
| Type: | Layer (IT ob | servea): | | | | | | | | | |
| | chee). | | | | | | | | Hydric Soil Present? Yes ✓ No | | |
| Remarks: | ches): | | | | | | | | , | | |
| A silty cla | ay loam | soil ov | er a c | ay soil, | both w | ith obs | erved | l redox f | eatures. | | |
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wasa1051f_w_W

| Project/Site: Line 5 Relocation Project | City/County: As | hland | Sampling Date: <u>2020-06-02</u> |
|---|--|--|----------------------------------|
| Applicant/Owner: Enbridge | | | |
| Investigator(s): SBR/DGL | Section, Townshi | p, Range: <u>sec 32 T047</u> | N R004W |
| Landform (hillslope, terrace, etc.): Depression | Local relief (concave | , convex, none): Concave | e Slope (%): <u>0-2%</u> |
| Subregion (LRR or MLRA): Northcentral Forests La | at: <u>46.506080</u> | Long: <u>-90.893189</u> | Datum: WGS84 |
| Soil Map Unit Name: Sanborg-Badriver co | mplex, 0 to 6 percent slo | DES NWI classif | fication: |
| 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 | | | |
| Are Vegetation, Soil, or Hydrology | | (If needed, explain any answ | |
| SUMMARY OF FINDINGS – Attach site | map showing sampling po | int locations, transect | s, important features, etc. |
| | No within a W No If yes, option a separate report.) | npled Area Vetland? Yes onal Wetland Site ID: high prevalence of s | |
| plant community as a whole is mor throughout most of the feature. | | | |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | Secondary India | cators (minimum of two required) |
| Primary Indicators (minimum of one is required; che | •••• | Surface So | |
| | _ Water-Stained Leaves (B9) | Drainage P | |
| | _ Aquatic Fauna (B13) | Moss Trim | |
| | _ Marl Deposits (B15) | | n Water Table (C2) |
| | Hydrogen Sulfide Odor (C1)Oxidized Rhizospheres on Living | Crayfish Bu | |
| | _ Oxidized Rhizospheres on Living _ Presence of Reduced Iron (C4) | | Visible on Aerial Imagery (C9) |
| | Recent Iron Reduction in Tilled S | | Stressed Plants (D1) |
| | Thin Muck Surface (C7) | Shallow Aq | |
| | _ Other (Explain in Remarks) | | raphic Relief (D4) |
| Sparsely Vegetated Concave Surface (B8) | _ Other (Explain in Remains) | Microtopog _∠ FAC-Neutra | |
| Field Observations: | | | |
| Surface Water Present? Yes ✔ No | Depth (inches): 2 | | |
| | Depth (inches): 0 | | |
| | Depth (inches): 0 | Wetland Hydrology Prese | ent? Yes 🗸 No |
| (includes capillary fringe) | | -41 | |
| Describe Recorded Data (stream gauge, monitoring | y well, aeriai priotos, previous inspec | ctions), if available: | |
| | | | |
| Remarks: | | | |
| The hydrologic regime is saturated | | ent in this portion of | f the wetland feature. |
| Saturation and water table were ob | served at 0 inches. | | |
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VEGETATION – Use scientific names of plants.

| | | | Sampling Point: wasa1051e_w2 |
|-----------|------------|---|---|
| Absolute | | Indicator | Dominance Test worksheet: |
| | | <u> </u> | Number of Dominant Species That Are OBL, FACW, or FAC: (A) |
| | | | Total Number of Dominant Species Across All Strata: 3 (B) |
| | | | Percent of Dominant Species |
| | | | That Are OBL, FACW, or FAC: 67 (A/B) |
| | | | Prevalence Index worksheet: |
| | | · · · | |
| | - Total Co | vei | FACW species 35 x 2 = 70 |
| 40 | V | E A C) A / | FAC species5 x3 =15 |
| | | | FACU species x4 =80 |
| | | · | UPL species |
| | | | Column Totals: 110 (A) 215 (B) |
| | | | |
| | | | Prevalence Index = B/A = 1.9545454545454546 |
| | | | Hydrophytic Vegetation Indicators: |
| | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | | | 2 - Dominance Test is >50% |
| | . Gta. GG | | 3 - Prevalence Index is ≤3.0 ¹ |
| 35 | V | OBI | 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) |
| | | | Problematic Hydrophytic Vegetation¹ (Explain) |
| | | | r roblematic riyurophytic vegetation (Explain) |
| | | | ¹ Indicators of hydric soil and wetland hydrology must |
| | | | be present, unless disturbed or problematic. |
| <u>5</u> | N | <u>FACW</u> | Definitions of Vegetation Strata: |
| 5 | N | FAC | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 5 | N | FACW | 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. |
| 100 | = Total Co | ver | |
| | | | |
| | | | |
| | | | |
| | | | Hydrophytic |
| | | | Vegetation Present? |
| 0 | = Total Co | ver | rieseiit: ies v No |
| e sheet.) | | | d complex. |
| | | % Cover Species? 0 = Total Co 10 = Total Co 35 | % Cover Species? Status |

SOIL Sampling Point: wasa1051e_w2

| Profile Desc | ription: (E | Describe t | o the dep | th needed | to docun | nent the i | ndicator | or confirm | the absence | of indicators.) |
|----------------------------|--|-------------|---------------|--------------|-----------------------|----------------------------|-------------------|------------------|-----------------|--|
| Depth | Matrix Redox Features Color (moist) % Color (moist) % Type¹ Loc² | | | | | | | | | |
| (inches) 0-13 | SYR | | 90 | SYR | | <u>%</u> 10 | Type ¹ | Loc ² | Texture SIC | Remarks |
| · · | | | · | | | | | | <u> </u> | |
| 13-20 | <u> 5YR</u> | 5/1 | 85 | <u>5YR</u> | 5/8 | <u> 15</u> | <u> </u> | _M_ | <u> </u> | |
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| 1- 0.0 | | | | | | | | | 2, ,, | |
| ¹ Type: C=Co | | | etion, RM | =Reduced l | Matrix, MS | S=Masked | Sand Gr | ains. | | PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : |
| Histosol | | | | Polyva | alue Belov | v Surface | (S8) (LRI | RR. | | uck (A10) (LRR K, L, MLRA 149B) |
| Histic Ep | ipedon (A2 | 2) | | MLI | RA 149B) | | | | Coast F | Prairie Redox (A16) (LRR K, L, R) |
| Black His | | | | | | | | LRA 149B) | | ucky Peat or Peat (S3) (LRR K, L, R) |
| | n Sulfide (A I Layers (A | | | | - | 1ineral (F1 Matrix (F2) | | , L) | | urface (S7) (LRR K, L) ue Below Surface (S8) (LRR K, L) |
| | Below Da | | e (A11) | | ted Matrix | | | | | ark Surface (S9) (LRR K, L) |
| | rk Surface | | | Redox | | | | | | inganese Masses (F12) (LRR K, L, R) |
| - | lucky Miner leyed Matr | | | | ted Dark S Depress | Surface (F | 7) | | | ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) |
| - | edox (S5) | IX (34) | | Nedox | Depless | ions (i o) | | | | rent Material (F21) |
| - | Matrix (S6 |) | | | | | | | | nallow Dark Surface (TF12) |
| Dark Sur | face (S7) (| LRR R, M | LRA 1491 | 3) | | | | | Other (I | Explain in Remarks) |
| ³ Indicators of | hydrophyt | ic vegetati | on and we | etland hydro | ology mus | t be prese | nt, unles: | s disturbed | or problematic. | |
| Restrictive L | ayer (if ob | served): | | | | | | | | |
| Туре: | | | | | | | | | | |
| Depth (inc | ches): | | | | | | | | Hydric Soil | Present? Yes <u>/</u> No |
| Remarks: | !! | م ملائد، ا | l - · · · £ - | | | 4 41 | 4 م مارم | 41 | £:1 ~ | |
| A red cla | yey son | with re | eaox re | eatures | preser | it throu | gnout | tne pro | īlie. | |
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wasa1051e_w2_N



wasa1051e_w2_S

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | | |
|--|--|------------------------------|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | | |
| File #: wasa1051 | Date of visit(s): 2020-06-02 | | |
| Location: PLSS: sec 32 T047N R004W | Ecological Landsca Lake Superior Clay Plain | • | |
| Lat: 46.507310 Long: -90.888512 County: Ashland Town/City/Village: Gingles town | Watershed: LS10, White River | | |
| SITE DESCRIPTION | | | |
| Soils: Mapped Type(s): | WWI Class: T5/S3Kr | | |
| Sanborg-Badriver complex, 0 to 6 percent slopes, Pickford-Badriver complex, 0 to 3 percent slopes Field Verified: | Wetland Type(s): PEM - wet meadow/ PSS - alder swamp | | |
| The soils were not field verified. | Wetland Size: 3.0781 | Wetland Area Impacted 3.0781 | |
| Hydrology: | Vegetation: Plant Community D | | |
| The hydrology regime is saturated with surface water being the main source of input for this feature. | The wetland is part of a complex. The wet meadow portion is dominated by reed canary grass. Gray dogwood is present in both the shrub and herbaceous layer and could convert the area to a shrub Carr once more shrubs grow up with time. The other component is an alder swamp dominated by speckled alder with a mixed herbaceous layer. | | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| | | ECTION 1: | Functional Value Assessment |
|----|------|---------------------------------------|--|
| HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 1 | Ν | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 2 | N | N | Used for educational or scientific purposes |
| 3 | N | N | Visually or physically accessible to public |
| 4 | N | N | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| | | - 1 | In or adjacent to RED FLAG areas |
| 5 | N | N | List: |
| 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| 7 | N | N | In or adjacent to archaeological or cultural resource site |
| WH | IN | IN | Wildlife Habitat |
| 1 | Υ | Υ | Wetland and contiguous habitat >10 acres |
| 2 | Y | Y | 3 or more strata present (>10% cover) |
| 3 | | | Within or adjacent to habitat corridor or established wildlife habitat area |
| | N | N | |
| 4 | N | N | 100 m buffer – natural land cover ≥50%(south) 75% (north) intact |
| 5 | N | N | Occurs in a Joint Venture priority township |
| 6 | Υ | Y | Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) |
| 7 | N | Y | Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other |
| | | | plans |
| 8 | N | Y | Part of a large habitat block that supports area sensitive species |
| 9 | N | N | Ephemeral pond with water present <u>> 45</u> days |
| 10 | Ν | Υ | Standing water provides habitat for amphibians and aquatic invertebrates |
| 11 | Ν | N | Seasonally exposed mudflats present |
| 12 | N | N | Provides habitat scarce in the area (urban, agricultural, etc.) |
| FA | | | Fish and Aquatic Life Habitat |
| 1 | N | N | Wetland is connected or contiguous with perennial stream or lake |
| 2 | N | Y | Standing water provides habitat for amphibians and aquatic invertebrates |
| 3 | N | N. | Natural Heritage Inventory (NHI) listed aquatic species within aquatic system |
| 4 | N | Y | Vegetation is inundated in spring |
| SP | 11 | | Shoreline Protection |
| 1 | N | N | Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable |
| | IN | IN | Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating |
| 2 | Ν | N | water levels or high flows – if no, not applicable |
| 3 | NI | N | Densely rooted emergent or woody vegetation |
| ST | N | IN | Storm and Floodwater Storage |
| | N. 1 | | |
| 1 | N | N | Basin wetland, constricted outlet, has through-flow or is adjacent to a stream |
| 2 | Y | Y | Water flow through wetland is NOT channelized |
| 3 | Υ | Y | Dense, persistent vegetation |
| 4 | N | N | Evidence of flashy hydrology |
| 5 | N | N | Point or non-point source inflow |
| 6 | N | N | Impervious surfaces cover >10% of land surface within the watershed |
| 7 | N | N | Within a watershed with <10% wetland |
| 8 | N | N | Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event |
| WQ | | | Water Quality Protection |
| 1 | N | N | Provides substantial storage of storm and floodwater based on previous section |
| 2 | Ν | N | Basin wetland or constricted outlet |
| 3 | Υ | Υ | Water flow through wetland is NOT channelized |
| 4 | N | N | Vegetated wetland associated with a lake or stream |
| 5 | Y | Y | Dense, persistent vegetation |
| 6 | N | N. | Signs of excess nutrients, such as algae blooms, heavy macrophyte growth |
| 7 | N | N | Stormwater or surface water from agricultural land is major hydrology source |
| 8 | N | N | Discharge to surface water |
| 9 | N | N N | Natural land cover in 100m buffer area < 50% |
| GW | IN | IN | Groundwater Processes |
| | | | |
| 1 | N | N | Springs, seeps or indicators of groundwater present |
| 2 | N | N | Location near a groundwater divide or a headwater wetland |
| 3 | N | N | Wetland remains saturated for an extended time period with no additional water inputs |
| 4 | N | N | Wetland soils are organic |
| 5 | N | N | Wetland is within a wellhead protection area |
| | | · · · · · · · · · · · · · · · · · · · | |

| Se | ction 1 Con | nments (Refer to Section 1 numbers) |
|--|-------------|--|
| WH-6 the wetland is the shrub and herba | | swamp complex. WH-10/FA-2/4 there is some standing water present in the deeper parts of the wetland ST-3/WQ-5 the wetland has dense vegetation i |
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| | | |
| Lis | | at and Species Observation (including amphibians and reptiles) oservation, tracks, scat, other sign; type of habitat: nesting, migratory, |
| Observed | Potential | Species/Habitat/Comments |
| Y | Y | Small mammal Avian |
| <u> </u> | ī | Avian |
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| | | atic Life Habitat and Species Observations oservation, other sign; type of habitat: nesting, spawning, nursery areas, etc. |
| Observed | Potential | Species/Habitat |
| | Y | Aquatic invertebrates |
| | | |
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SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% 🔽 | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 | S2 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|----------------------------|-------------|------|-------------------|---|
| Alnus incana* | | | PSS | Patchy |
| Phalaris arundinacea* | | | PEM/PSS | Patchy |
| Carex gracillima | | | PEM/PSS | Rare |
| Cornus racemosa | | | PEM/PSS | Rare |
| Fragaria virginiana | | | PEM | Rare |
| Juncus effusus | | | PEM | Rare |
| Poa pratensis | | | PEM | Rare |
| Solidago gigantea | | | PEM/PSS | Rare |
| Agrimonia pubescens | | | PEM | Barren |
| Carex vulpinoidea | | | PEM | Barren |
| Cornus alba | | | PEM | Barren |
| Equisetum arvense | | | PEM | Barren |
| Equisetum pratense | | | PEM/PSS | Barren |
| Prunus pensylvanica | | | PEM | Barren |
| Ranunculus acris | | | PEM/PSS | Barren |
| Rosa blanda | | | PEM | Barren |
| Salix petiolaris | | | PEM | Barren |
| Scirpus cyperinus | | | PEM | Barren |
| Cardamine pensylvanica | | | PEM | Barren |
| Equisetum sylvaticum | | | PSS | Barren |
| Frangula alnus | | | PEM | Barren |
| Lonicera morrowii | | | PSS | Barren |
| Persicaria hydropiperoides | | | PEM | Barren |
| Rumex crispus | | | PEM | Barren |
| Sisyrinchium montanum | | | PEM | Barren |
| Solidago canadensis | | | PSS | Barren |
| Triosteum aurantiacum | | | PEM | Barren |

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low due to fair species diversity, but high abundance of invasive species.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| | | | | | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | | | | | Roads or railroad |
| | | | | | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | | | | 0 | Removal of herbaceous stratum – mowing, |
| | X | | L | С | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| X | Х | | Н | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is within an unmowed field that is close to a mowed area of a residential area. | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|
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^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|----------|-------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | / | | | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | | ✓ | | | |
| Fish and Aquatic Life Habitat | ~ | | | | |
| Shoreline Protection | | | | | / |
| Flood and Stormwater Storage | / | | | | |
| Water Quality Protection | / | | | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|--|
| Floristic Integrity | Florisitic integrity is low due to the high cover of invasive species in the common plant community. |
| Human Use Values | The wetland is in the middle of the field not really noticeable by the road. |
| Wildlife Habitat | The wetland is a large complex that offers cover at multiple strata. |
| Fish and Aquatic Life Habitat | The area only has a few pockets of standing water that could potentially support habitat for aquatic invertebrates. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is relatively large in size and has continuous dense persistent vegetation herbaceous later but is overall relatively shallow and cannot hold large depths of water. |
| Water Quality Protection | The wetland has persistent vegetation and is not channelized, but offers a little else to help filter water. |
| Groundwater Processes | The wetland receives a majority of its input from surface water runoff and serves as groundwater recharge. |

Section 4: Project Impact Assessment

| Brief Project Description | | |
|--|--|--|
| Enbridge Line 5 pipeline route analysis. | | |
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Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Medium |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Medium |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

| Project/Site: Line 5 Relocation Project | City/County: Ash | land Samp | oling Date: <u>2020-06-02</u> | | |
|--|-----------------------------------|---|-------------------------------|--|--|
| • | | State: Wisconsin Sa | | | |
| Investigator(s): SBR/DGL | Section, Township, | Range: sec 32 T047N R00 | 04W | | |
| Landform (hillslope, terrace, etc.): Rise | | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46. | 506525 | Long: -90.891324 | Datum: WGS84 | | |
| Soil Map Unit Name: Sanborg-Badriver complex | 0 to 6 percent slor | Des NWI classification: | | | |
| Are climatic / hydrologic conditions on the site typical for this | | | | | |
| Are Vegetation, Soil, or Hydrology sig | - | | | | |
| Are Vegetation, Soil, or Hydrology na | | | | | |
| | | | | | |
| SUMMARY OF FINDINGS – Attach site map s | howing sampling poir | it locations, transects, imp | ortant features, etc. | | |
| Hydrophytic Vegetation Present? Yes No | ✓ Is the Samp | oled Area | | | |
| Hydric Soil Present? Yes No | | etland? Yes N | lo <u> </u> | | |
| Wetland Hydrology Present? Yes No | If yes, option | nal Wetland Site ID: | _ | | |
| Remarks: (Explain alternative procedures here or in a separation of the support o | rate report.) | d alder energaches from | n the adjacent | | |
| The upland is a small island on an open alder swamp. There is bare ground and | - | | - | | |
| herbaceous layer. | uisturbarice-tolerari | i nerbaceous vegetation | i present in the | | |
| Tierbaceous layer. | | | | | |
| | | | | | |
| | | | | | |
| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | | minimum of two required) | | |
| Primary Indicators (minimum of one is required; check all the | | | | | |
| | r-Stained Leaves (B9) | Drainage Patterns (| | | |
| | tic Fauna (B13) Deposits (B15) | Moss Trim Lines (B16) | | | |
| | ogen Sulfide Odor (C1) | Dry-Season Water Table (C2) Crayfish Burrows (C8) | | | |
| | | Roots (C3) Saturation Visible of | · | | |
| | ence of Reduced Iron (C4) | Stunted or Stressed | | | |
| | nt Iron Reduction in Tilled Soi | | | | |
| | Muck Surface (C7) | Shallow Aquitard (| | | |
| | (Explain in Remarks) | Microtopographic R | | | |
| Sparsely Vegetated Concave Surface (B8) | | FAC-Neutral Test (D5) | | | |
| Field Observations: | | | | | |
| Surface Water Present? Yes No Dept | | | | | |
| Water Table Present? Yes No _ ✓ Dept | | | | | |
| Saturation Present? Yes No Dept (includes capillary fringe) | :h (inches): | Wetland Hydrology Present? Y | 'es No <u> </u> | | |
| Describe Recorded Data (stream gauge, monitoring well, ac | erial photos, previous inspecti | ons), if available: | | | |
| | | | | | |
| Remarks: | | | | | |
| No indicators of wetland hydrology were | observed. | | | | |
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| Troe Stratum (Blat size: 20 | Absolute | | | Dominance Test worksheet: |
|--|----------|-------------|----------|---|
| <u>Tree Stratum</u> (Plot size: <u>30</u>) 1. <u>Pinus strobus</u> | | Species? | | Number of Dominant Species |
| | | | | That Are OBL, FACW, or FAC: (A) |
| 2 | | | | Total Number of Dominant Species Across All Strata: 5 (B) |
| | | | | |
| 4. 5. | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B) |
| 6. | | | | |
| 7 | | | | Prevalence Index worksheet: |
| ·· | | = Total Cov | | |
| Sapling/Shrub Stratum (Plot size:15) | | . Total oo | 701 | FACW species 12 x 2 = 24 |
| 1. Alnus incana | 10 | Υ | FACW | FAC species 15 x 3 = 45 |
| 2. | | | | FACU species x 4 =300 |
| 3. | | | | UPL species5 x 5 =25 |
| 4 | | | | Column Totals:107 (A)394 (B) |
| 5. | | | | Prevalence Index = B/A = 3.682242990654206 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| r | | = Total Cov | | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size: 5 | | - Total Co | 761 | 3 - Prevalence Index is ≤3.0¹ |
| 1. <u>Carex gracillima</u> | 30 | Υ | FACU | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. Pteridium aquilinum | | | FACU | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. Fragaria virginiana | | <u>.</u> | FACU | |
| 4. Solidago canadensis | | N | FACU | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. Cornus racemosa | | Y | FAC | |
| 6. Bromus inermis | _ | <u>.</u> | UPL | Definitions of Vegetation Strata: |
| 7. Taraxacum officinale | | N | FACU | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8. Rubus idaeus | | N | FAC | |
| 9. Crataegus chrysocarpa | | N | 17.0 | Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. |
| 10. Equisetum pratense | 2 | | FACW | Herb – All herbaceous (non-woody) plants, regardless |
| 11. | | | <u> </u> | of size, and woody plants less than 3.28 ft tall. |
| 12. | | | | Woody vines – All woody vines greater than 3.28 ft in |
| · | | = Total Cov | /er | height. |
| Woody Vine Stratum (Plot size:30) | | . Total oo | 701 | |
| 1 | | | | |
| 2. | | | | |
| 3 | | | | Hydrophytic |
| 4. | | | | Vegetation |
| | _ | = Total Cov | /er | Present? Yes No |
| Remarks: (Include photo numbers here or on a separate | | . Total oo | 701 | |
| The sample point is representative of t | | l upland | island. | |
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SOIL Sampling Point: wasa1051s_u

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | | | | | |
|---|---------------------------|-------------|------------|--------------|--------------------------|------------|-------------------|------------------|---|---|--|--|
| Depth | | Matrix | | | | x Features | | . 2 | | | | |
| (inches) | Color (| - | <u>%</u> | Color (r | noist) | | Type' | Loc ² | <u>Texture</u> | Remarks | | |
| 0-15 | <u>5YR</u> | 4/3 | 100 | | | 0 | | | _SIC | | | |
| <u>15-20</u> | <u>5YR</u> | 4/3 | <u>85</u> | 5YR | 4/6 | <u>15</u> | <u>C</u> | <u> </u> | C | | | |
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| ¹ Type: C=Ce | oncentration | n, D=Depl | etion, RM | =Reduced I | Matrix, MS | S=Masked | Sand Gr | ains. | | Pore Lining, M=Matrix. | | |
| Hydric Soil | | | | | | | | | | oblematic Hydric Soils ³ : | | |
| Histosol | (A1) pipedon (A2 |) | | - | alue Belov RA 149B) | | (S8) (LRI | RR, | | A10) (LRR K, L, MLRA 149B) e Redox (A16) (LRR K, L, R) | | |
| | stic (A3) | -) | | | , | | RR R, M | LRA 149B) | | Peat or Peat (S3) (LRR K, L, R) | | |
| | en Sulfide (A | | | | Mucky N | | | , L) | Dark Surface (S7) (LRR K, L) | | | |
| | d Layers (A d Below Da | | e (A11) | | y Gleyed I ted Matrix | |) | | Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) | | | |
| - | ark Surface | | () | | Dark Su | | | | Iron-Manganese Masses (F12) (LRR K, L, R) | | | |
| - | lucky Mine | | | | ted Dark S | | 7) | | Piedmont Floodplain Soils (F19) (MLRA 149B) | | | |
| - | Gleyed Matr Redox (S5) | IX (S4) | | Redox | Depress | ions (F8) | | | Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) | | | |
| - | Matrix (S6 |) | | | | | | | | Dark Surface (TF12) | | |
| Dark Su | rface (S7) (| LRR R, M | ILRA 1491 | 3) | | | | | Other (Expla | in in Remarks) | | |
| ³ Indicators o | f hydrophyt | ic vegetati | ion and we | etland hydro | oloav mus | t be prese | ent. unles: | s disturbed | or problematic. | | | |
| Restrictive | | - | | | | | , | | | | | |
| Type: | | | | | | | | | | | | |
| Depth (in | ches): | | | | | | | | Hydric Soil Prese | ent? Yes No <u>/</u> | | |
| Remarks: | | | •• | | | | | | 1 | | | |
| No indica | ators of | nyarıc | SOIIS W | ere obs | served. | | | | | | | |
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wasa1051s_u_N



wasa1051s_u_S

| Project/Site: Line 5 Relo | cation Proied | ct | City/0 | County: Ash | nland | Sa | mpling Date: 2 | 2020-06-02 | |
|--|---------------------|---------|--------------------------|----------------|------------------|-----------------------------|----------------|--------------|--|
| Applicant/Owner: Enbridge | - | | | | | | | | |
| Investigator(s): SBR/DGL Section, Township, Range: Sec 32 T047N R004W | | | | | | | | | |
| Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%) | | | | | | | | | |
| Subregion (LRR or MLRA): No. | orthcentral Forest | ts Lat | : 46.506072 | , | Long: -90. | .893416 | Datum: | : WGS84 | |
| Soil Map Unit Name: Sanbo | org-Badriver | com | nnlex 0 to 6 ne | rcent slo | nes | NWI classificatio | n | | |
| Are climatic / hydrologic condit | J | | | | • | | | | |
| Are Vegetation, Soil | | | - | | | | | ' No | |
| Are Vegetation, Soil | | | | | | concumstances presi | | 110 | |
| - | | - | | | • | • | , | | |
| SUMMARY OF FINDING | 3S – Attach s | ite m | nap showing san | npling poi | nt location | ns, transects, in | nportant fea | atures, etc. | |
| Hydrophytic Vegetation Pres | ent? Yes | | No <u></u> ✓ | Is the Sam | | | | | |
| Hydric Soil Present? | Yes_ | | No 🔽 | within a W | etland? | Yes | No | | |
| Wetland Hydrology Present? | Yes_ | | No | If yes, option | onal Wetland | Site ID: | | | |
| Remarks: (Explain alternative The upland is an open content of the | e procedures here | or in | a separate report.) | aint cloar | od for a r | rivata racidar | oco (mobile | o homo) | |
| | | | • | | • | | ` | , | |
| and remains open w | | | | upianu i | S domina | ited by meadc | w species | s. Opiano | |
| point is shared with | welland was | sarc | J52e. | | | | | | |
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| | | | | | | | | | |
| HYDROLOGY | | | | | | | | | |
| Wetland Hydrology Indicate | ors: | | | | 9 | Secondary Indicators | (minimum of ty | wo required) | |
| Primary Indicators (minimum | of one is required: | chec | k all that apply) | | | Surface Soil Cra | cks (B6) | | |
| Surface Water (A1) | | | Water-Stained Leave | es (B9) | _ | Drainage Patterns (B10) | | | |
| High Water Table (A2) | | | Aquatic Fauna (B13) |) | <u>-</u> | Moss Trim Lines (B16) | | | |
| Saturation (A3) | | | Marl Deposits (B15) | | - | Dry-Season Water Table (C2) | | | |
| Water Marks (B1) | | | Hydrogen Sulfide Oc | | | Crayfish Burrows (C8) | | | |
| Sediment Deposits (B2) | | | Oxidized Rhizospher | _ | | Saturation Visible | | | |
| Drift Deposits (B3) | | | Presence of Reduce | . , | | Stunted or Stress | |) | |
| Algal Mat or Crust (B4) | | | Recent Iron Reduction | | | Geomorphic Pos | | | |
| Iron Deposits (B5) | rial Imagan (D7) | | Thin Muck Surface (| | | Shallow Aquitard | | | |
| Inundation Visible on AeSparsely Vegetated Con | | | Other (Explain in Re | marks) | - | Microtopographic | | | |
| Field Observations: | cave Surface (Bo) | | | | - | FAC-Neutral Tes | <u>ж (D3)</u> | | |
| Surface Water Present? | Yes No | ~ | _ Depth (inches): | | | | | | |
| Water Table Present? | | | Depth (inches): | | | | | | |
| Saturation Present? | | | Depth (inches): | | Wetland Hy | ydrology Present? | Yes | No 🗸 | |
| (includes capillary fringe) | | | | | _ | | | | |
| Describe Recorded Data (stre | eam gauge, monito | oring \ | well, aerial photos, pre | evious inspec | tions), if avail | able: | | | |
| | | | | | | | | | |
| Remarks: | | | | | | | | | |
| No indicators of wet | tland hydrolc | gy v | were observed | | | | | | |
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VEGETATION – Use scientific names of plants.

| | | | | Sampling Point: wasa1051e_u2 |
|--|-------------|------------|-----------------------|---|
| Tree Stratum (Plot size:) | Absolute | | t Indicator Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC:(A) |
| 2 | | | | Total Number of Dominant Species Across All Strata: 3 (B) |
| 4 | | | · | Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B) |
| 5 | | | | THAT ARE OBL, FACW, OF FAC. |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| 4- | | = Total Co | over | OBL species x 1 = |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species5 x 2 =10 FAC species13 x 3 =39 |
| 1 | | | | FACU species |
| 2 | | | - | UPL species x = |
| 3 | | | | Column Totals: 95 (A) 382 (B) |
| 4 | <u> </u> | | | |
| 5 | | | | Prevalence Index = B/A = 4.021052631578947 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | 0 | = Total Co | ver | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:) | | | | 3 - Prevalence Index is ≤3.0¹ |
| 1. Carex gracillima | 20 | Υ | FACU | 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) |
| 2. Bromus inermis | | Y | UPL | Problematic Hydrophytic Vegetation¹ (Explain) |
| 3. <u>Trifolium pratense</u> | | Y | FACU | |
| 4. Sisvrinchium montanum | | N | FAC | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. Achillea millefolium | | N | FACU | · · · |
| 6. Fragaria virginiana | | N | FACU | Definitions of Vegetation Strata: |
| 7. Lotus corniculatus | | N | FACU | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8. Carex pallescens | | N | FAC | |
| a la company de proposition de la company de | _ | N | UPL | Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. |
| Leucantnemum vuigare Carex castanea | 3 | NI | FACW | |
| 11. Ranunculus acris | 3 | N | FAC | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| <u>-</u> | 2 | N | FACW | Woody vines – All woody vines greater than 3.28 ft in |
| 12. <u>Equisetum pratense</u> | | | | height. |
| | 95 | = Total Co | over | |
| Woody Vine Stratum (Plot size:30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | - | | Hydrophytic |
| | | | | Vegetation Present? Yes No/_ |
| 4. | | | | |

SOIL Sampling Point: wasa1051e_u2

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | | | | | |
|---|-----------------------------------|-------------|--------------|--------------|-------------------------|------------|-------------------|------------------|-------------------------|--|--|--|
| Depth Matrix Redox Features | | | | | | | | | | | | |
| (inches) | | | <u>%</u> | Color (r | noist) | <u>%</u> | Type ¹ | Loc ² | Texture | Remarks | | |
| _0-17_ | <u>5YR</u> | 4/2 | 100 | | | 0 | | | C | | | |
| 17-20 | 5YR | 4/2 | 90 | 5YR | 4/4 | _10 | C | M | C | | | |
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| ¹Type: C=Co | ncentratio | n D=Denl | etion RM: | =Reduced I | Matrix MS | S=Masker | d Sand Gr | ains | ² l ocation: | PL=Pore Lining, M=Matrix. | | |
| Hydric Soil | | | CHOTI, TAIVI | reduced | viatrix, ivic | 5 WIGORCE | a Garia Gi | airio. | | for Problematic Hydric Soils ³ : | | |
| Histosol | (A1) | | | Polyva | alue Belov | w Surface | (S8) (LR | R R, | 2 cm M | uck (A10) (LRR K, L, MLRA 149B) | | |
| | oipedon (A2 | 2) | | | RA 149B) | | | | | Prairie Redox (A16) (LRR K, L, R) | | |
| Black Hi | stic (A3) n Sulfide (<i>I</i> | ۸۸) | | | oark Surfa y Mucky N | | | LRA 149B) | | ucky Peat or Peat (S3) (LRR K, L, R) urface (S7) (LRR K, L) | | |
| | d Layers (A | | | | y Gleyed I | | | , L) | | ue Below Surface (S8) (LRR K, L) | | |
| Depleted | d Below Da | rk Surface | e (A11) | | ted Matrix | | , | | | rk Surface (S9) (LRR K, L) | | |
| | ark Surface | | | | Dark Su | , , | | | | nganese Masses (F12) (LRR K, L, R) | | |
| | lucky Mine Gleyed Matr | | | | ted Dark S Depress | | -7) | | | nt Floodplain Soils (F19) (MLRA 149B) | | |
| | Redox (S5) | IX (34) | | Redox | Depress | ions (Fo) | | | | Spodic (TA6) (MLRA 144A, 145, 149B) rent Material (F21) | | |
| | Matrix (S6 |) | | | | | | | | nallow Dark Surface (TF12) | | |
| Dark Su | rface (S7) (| LRR R, M | ILRA 149 | 3) | | | | | Other (F | Explain in Remarks) | | |
| 3Indicators of | f budronbut | ia vagatati | ion and w | tland budg | alaas mua | t ha nraa | ont unloc | a diaturbad | ar problematic | | | |
| Restrictive I | | - | ion and we | eliano nyoro | blogy mus | t be prese | ent, unies | s disturbed | or problematic. | | | |
| Type: | -uyo. (o. | | | | | | | | | | | |
| | ches): | | | | | | | | Hydric Soil F | Present? Yes No | | |
| Remarks: | Jiles) | | | | | | | | | | | |
| No indica | ators of | hvdric | soil we | ere obse | erved. | | | | | | | |
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wasa1051e_u2_NW



wasa1051e_u2_S

| Project/Site: Line 5 Relocatio | n Proiect | City/C | County: Ashland | Samp | oling Date: <u>2020-06-02</u> | | |
|--|--------------------|--|---|---|-------------------------------|--|--|
| | • | | | | mpling Point: wasa1051e_u² | | |
| Investigator(s): SBR/DGL | sec 32 T047N R00 |)4W | | | | | |
| Landform (hillslope, terrace, etc.): Ta | | | | | | | |
| Subregion (LRR or MLRA): Northcer | ntral Forests Lat | : 46.507418 | Lona: -9 | 0.888456 | Datum: WGS84 | | |
| Soil Map Unit Name: Sanborg-B | Badriver com | nplex 0 to 6 pe | rcent slopes | NWI classification: | | | |
| Are climatic / hydrologic conditions or | | | | | | | |
| Are Vegetation, Soil, | | | | | | | |
| Are Vegetation, Soil, | | - | | | | | |
| | | | | | | | |
| SUMMARY OF FINDINGS – | Attach site m | nap showing sam | npling point location | ons, transects, imp | ortant features, etc. | | |
| Hydrophytic Vegetation Present? | Yes | No <u> </u> | Is the Sampled Area | | | | |
| Hydric Soil Present? | | No | within a Wetland? | Yes No | o <u> </u> | | |
| Wetland Hydrology Present? | | No | If yes, optional Wetlan | d Site ID: | | | |
| Remarks: (Explain alternative proce The upland is slightly up | edures here or in | a separate report.) the wetland fea | ature. The unland | d is in an onen m | eadow with a | | |
| two-track going through | • | ine welland lea | iture. The uplan | a is in an open in | cadow with a | | |
| two-track going tillough | it. | | | | | | |
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| HYDROLOGY | | | | | | | |
| Wetland Hydrology Indicators: | | | | Secondary Indicators (m | ninimum of two required) | | |
| Primary Indicators (minimum of one | is required; chec | k all that apply) | | Surface Soil Cracks | s (B6) | | |
| Surface Water (A1) | | Water-Stained Leave | | Drainage Patterns (| | | |
| High Water Table (A2) | | Aquatic Fauna (B13) | | Moss Trim Lines (B16) | | | |
| Saturation (A3) | | Marl Deposits (B15) | | Dry-Season Water Table (C2) | | | |
| Water Marks (B1) | | Hydrogen Sulfide Od | | Crayfish Burrows (C8) | | | |
| Sediment Deposits (B2) | | | - | .iving Roots (C3) Saturation Visible on Aerial Imagery (C9) | | | |
| Drift Deposits (B3) Algal Mat or Crust (B4) | | Presence of Reduced | | Stunted or Stressed | | | |
| Iron Deposits (B5) | | Thin Muck Surface (C | ent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Muck Surface (C7) Shallow Aquitard (D3) | | | | |
| Inundation Visible on Aerial Ima | | Other (Explain in Rer | · · · · · · · · · · · · · · · · · · · | | | | |
| Sparsely Vegetated Concave S | | Other (Explain in Nei | nanoj | FAC-Neutral Test (D5) | | | |
| Field Observations: | | | | | | | |
| Surface Water Present? Yes | No 🗸 | Depth (inches): | | | | | |
| | | Depth (inches): | | | | | |
| | | Depth (inches): | | Hydrology Present? Ye | es No <u> </u> | | |
| (includes capillary fringe) Describe Recorded Data (stream ga | ugo monitoring | wall parial photos pro | vious inspections) if av | ailahla | | | |
| Describe Recorded Data (stream ga | luge, monitoring t | well, aerial priolos, pre | vious irispections), ii av | allable. | | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| No indicators of wetland | hydrology v | were observed. | • | | | | |
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| VEGETATION - | Hen | cciontific | namac | of plant | _ |
|---------------------|-----|------------|-------|----------|----|
| VEGETATION - | use | scieniiic | names | oi biani | S. |

| Torra Otostono (Dietoino 20 | Absolute | | Indicator | Dominance Test worksheet: |
|--|----------|------------|-------------|---|
| Tree Stratum (Plot size:30) | | Species? | - ' | Number of Dominant Species |
| 1 | | | | That Are OBL, FACW, or FAC:1 (A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata:4 (B) |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B) |
| 5 | | | | That are OBL, FACW, or FAC (A/B) |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | 0 | = Total Co | ver | OBL species0 x 1 =0 |
| Sapling/Shrub Stratum (Plot size:) | | | | FACW species 20 x 2 = 40 |
| 1. Pinus strobus | 5 | Y | <u>FACU</u> | FAC species 12 x 3 = 36 |
| 2 | | | | FACU species <u>58</u> x 4 = <u>232</u> UPL species <u>15</u> x 5 = <u>75</u> |
| 3 | | | | Column Totals: 105 (A) 383 (B) |
| 4. | | | | (A)(D) |
| 5 | | | | Prevalence Index = B/A = 3.65 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | | = Total Co | | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:5 | | | | 3 - Prevalence Index is ≤3.0 ¹ |
| 1. <u>Carex gracillima</u> | 25 | Υ | FACU | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. Solidago gigantea | | Y | FACW | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Bromus inermis</u> | | Y | UPL | |
| 4. <u>Fragaria virginiana</u> | | N | FACU | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| - | | N | FACU | |
| 5. <u>Poa pratensis</u>6. <u>Ranunculus acris</u> | | N | FAC | Definitions of Vegetation Strata: |
| | | | FACU | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7. <u>Prunus pensylvanica</u> | | | | at breast height (DBH), regardless of height. |
| 8. <u>Agrimonia gryposepala</u> | 2 | | FACU | Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. |
| 9. <u>Equisetum arvense</u> | | N | <u>FAC</u> | |
| 10. <u>Viola sororia</u> | • | | <u>FAC</u> | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 11. Acer rubrum | | <u>N</u> | <u>FAC</u> | |
| 12 | | - | · | Woody vines – All woody vines greater than 3.28 ft in height. |
| | 100 | = Total Co | ver | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic |
| 4 | | | | Vegetation Present? Yes No✓ |
| | 0 | = Total Co | ver | |
| Remarks: (Include photo numbers here or on a separate: | | الماميدا | ores O | ther erose have a greater should save |
| The sample point is fairly representative | e or the | upiand | area. O | ther areas have a greater shrub cover. |
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Sampling Point: wasa1051e_u1

SOIL Sampling Point: wasa1051e_u1

| Profile Desc | cription: (Describe | to the dept | h needed to docun | nent the | indicator | or confirm | the absence of indicators.) |
|--------------|--|-------------|----------------------------------|------------|--------------------|------------------|---|
| Depth | Matrix | | | k Feature | <u>S</u> 1 | | |
| (inches) | Color (moist) | <u></u> % | Color (moist) | % | Type ¹ | Loc ² | Texture Remarks |
| 0-14 | 7.5YR 4/3 | 100 | | 0 | | | SICL |
| 14-20 | 7.5YR 3/3 | 100 | | 0 | | | SICL |
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| | oncentration, D=Depl | etion, RM= | Reduced Matrix, MS | S=Masked | d Sand Gr | ains. | ² Location: PL=Pore Lining, M=Matrix. |
| Hydric Soil | | | Daharaha Balan | 0 | (00) (I DI | | Indicators for Problematic Hydric Soils ³ : |
| Histosol | (A1) pipedon (A2) | | Polyvalue Below MLRA 149B) | | (58) (LR I | κκ, | 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) |
| | stic (A3) | | Thin Dark Surfa | | LRR R, M | LRA 149B) | |
| | en Sulfide (A4) | • | Loamy Mucky M | | | | Dark Surface (S7) (LRR K, L) |
| | d Layers (A5) | | Loamy Gleyed N | | 2) | | Polyvalue Below Surface (S8) (LRR K, L) |
| | d Below Dark Surface | e (A11) | Depleted Matrix | | | | Thin Dark Surface (S9) (LRR K, L) |
| | ark Surface (A12) | | Redox Dark Sur | , , | | | Iron-Manganese Masses (F12) (LRR K, L, R) |
| - | Mucky Mineral (S1) Gleyed Matrix (S4) | | Depleted Dark S Redox Depression | | -7) | | Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| | Redox (S5) | | Redox Deplessi | 0113 (1 0) | | | Red Parent Material (F21) |
| - | Matrix (S6) | | | | | | Very Shallow Dark Surface (TF12) |
| | rface (S7) (LRR R, M | ILRA 149B |) | | | | Other (Explain in Remarks) |
| 2 | | | | | | | |
| | f hydrophytic vegetat | | tland hydrology mus | t be pres | ent, unles | s disturbed | or problematic. |
| | Layer (if observed): | | | | | | |
| Type: | | | | | | | Hydric Soil Present? Yes No |
| | ches): | | | | | | Hydric Soil Present? Tes No |
| Remarks: | 1 | | I. C. C. | | | | |
| Slity clay | loam soils wi | tnout re | dox reatures. | | | | |
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wasa1051e_u1_E



wasa1051e_u1_NW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ash | land sa | ampling Date: <u>2020-06-02</u> | | | | | |
|---|--|--|---------------------------------|--|--|--|--|--|
| Applicant/Owner: Enbridge | | | | | | | | |
| Investigator(s): SBR/DGL Section, Township, Range: Sec 32 T047N R004W | | | | | | | | |
| Landform (hillslope, terrace, etc.): Rise | | - | | | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46.5 | 506968 | Long: -90.890545 | Datum: WGS84 | | | | | |
| Soil Map Unit Name: Sanborg-Badriver complex | 0 to 6 percent slor | Des NWI classification | on. | | | | | |
| Are climatic / hydrologic conditions on the site typical for this ti | | | | | | | | |
| Are Vegetation, Soil, or Hydrologysign | | | | | | | | |
| Are Vegetation, Soil, or Hydrology nat | - | | | | | | | |
| | | | | | | | | |
| SUMMARY OF FINDINGS – Attach site map sh | nowing sampling poir | nt locations, transects, ir | nportant features, etc. | | | | | |
| Hydrophytic Vegetation Present? Yes No _ | ✓ Is the Samp | | | | | | | |
| Hydric Soil Present? Yes No | | etland? Yes | No <u>~</u> | | | | | |
| Wetland Hydrology Present? Yes No _ | If yes, option | nal Wetland Site ID: | _ | | | | | |
| Remarks: (Explain alternative procedures here or in a separ The upland is a small island within the wo | ate report.) | ro is coverage of whit | o nino in tho | | | | | |
| overstory and Kentucky bluegrass with o | | • | e pine in the | | | | | |
| Overstory and Nemucky bidegrass with o | thei meadow lorbs | in the understory. | | | | | | |
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| HYDROLOGY | | | | | | | | |
| Wetland Hydrology Indicators: | | Secondary Indicators | s (minimum of two required) | | | | | |
| Primary Indicators (minimum of one is required; check all that | | | | | | | | |
| | -Stained Leaves (B9) | Drainage Patter | | | | | | |
| | c Fauna (B13) | Moss Trim Lines | | | | | | |
| | reposits (B15) | Dry-Season Wa | | | | | | |
| | gen Sulfide Odor (C1) | Crayfish Burrow | | | | | | |
| | ed Knizospheres on Living Fince of Reduced Iron (C4) | Roots (C3) Saturation Visible Stunted or Stres | | | | | | |
| | t Iron Reduction in Tilled So | | | | | | | |
| | luck Surface (C7) | Shallow Aquitare | | | | | | |
| , | (Explain in Remarks) | Microtopographi | | | | | | |
| Sparsely Vegetated Concave Surface (B8) | (| FAC-Neutral Te | | | | | | |
| Field Observations: | | _ | () | | | | | |
| Surface Water Present? Yes No _ ✓ Depth | ı (inches): | | | | | | | |
| Water Table Present? Yes No _ ✓ Depth | ı (inches): | | | | | | | |
| Saturation Present? Yes No Depth | ı (inches): | Wetland Hydrology Present? | Yes No | | | | | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, ae | rial photos, previous inspect | ions) if available: | | | | | | |
| Joseph Television Tala (et earn gauge, memering non, ae | nai priotos, provioso inopost | , a validato: | | | | | | |
| | | | | | | | | |
| Remarks: No indicators of wetland hydrology were | obsorved | | | | | | | |
| Two indicators of wetland flydrology were | observed. | | | | | | | |
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VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size:) | Absolute | | Indicator | Dominance Test worksheet: |
|---|-----------|------------|---------------|--|
| 1. Pinus strobus | | Species? | | Number of Dominant Species |
| | | | | That Are OBL, FACW, or FAC:(A) |
| 2 | | | | Total Number of Dominant Species Across All Strata: 3 (B) |
| 3 | | | | ` ' |
| 4 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B) |
| 5 | | | | That rice obe, trion, or trio. |
| 6 | | | | Prevalence Index worksheet: |
| 7 | | | | Total % Cover of: Multiply by: |
| | 25 | = Total Co | ver | OBL species <u>0</u> x 1 = <u>0</u> |
| Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species <u>5</u> x 2 = <u>10</u> |
| 1 | | | · | FAC species 10 x 3 = 30 FACU species 108 x 4 = 432 |
| 2 | | | | UPL species0 x 5 =0 |
| 3 | | | | Column Totals: 123 (A) 472 (B) |
| 4 | | | | ,,,,,,,, |
| 5 | | | | Prevalence Index = B/A = 3.84 |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | | = Total Co | | 2 - Dominance Test is >50% |
| Herb Stratum (Plot size:5 | | | | 3 - Prevalence Index is ≤3.0 ¹ |
| 1. Poa pratensis | 40 | Υ | FACU | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. <u>Fragaria virginiana</u> | | N | FACU | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. Carex gracillima | | Y | FACU | |
| 4. Rhamnus cathartica | | N | FAC | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| - Danimanton antia | _ | N | FAC | |
| | | | · · | Definitions of Vegetation Strata: |
| 6. Potentilla simplex | | N | FACU | Tree – Woody plants 3 in. (7.6 cm) or more in diameter |
| 7. Achillea millefolium | | _N_ | FACU | at breast height (DBH), regardless of height. |
| 8. <u>Taraxacum officinale</u> | | | <u>FACU</u> | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9. <u>Cirsium arvense</u> | | N | FACU | and greater than or equal to 3.28 ft (1 m) tall. |
| 10. <u>Solidago gigantea</u> | | | <u>FACW</u> | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. |
| 11. <u>Agrimonia gryposepala</u> | 3 | N | <u>FACU</u> | |
| 12 | | | | Woody vines – All woody vines greater than 3.28 ft in height. |
| | <u>98</u> | = Total Co | ver | noight. |
| Woody Vine Stratum (Plot size:) | | | | |
| 1 | | | · | |
| 2 | | | | |
| 3 | | | | Hydrophytic |
| 4 | | | | Vegetation Present? Yes No ✓ |
| | 0 | = Total Co | ver | riesent? Tes No |
| Remarks: (Include photo numbers here or on a separate | | | | |
| The upland is a small island and the sa | mple po | oint is re | epresent | ative of the feature. |
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Sampling Point: wasa1051_u

SOIL Sampling Point: wasa1051_u

| Profile Desc | ription: (E | Describe 1 | o the dep | th needed | to docun | nent the i | ndicator | or confirm | the absence of ind | icators.) |
|---|------------------------------------|-------------|------------|--------------|------------------------|---------------|--------------------|--------------------|--------------------|--|
| Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type¹ Loc² | | | | | | | | | | |
| (inches) | | | 400 | Color (r | noist) | <u>%</u> | Type' | Loc ² | SIC | Remarks |
| 0-16 | <u>5YR</u> | 4/3 | 100 | EVD | 4/0 | | | | <u>SIC</u> | |
| <u>16-20</u> | DIK | 4/3 | 85 | 5YR | 4/6 | 15 | | <u> </u> | | |
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| ¹ Type: C=C | | | etion, RM | =Reduced I | Matrix, MS | S=Masked | Sand Gr | ains. | | Pore Lining, M=Matrix. oblematic Hydric Soils ³ : |
| Hydric Soil Histosol | | | | Polyva | alue Belov | v Surface | (S8) (LR I | R R. | | 10) (LRR K, L, MLRA 149B) |
| Histic E | oipedon (A2 | 2) | | ML | RA 149B) | 1 | | | Coast Prairie | Redox (A16) (LRR K, L, R) |
| Black Hi | stic (A3) en Sulfide (<i>A</i> | A4) | | | ark Surfa Mucky M | | | LRA 149B) (. L) | | Peat or Peat (S3) (LRR K, L, R) (S7) (LRR K, L) |
| Stratified | d Layers (A | 5) | | Loam | Gleyed I | Matrix (F2 | | ., –, | Polyvalue Be | low Surface (S8) (LRR K, L) |
| - | d Below Da ark Surface | | e (A11) | | ted Matrix Dark Sui | | | | | rface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R) |
| | lucky Mine | | | | ted Dark S | . , | | | - | odplain Soils (F19) (MLRA 149B) |
| - | Bleyed Matr | ix (S4) | | Redox | Depress | ions (F8) | | | | (TA6) (MLRA 144A, 145, 149B) |
| - | Redox (S5) I Matrix (S6 |) | | | | | | | Red Parent M | laterial (F21) Dark Surface (TF12) |
| | rface (S7) (| | ILRA 1491 | 3) | | | | | | n in Remarks) |
| ³ Indicators o | f hydrophyt | ic vegetat | ion and we | etland hydro | ology mus | t be prese | ent, unles | s disturbed | or problematic. | |
| Restrictive I | Layer (if ob | served): | | | | | | | | |
| Type: | | | | | | | | | Undria Cail Drasa | |
| Depth (inc | ches): | | | | | | | | nyaric Soil Prese | nt? Yes No |
| Red clay | ey soils | with re | edox p | resent r | near th | e botto | m of t | he profil | e. | |
| | , | | • | | | | | • | | |
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wasa1051_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation | n Proiect | City/C | ounty: Ash | nland | Samp | ling Date: 2020 | <u> </u> |
|--|-------------------|---|---------------------------|------------------|--|------------------|----------------|
| Applicant/Owner: Enbridge | - | | | | | | |
| Investigator(s): SBR/DGL | | | | | | | |
| Landform (hillslope, terrace, etc.): De | | | 0-2% | | | | |
| Subregion (LRR or MLRA): Northcen | | | | | | | |
| Soil Map Unit Name: Sanborg-B | | | | | | | |
| • | | • | • | | | | |
| Are climatic / hydrologic conditions on | | | | | | | ula. |
| Are Vegetation, Soil, c | - | | | | | | 10 |
| Are Vegetation, Soil, c | | | | | | | |
| SUMMARY OF FINDINGS – | Attach site m | nap showing sam | pling poi | nt location | ns, transects, impo | ortant feature | etc. |
| Hydrophytic Vegetation Present? Hydric Soil Present? | Yes 🔽 | No No | Is the Sam within a Wo | | Yes <u></u> No | > | |
| Wetland Hydrology Present? Remarks: (Explain alternative proce | | No | If yes, optio | nal Wetland | Site ID: | | |
| The wetland is a wet mea The community as a who feature shares upland po | ole is best c | characterized as | | | | | |
| HYDROLOGY | | | | | | | |
| Wetland Hydrology Indicators: | | | | | Secondary Indicators (m | | <u>quired)</u> |
| Primary Indicators (minimum of one | | | | | Surface Soil Cracks | | |
| Surface Water (A1) | | Water-Stained Leave | | | Drainage Patterns (I | | |
| High Water Table (A2) | | Aquatic Fauna (B13) | | | Moss Trim Lines (B1 | | |
| Saturation (A3) Water Marks (B1) | | Marl Deposits (B15) Hydrogen Sulfide Od | or (C1) | | Dry-Season Water 1Crayfish Burrows (C | | |
| Sediment Deposits (B2) | | Oxidized Rhizosphere | | | Saturation Visible or | | (C9) |
| Occument Deposits (B2) Drift Deposits (B3) | | Presence of Reduced | _ | | Stunted or Stressed | | (00) |
| Algal Mat or Crust (B4) | · | Recent Iron Reductio | , , | | ✓ Geomorphic Position | | |
| Iron Deposits (B5) | | Thin Muck Surface (C | | | Shallow Aquitard (D | | |
| Inundation Visible on Aerial Ima | | Other (Explain in Rer | | | Microtopographic Re | | |
| Sparsely Vegetated Concave St | urface (B8) | | | | FAC-Neutral Test (D | | |
| Field Observations: | | | | | | | |
| | | _ Depth (inches): <u>0.1</u> | | | | | |
| | | Depth (inches): 0 | | | | | |
| Saturation Present? Yes (includes capillary fringe) | No | _ Depth (inches): 0 | | Wetland Hy | drology Present? Ye | es <u> √</u> No_ | |
| Describe Recorded Data (stream ga | uge, monitoring \ | well, aerial photos, pre | vious inspect | tions), if avail | able: | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| The hydrologic regime is | saturated | with standing w | ater pres | sent in pa | arts of the wetlar | nd. | |
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| VEGETATION – Use | scientific names | of plants. |
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|-------------------------|------------------|------------|

| | | | | Samp | |
|------------------------------------|----|-------------------|----------|--|----------------------------|
| Tree Stratum (Plot size:30) | | Dominant Species? | | Dominance Test worksheet: | |
| · | | | | Number of Dominant Species That Are OBL, FACW, or FAC | : <u> </u> |
| | | | | Total Number of Dominant | |
| | | | | Species Across All Strata: | (B) |
| · <u> </u> | | | | Percent of Dominant Species | |
| 5 | | | | That Are OBL, FACW, or FAC | : <u>50</u> (A/B |
| S | | | | Prevalence Index worksheet | : |
| · | | | | Total % Cover of: | Multiply by: |
| | 0 | = Total Co | ver | OBL species30 | |
| Sapling/Shrub Stratum (Plot size:) | | | | FACW species 43 | |
| · | | | <u> </u> | FAC species 8 | · |
| D | | | | FACU species15 | |
| l | | | | UPL species 0 Column Totals: 96 | |
| l | | | | | |
| j. | | | | Prevalence Index = B/A | = 2.08333333333333 |
|) | | | | Hydrophytic Vegetation Indi | cators: |
| · | | | | 1 - Rapid Test for Hydropl | nytic Vegetation |
| | | = Total Co | | 2 - Dominance Test is >50 | 0% |
| Herb Stratum (Plot size: 5) | | | | v 3 - Prevalence Index is ≤3 | |
| . <u>Phalaris arundinacea</u> | 35 | Υ | FACW | 4 - Morphological Adaptat data in Remarks or on | |
| . Carex gracillima | | Y | FACU | Problematic Hydrophytic \ | • |
| 3. Juncus effusus | | N | OBL | | |
| L. Scirpus cyperinus | | N | OBL | ¹ Indicators of hydric soil and w be present, unless disturbed o | |
| s. <u>Cornus racemosa</u> | _ | N | FAC | | |
| s. <u>Carex intumescens</u> | | | FACW | Definitions of Vegetation Str | ata: |
| Z. Equisetum pratense | | | FACW | Tree – Woody plants 3 in. (7.6 at breast height (DBH), regard | |
| 3. <u>Frangula alnus</u> | | | FAC | | · · |
|) | | | 170 | Sapling/shrub – Woody plant and greater than or equal to 3 | |
| 10 | | | | Herb – All herbaceous (non-w | oody) plants_regardless |
| 11. | | | | of size, and woody plants less | |
| 12. | | | | Woody vines – All woody vine | es greater than 3.28 ft in |
| | 96 | = Total Co | ver | height. | |
| Voody Vine Stratum (Plot size:) | | | | | |
| | | | | | |
| 2. | | | | | |
| 3. | | | | Hydrophytic | |
| _ | | | | Vegetation | |
| 4. | | = Total Co | · | Present? Yes | No |

SOIL Sampling Point: wasa1052e_w

| Profile Des | cription: (I | Describe 1 | to the dep | th needed | to docun | nent the i | ndicator | or confirm | the absence of indicators.) | ! |
|--|----------------------------|-------------|-------------|--------------|---------------|----------------------|-------------------|-------------|--|-------------|
| Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks | | | | | | | | | | |
| (inches) | Color (| | <u>%</u> | Color (r | | <u>%</u> | Type ¹ | Loc² | | marks |
| 0-12 | <u>5YR</u> | 3/1 | 90 | <u>5YR</u> | 3/4 | 10 | <u>C</u> | _M_ | SIC | |
| 12-20 | <u>5YR</u> | 5/1 | 85 | <u>5YR</u> | 5/6 | _15_ | <u> </u> | _M_ | | _ |
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| 1 _{T. max} C=0 | | - D-DI | | | Madrille NAC | | | | 21 continue DI - Doro Linius | NA-NAstrice |
| ¹ Type: C=C Hydric Soil | | | etion, Rivi | =Reduced I | viatrix, ivis | s=iviasked | i Sand Gr | ains. | ² Location: PL=Pore Lining, Indicators for Problematic I | |
| Histoso | | | | - | | v Surface | (S8) (LR | R R, | 2 cm Muck (A10) (LRR K | |
| | pipedon (A2 istic (A3) | 2) | | | RA 149B) | | DD D M | LRA 149B) | Coast Prairie Redox (A165 cm Mucky Peat or Pea | |
| I —— | en Sulfide (A | A 4) | | | | /lineral (F | | | Dark Surface (S7) (LRR | |
| | d Layers (A | | (1.44) | | | Matrix (F2 |) | | Polyvalue Below Surface | |
| - | d Below Da ark Surface | | e (A11) | | ted Matrix | : (F3) rface (F6) | | | Thin Dark Surface (S9) (Iron-Manganese Masses | 7 |
| | Mucky Mine | | | | | Surface (F | | | Piedmont Floodplain Soil | |
| - | Gleyed Matr | ix (S4) | | Redox | Depress | ions (F8) | | | Mesic Spodic (TA6) (ML I | |
| - | Redox (S5) d Matrix (S6 | \ | | | | | | | Red Parent Material (F2'Very Shallow Dark Surfa | 7 |
| | ırface (S7) (| | ILRA 149 | В) | | | | | Other (Explain in Remark | |
| | | - | ion and w | etland hydro | ology mus | t be prese | ent, unles | s disturbed | or problematic. | |
| Restrictive | Layer (if ol | oserved): | | | | | | | | |
| Type: | -h\. | | | | | | | | Hydric Soil Present? Yes | ∨ No |
| Remarks: | iches): | | | | | | | | Tryunc con riesent: Tes | |
| Clayey s | oils with | n redox | prese | nt throu | ghout. | | | | | |
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wasa1052e_w_E



 $wasa1052e_w_N$

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | |
|--|--|--|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | |
| File #: wasa1052 | Date of visit(s): 2020-06-02 | |
| Location: PLSS: sec 32 T047N R004W | Ecological Landsca Lake Superior Clay Plain | • |
| Lat: <u>46.506178</u> Long: <u>-90.893455</u> | Watershed: LS10, White River | |
| County: Ashland Town/City/Village: Gingles town | | |
| SITE DESCRIPTION | | |
| Soils: Mapped Type(s): | WWI Class: N/A | |
| Sanborg-Badriver complex, 0 to 6 percent slopes | Wetland Type(s): PEM Wet meado | DW . |
| Field Verified: | | |
| The soils were not field verified. | Wetland Size: 0.0692 | Wetland Area Impacted 0.0692 |
| | Vegetation: Plant Community D | rescription(s): |
| Hydrology: The hydrologic regime is saturated and the main input is from surface water. Standing water is present in some parts of the wetland. Saturation was observed at 0 inches. | sedges, reed car | wet meadow comprised of nary grass, and graminoids es that are more tolerant of ditions. |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| HU Y/N Potential Human Use Values: recreation, culture, education, science, natural scenic beauty 1 N N Used for recreation (funting, birding, king, etc.). List: 2 N N N Used for educational or scientific purposes 3 N N N Visually or physically accessible to public 4 N N N Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation 5 N N N In or adjacent to RED FLAG areas 6 N N Supports or provides habitat for endangered, threatened or special concern species 7 N N N In or adjacent to RED FLAG areas 7 N N N Wetland and contiguous habitat 10 acres 8 N N Wetland and contiguous habitat 10 acres 2 N N N Wetland and contiguous habitat 10 acres 3 N N N Wetland and contiguous habitat 2 occover) 4 N N N 10 more strata present (101% cover) 3 N N Within or adjacent to habitat corridor or established wildlife habitat area 4 N N N 100 multiper natural land cover ≥50%(south) 75% (north) intact 5 N N N Occurs in a Joint Venture priority township 6 N N Interpression of habitat structure (herm-marsh, shrub/emergent, wetland/upland complex etc.) 8 N N Supports or provides habitat for SGCN or birds listed in the Wi All-Bird Cons. Plan, or other plant 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Provides habita township from a provides habitat for amphibians and aquatic invertebrates 12 N Y Standing water provides habitat for amphibians and aquatic invertebrates 13 N N N Wetland is connected or contiguous with perennial stream or lake 14 N Y Standing water provides habitat for amphibians and aquatic invertebrates 15 N N N N Standing water provides habitat for amphibians and aquatic invertebrates 16 N N N Standing water provides habitat for amphibians and aquatic invertebrates 17 N N Wetland is connected or contiguous with perennial stream or lake 18 N N N Standing water provides habitat for amphibians and aqu | | | | Functional Value Assessment |
|--|-------------|----|-------|---|
| 2 | | | | |
| 3 | | Ν | | |
| N | 2 | Ν | N | Used for educational or scientific purposes |
| 5 | 3 | Ν | N | Visually or physically accessible to public |
| 5 | 4 | | | Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation |
| N N N Supports or provides habitat for endangered, threatened or special concern species | _ | | | In or adjacent to RED FLAG areas |
| N | 5 | N | N | |
| N | 6 | N | N | Supports or provides habitat for endangered, threatened or special concern species |
| WH | 7 | | | |
| 1 N N Welland and contiguous habitat >10 acres 2 N N N 3 or more strata present (>10% cover) 3 N N N Within or adjacent to habitat corridor or established wildlife habitat area 4 N N N 100 m buffer – natural land cover ≥50%(south) 75% (north) intact 5 N N Occurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex,etc.) 7 N N Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat blots that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) Fish and Aquatic Life Habitat 1 N N Welland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, take, pond or open water area (≥1 acre) - if no, not applicable 2 N N N Provides habitat stream or lake stream; Along shoreline of a stream; take, pond or open water area (≥1 acre) - if no, not applicable water levels or high flows – if no, not applicable 2 N N Deptatial for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable 3 N N Depse, persistent vegetation 4 N N Depse, persistent vegetation 5 N N Dense, persistent vegetation 6 N N N Point or non-point source inflow 7 N N Point or non-point source inflow 8 N N Point or non-point source inflow 9 N N N Point or non-point source inflow 9 N N N Point or non-point source inflow 9 N N N Point or non-point source inflow 9 N N N Point or non-point source inflow 9 N N N Point or non-point source inflow 9 N N N Point or non- | WH | | ., | |
| 2 | 1 | N | N | |
| 3 | 2 | | | |
| 4 N N 100 m buffer – natural land cover ≤50%(south) 75% (north) intact 5 N N Occurs in a Joint Venture priority township 6 N N N Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) 7 N N plans 8 N N Part of a large habitat for SGCN or birds listed in the WI Ali-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudifats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) FA FA Fish and Aquatic Life Habitat 1 N N Welland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 2 N N N water levels or high flows – if no, not applicable 2 N N Densely rooted emergent or woody vegetation 3 N N Densely rooted emergent or woody vegetation 5 N N Densely rooted emergent or woody vegetation 5 N N Densely rooted emergent or woody vegetation 5 N N N Densely rooted emergent or woody vegetation 5 N N N Densely rooted emergent or woody vegetation 5 N N N Densely rooted emergent or woody vegetation 5 N N N Densely rooted emergent or woody vegetation 5 N N N Densely rooted emergent or woody vegetation 5 N N N Densely rooted emergent or woody vegetation 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N N Water flow through wetland is NOT channelized 9 N N N Proint or non-point source inflow 10 N N Provides substantial storage of storm and floodwater based on previous section 11 N N Provides substantial storage of storm and floodwater based on previous section 12 Y Y Basin wet | | | | |
| 5 N N Cocurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) 7 N Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) Fish and Aquatic Life Habitat 1 N N Wetland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring 5 P Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 2 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable 3 N N Densely rooted emergent or woody vegetation 5 Storm and Floodwater Storage 1 Y Y Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 Y Y Y Water flow through wetland is NOT channelized 3 Y Y Dense, persistent vegetation 4 N N Evidence of flashy hydrology 5 N N N Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N N Within a watershed with <10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Stormwater or surface of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 Y Y Dense, persistent vegetation 6 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Stormwater or surface water 9 N N N Stormwater or surface water 9 N N N St | | | | |
| 6 N N N Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex.etc.) 7 N N Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudiflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) Fish and Aquatic Life Habitat 1 N N Wetland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable 2 N N Densely rooted emergent or woody vegetation ST Storm and Floodwater Storage 1 Y Y Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 4 N N Evidence of flashy hydrology 5 N N Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Point or non-point source inflow 8 N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WO Water Quality Protection 1 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Stormwater or surface water from agricultural land is major hydrology source 9 N N Stormwater or surface water from agricultural land is major hydrology source 1 N N Stormwater or surface sor indicators of groundwater | | | | |
| N | | | | |
| N | | IN | IN | Supports or provides habitat for SGCN or hirds listed in the WLAIL-Rird Cons. Plan. or other |
| 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N Provides habitat scarce in the area (urban, agricultural, etc.) FFA Fish and Aquatic Life Habitat 1 N N Welland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring FP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 2 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable 3 N N Densely rooted emergent or woody vegetation 5 T Storm and Floodwater Storage 1 Y Y Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 Y Y Water flow through wetland is NOT channelized 3 Y Y Dense, persistent vegetation 4 N N Evidence of flashy hydrology 5 N N Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with <10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Goullity Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 4 N N Vegetated wetland associated with a lake or stream Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 8 N N Discharge to surface water from agricultural land is major hydrology source 9 N N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs | 7 | Ν | N | |
| 9 | ρ | NI | | |
| 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) FA FA Fish and Aquatic Life Habitat 1 N Wetland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 2 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable 3 N Densely rooted emergent or woody vegetation ST Storm and Floodwater Storage 1 Y Y Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 Y Y Water flow through wetland is NOT channelized 3 Y Y Dense, persistent vegetation 4 N N Evidence of flashy hydrology 5 N N Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with ≤10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 4 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water flow through wetland is NOT channelized 4 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N Stormwater or surface water from agricultural land is major hydrology sourc | | | | |
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| | Section 1 Comments (Refer to Section 1 numbers) | | | | | | | | |
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| | | ater present at the time of survey and the wetland could support aquatic invertebrates after periods of heavy rains. ST1/2/3-WQ-2/3/5 the wetland is a small as dense persistent vegetation. | | | | | | | |
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| Wi | ildlife Habita | at and Species Observation (including amphibians and reptiles) | | | | | | | |
| | | oservation, tracks, scat, other sign; type of habitat: nesting, migratory, | | | | | | | |
| wi | nter, etc. | | | | | | | | |
| Observed | Potential | Species/Habitat/Comments | | | | | | | |
| Υ | Y | Avian | | | | | | | |
| | Y | Small mammals | | | | | | | |
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| | | atic Life Habitat and Species Observations | | | | | | | |
| LIS | st: direct of | oservation, other sign; type of habitat: nesting, spawning, nursery areas, etc. | | | | | | | |
| Observed | Potential | Species/Habitat | | | | | | | |
| | Y | Aquatic invertebrates | | | | | | | |
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SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 🗌 | S2 🗌 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🔽 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|-----------------------|-------------|------|-------------------|---|
| Phalaris arundinacea* | | | PEM | Rare |
| Carex gracillima* | | | PEM | Rare |
| Cornus racemosa* | | | PEM | Rare |
| Juncus effusus* | | | PEM | Rare |
| Poa pratensis* | | | PEM | Rare |
| Carex castanea | | | PEM | Rare |
| Carex intumescens | | | PEM | Rare |
| Equisetum pratense | | | PEM | Rare |
| Frangula alnus | | | PEM | Rare |
| Ranunculus acris | | | PEM | Rare |
| Rubus idaeus | | | PEM | Rare |
| Scirpus cyperinus | | | PEM | Rare |
| Solidago gigantea | | | PEM | Barren |
| Acer rubrum | | | PEM | Barren |
| Cornus alba | | | PEM | Barren |
| Populus tremuloides | | | PEM | Barren |
| Salix bebbiana | | | PEM | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity is low based on the presence of invasives and only one strata.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| • | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| | | | | | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| | | | | | Agriculture – pasture |
| Х | Х | | Н | UC | Roads or railroad |
| | | | | | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | | | | | Removal of herbaceous stratum – mowing, |
| | | | | | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | | | | | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Х | Х | | Н | С | Cover of non-native and/or invasive species |
| | | | | | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| residence on the other side of the two track, which seems to have been used by heavy machinery recently. | ome |
|--|-----|
| | |
| | |
| | |

^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | SIGNIFICANCE | | | | | | |
|-------------------------------|--------------|--------|------|-------------|----------|--|--|
| | Low | Medium | High | Exceptional | NA | | |
| Floristic Integrity | / | | | | | | |
| Human Use Values | V | | | | | | |
| Wildlife Habitat | V | | | | | | |
| Fish and Aquatic Life Habitat | / | | | | | | |
| Shoreline Protection | | | | | / | | |
| Flood and Stormwater Storage | / | | | | | | |
| Water Quality Protection | ✓ | | | | | | |
| Groundwater Processes | ✓ | | | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | The floristic integrity is low due to invasive species cover and the common plant community. |
| Human Use Values | The wetland is small and isolated from the general public. |
| Wildlife Habitat | The wetland is small with just the herbaceous layer for cover. |
| Fish and Aquatic Life Habitat | The wetland likely only has small amount of water to sustain aquatic habitats for brief amounts of time. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is a depression with dense vegetation that isn't channelized but is limited by its size. |
| Water Quality Protection | The wetland has dense persistent vegetation but is limited in its filtering capacity due to its small size. |
| Groundwater Processes | The wetland does not appear to influence groundwater influences. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ash | nland | Sampling Date: 2020-06-03 | | |
|--|---|-----------------------------|------------------------------------|--|--|
| Applicant/Owner: Enbridge | | | | | |
| Investigator(s): SBR/DGL | Section, Township | , Range: sec 32 T04 | 7N R004W | | |
| Landform (hillslope, terrace, etc.): Depression | | | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 4 | | | | | |
| Soil Map Unit Name: Sanborg-Badriver comple | | | | | |
| Are climatic / hydrologic conditions on the site typical for the | · | | | | |
| | | | | | |
| Are Vegetation, Soil, or Hydrology | | | | | |
| Are Vegetation, Soil, or Hydrology | | (If needed, explain any ans | | | |
| SUMMARY OF FINDINGS – Attach site map | showing sampling poi | nt locations, transed | ets, important features, etc. | | |
| Hydrophytic Vegetation Present? Hydric Soil Present? Wes Westland Hydrology Present? | No within a W | etland? Yes | | | |
| Wetland Hydrology Present? Yes Remarks: (Explain alternative procedures here or in a second | | nal Wetland Site ID: | | | |
| The wetland is a shallow depression o dominated by woolgrass and red top. Sapproaches and less standing water is | Some weedy forbs ha | ave encroached as | | | |
| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | Secondary Inc | dicators (minimum of two required) | | |
| Primary Indicators (minimum of one is required; check all | I that apply) | y) Surface Soil Cracks (B6) | | | |
| | ater-Stained Leaves (B9) | | Drainage Patterns (B10) | | |
| | uatic Fauna (B13) | Moss Trin | | | |
| | url Deposits (B15) | | Dry-Season Water Table (C2) | | |
| | drogen Sulfide Odor (C1) | | Burrows (C8) | | |
| | idized Rhizospheres on Living | | n Visible on Aerial Imagery (C9) | | |
| | esence of Reduced Iron (C4) | | r Stressed Plants (D1) | | |
| | Recent Iron Reduction in Tilled Soils (C6) — Geomorphic Position (D2) — Shallow Aquitard (D3) | | | | |
| | er (Explain in Remarks) — Microtopographic Relief (D4) | | | | |
| Sparsely Vegetated Concave Surface (B8) | (=Aprairi iii terrairie) | FAC-Neut | | | |
| Field Observations: | | _ | | | |
| Surface Water Present? Yes No _ 🗸 De | epth (inches): | | | | |
| Water Table Present? Yes _ v No De | epth (inches): 19 | | | | |
| Saturation Present? Yes _ v No De | epth (inches): <u>17</u> | Wetland Hydrology Pres | sent? Yes <u>/</u> No | | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, | aerial photos, previous inspec | tions) if available: | | | |
| Describe Recorded Data (stream gauge, monitoring well, | , aeriai priotos, previous irispec | iloris), ii avaliable. | | | |
| | | | | | |
| Remarks: | uration was absented | d at 17 in aboa and | la water table was | | |
| The hydrolgic regime is saturated. Sat | uration was observed | at 17 inches and | i a water table was | | |
| observed at 19 inches. | | | | | |
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| /EGETATION – Use scientific names of plants | | | | Sampling Point: wasa1053e_w |
|--|---------------------|-------------------|-------------|---|
| Tree Stratum (Plot size:30) | Absolute % Cover | Dominant Species? | | Dominance Test worksheet: |
| 1. Populus tremuloides | 5 | Y | FAC | Number of Dominant Species That Are OBL, FACW, or FAC:5(A) |
| 2. <u>Acer rubrum</u> | | | | |
| 3. | | | | Total Number of Dominant Species Across All Strata: |
| 4. | | | | Percent of Dominant Species |
| 5 | | | | That Are OBL, FACW, or FAC: 100 (A/B) |
| 6. | | | | |
| 7 | | | | Prevalence Index worksheet: |
| 7 | | = Total Co | | |
| Sapling/Shrub Stratum (Plot size: 15) | | - Total Co | vei | FACW species x 1 = |
| | 10 | V | | FAC species 14 x3 = 42 |
| 1. <u>Alnus incana</u> | | | | FACU species 7 x 4 = 28 |
| 2 | | | | UPL species0 x 5 =0 |
| 3 | | | | Column Totals: <u>120</u> (A) <u>221</u> (B) |
| 4 | | | | Prevalence Index = B/A = 1.84166666666666666666666666666666666666 |
| 5 | | | | |
| 6 | | | | Hydrophytic Vegetation Indicators: |
| 7 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| | 10 | = Total Co | ver | 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ |
| Herb Stratum (Plot size:) | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| 1. Scirpus cyperinus | 40 | <u>Y</u> | OBL | data in Remarks or on a separate sheet) |
| 2. Agrostis gigantea | 40 | <u>Y</u> | <u>FACW</u> | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Juncus effusus</u> | _ 5 | N | OBL | Indicators of hydric coil and wetland hydrology must |
| 4. Fragaria virginiana | | N | <u>FACU</u> | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5. Solidago gigantea | 2 | N | FACW | Definitions of Vegetation Strata: |
| 6. <u>Achillea millefolium</u> | | N | FACU | - |
| 7. Persicaria hydropiperoides | | | OBL | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| 8. <u>Geum aleppicum</u> | | | FAC | Sapling/shrub – Woody plants less than 3 in. DBH |
| 9. <u>Solidago canadensis</u> | | | <u>FACU</u> | and greater than or equal to 3.28 ft (1 m) tall. |
| 10. Ranunculus acris | 2 | N | FAC | Herb – All herbaceous (non-woody) plants, regardless |
| 11. | | | | of size, and woody plants less than 3.28 ft tall. |
| 12. | | | | Woody vines – All woody vines greater than 3.28 ft in |
| 12. | 100 | = Total Cov | | height. |
| Woody Vine Stratum (Plot size:30) | | - Total Oo | VCI | |
| | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | Hydrophytic Vegetation |
| 4 | | | | Present? Yes No |
| | | = Total Co | ver | |
| Remarks: (Include photo numbers here or on a separate The sample point is representative of the sample point is representative of the sample point is representative.) | sneet.) he small | wetland | d featur | <u> </u> |
| The sample point is representative of the | ic siriai | wellan | a icatai | o. |
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SOIL Sampling Point: wasa1053e_w

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | | | | |
|---|-------------------------------------|----------|---|--------------|---------------------|-------------------------------------|--------------------|------------------|---|--|--|
| Depth | Calan (| 0/ | Redox Features Color (moist) % Type ¹ Loc ² | | | | | Tanduna | Damarka | | |
| (inches) 0-16 | Color (I | 4/2 | <u>%</u> 95 | 5YR | | <u>%</u> 5 | Type' | Loc ² | SIC | Remarks | |
| 16-20 | | | · | 5YR | | | $\overline{}$ | M | <u> </u> | | |
| 10-20 | 2.011 | 4/3 | _90_ | <u> </u> | 4/0 | 10 | | <u> </u> | | | |
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| ¹ Type: C=Co | | | etion, RM | =Reduced I | Matrix, MS | S=Masked | Sand Gr | ains. | | PL=Pore Lining, M=Matrix. or Problematic Hydric Soils ³ : | |
| Histosol | | | | Polyva | alue Belov | v Surface (| (S8) (LR I | R R, | | uck (A10) (LRR K, L, MLRA 149B) | |
| Histic Ep | pipedon (A2 | 2) | | ML | RA 149B) | | | | Coast P | rairie Redox (A16) (LRR K, L, R) | |
| | istic (A3) en Sulfide (<i>A</i> | (4) | | | | ce (S9) (L l 1ineral (F1 | | LRA 149B) | | ucky Peat or Peat (S3) (LRR K, L, R) | |
| | d Layers (A | | | | | Matrix (F2) | | ., L) | Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) | | |
| | d Below Da | | e (A11) | Deple | | | | | Thin Dark Surface (S9) (LRR K, L) | | |
| | ark Surface ⁄lucky Miner | | | | CDark Suited Dark S | face (F6) Surface (F7 | 7) | | Iron-Manganese Masses (F12) (LRR K, L, R) | | |
| | Bleyed Matri | | | | Depress | | ') | | Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | | |
| | Redox (S5) | | | | | | | | | rent Material (F21) | |
| | Matrix (S6) rface (S7) (| | LRA 149I | 3) | | | | | | allow Dark Surface (TF12) Explain in Remarks) | |
| | | _ | on and we | etland hydro | ology mus | t be prese | nt, unles | s disturbed o | or problematic. | | |
| Restrictive I | Layer (if ob | served): | | | | | | | | | |
| Type: | oboo): | | | | | | | | Hydric Soil F | Present? Yes <u>✓</u> No | |
| Remarks: | ches): | | | | | | | | | | |
| Redox fe | eatures v | were o | bserve | d throu | ghout t | he clay | ey so | il profile | | | |
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wasa1053e_w_N

Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

| WETLAND IDENTIFICATION | | |
|--|--|------------------------------|
| Project name: Line 5 Relocation Project | Evaluator(s): SBR/DGL | |
| File #: wasa1053 | Date of visit(s): 2020-06-03 | |
| Location: PLSS: sec 32 T047N R004W | Ecological Landsca Lake Superior Clay Plair | • |
| Lat: 46.505797 Long: -90.893870 County: Ashland Town/City/Village: Gingles town | Watershed: LS10, White River | |
| SITE DESCRIPTION | | |
| Soils: Mapped Type(s): Saphara Padrivar complex: 0 to 6 percent clanes. | WWI Class: N/A Wetland Type(s): PEM - fresh wet meadow | |
| Sanborg-Badriver complex, 0 to 6 percent slopes Field Verified: | | |
| The soils were not field verified. Soils were a silty clay over clay, and were reddish and reduced | Wetland Size: 0.0360 | Wetland Area Impacted 0.0360 |
| throughout the profile. | Vegetation: Plant Community Description(s): The wetland is a wet meadow dominated by woolgrass and redtop, with some weedy forbs encroaching from the adjacent meadow. | |
| Hydrology: The hydrolgic regime is saturated and the main source of input is surface water. | | |

| SITE MAP | | |
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SECTION 1: Functional Value Assessment

| HU Y/N Potential Human Use Values: recreation, culture, education, science, natural scenic beauty | | | | Functional Value Assessment |
|--|----|-------|-----------|--|
| 2 N N Visually or physically accessible to public 4 N N A Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation 5 Y Y In or adjacent to RED FLAG areas List White River Fishery Area-Bayfield 6 N N Supports or provides habitat for endangered, threatened or special concern species 7 N N In or adjacent to archaeological or cultural resource site WH WH 1 Y Wildlife Habitat 1 Y Y Welland and contiguous habitat 1-10 acros 2 N N 3 or more strata present (-10% cover) 3 N N Within or adjacent to habitat corridor or established wildlife habitat area 4 Y Y 100 m buffer - natural land cover >50% (south) 75% (north) infact 5 N N Occurs in a Joint Venture priority township 6 N Y Unterspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex,etc.) 9 N N Ephemeral pond with water present >45 days 1 N Y Part of a large habitat to SCGN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N Y Part of a large habitat to SCGN or birds listed in the WI All-Bird Cons. Plan, or other plans 9 N N Ephemeral pond with water present >45 days 11 N N Seasonally exposed mudflats present 12 N N Provides habitat for for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat for amphibians and aquatic invertebrates 13 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 14 N Y Vegetation is inundated in spring 15 Shortline Protection 16 N N Provides habitat for dispulsions on take 17 N N N Reland is connected or contiguous with perennial stream or lake 18 N Y Vegetation is inundated in spring 19 Shortline Protection 10 N N Along shoreline of a stream, lake, pond or open water area (>1 acro) - if no, not applicable 10 N N Portential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable 10 N N Portential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - i | HU | Y/N | Potential | Human Use Values: recreation, culture, education, science, natural scenic beauty |
| 2 N N Visually or physically accessible to public 4 N N A Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation 5 Y Y In or adjacent to RED FLAG areas List White River Fishery Area-Bayfield 6 N N Supports or provides habitat for endangered, threatened or special concern species 7 N N In or adjacent to archaeological or cultural resource site WH WH 1 Y Wildlife Habitat 1 Y Y Welland and contiguous habitat 1-10 acros 2 N N 3 or more strata present (-10% cover) 3 N N Within or adjacent to habitat corridor or established wildlife habitat area 4 Y Y 100 m buffer - natural land cover >50% (south) 75% (north) infact 5 N N Occurs in a Joint Venture priority township 6 N Y Unterspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex,etc.) 9 N N Ephemeral pond with water present >45 days 1 N Y Part of a large habitat to SCGN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N Y Part of a large habitat to SCGN or birds listed in the WI All-Bird Cons. Plan, or other plans 9 N N Ephemeral pond with water present >45 days 11 N N Seasonally exposed mudflats present 12 N N Provides habitat for for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 12 N N Provides habitat for amphibians and aquatic invertebrates 13 N N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 14 N Y Vegetation is inundated in spring 15 Shortline Protection 16 N N Provides habitat for dispulsions on take 17 N N N Reland is connected or contiguous with perennial stream or lake 18 N Y Vegetation is inundated in spring 19 Shortline Protection 10 N N Along shoreline of a stream, lake, pond or open water area (>1 acro) - if no, not applicable 10 N N Portential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable 10 N N Portential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - i | 1 | Ν | N | Used for recreation (hunting, birding, hiking, etc.). List: |
| 3 | 2 | N | N | |
| A | 3 | N | N | |
| S | 4 | | | |
| 9 | | | | |
| 6 N N Supports or provides habitat for endangered, threatened or special concern species 7 N N N In or adjacent to a crhaeological or cultural resource site WH 1 Y Wetland and contiguous habitat >10 acres 2 N N N 3 or more strata present (>10% cover) 3 N N Within or adjacent to habitat corridor or established wildlife habitat area 4 Y Y 100 m buffer - natural land cover >50% (south) 75% (north) intact 5 N N Occurs in a Joint Venture priority township 6 N Y Interspersion of habitat structure (nemi-marsh, shrub/emergent, wetland/upland complex.etc.) 7 N Y plans 8 N Y Interspersion of habitat structure (nemi-marsh, shrub/emergent, wetland/upland complex.etc.) 9 N N Ephemeral pond with water present >45 days 10 N Y Standing water provides habitat for SGCN or birds listed in the WI Ali-Bird Cons. Plan, or other plans 11 N N Seasonally exposed mudflats present 11 N N Seasonally exposed mudflats present 12 N N Provides habitat scarce in the area (urban, agricultural, etc.) Fish and Aquatic Life Habitat 1 N N Wetland is connected or contiguous with perennial stream or lake 2 N Y Standing water provides habitat for amphibians and aquatic invertebrates 3 N N N Natural Heritage Inventory (MH) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring SP Shoreline Protection 1 N A Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable N N Perovides and sociated with exposed mudflate provides habitat for amphibians and aquatic to a stream Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable N N Perotential to reconstincted outlet, has through-flow or is adjacent to a stream Potential | 5 | Y | Y | |
| 7 | 6 | N | N | |
| WH | | | | In or adjacent to archaeological or cultural resource site |
| 1 | | - ' \ | | |
| 2 N N O Seasonally exposed mudifate present (>10% cover) 3 N N Within or adjacent to habitat corridor or established wildlife habitat area 4 Y O 100 m buffer – natural land cover >50%(south) 75% (north) intact 5 N N O Cocurs in a Joint Verlure priority (brownship 6 N Y Interspersion of habitat structure (nemi-marsh,shrub/emergent, wetland/upland complex,etc.) 7 N O Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N Y Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present >45 days 10 N Y Standing water provides habitat for amphiblans and aquatic invertebrates 11 N N Seasonally exposed mudifats present 11 N N Seasonally exposed mudifats present 11 N N Seasonally exposed mudifats present 11 N N N Wetland is connected or configuous with perennial stream or lake 12 N Y Standing water provides habitat for amphibians and aquatic invertebrates 13 N N N Metland is connected or configuous with perennial stream or lake 14 N Y Sequelation is inundated in spring 15 N N Adural Heritage Inventory (NHI) listed aquatic species within aquatic system 16 N Y Vegetation is inundated in spring 17 N N Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable 18 N N Densely rooted emergent or woody vegetation 19 N Densely rooted emergent or woody vegetation 19 Y Y Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 20 Y Y Water flow through wetland is NOT channelized 21 N N Dense, persistent vegetation 22 N N N Dense, persistent vegetation 23 Y Y Water flow through wetland is NOT channelized 24 N N N Evidence of flashy hydrology 25 N N N Dense, persistent vegetation 26 N N N Dense, persistent vegetation 27 N N Within a watershed with <10% wetland 28 N N Point or non-point source inflow 29 N N N Storm and Floodwater storage 30 N N Dense, persistent vegetation 31 N N N Vegetated wetland associated with a lake or stream 32 N N N Storm and Floodwater processes 33 N N N Dense | | V | | |
| 3 | | | _ | |
| 4 Y Y 100 m buffer – natural land cover ≥60%(south) 75% (north) intact 5 N N Occurs in a Joint Venture priority township 6 N Y Interspersion of habitat structure (nemi-marsh,shrub/emergent, wetland/upland complex,etc.) 7 N Y Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N Y Part of a large habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Seasonally exposed mudflats present 11 N N Seasonally exposed mudflats present 11 N N Seasonally exposed mudflats present 11 N N N Wetland is connected or contiguous with perennial stream or lake 11 N N N Wetland is connected or contiguous with perennial stream or lake 12 N Y Standing water provides habitat for amphibians and aquatic invertebrates 13 N N Natural Heritage Inventory (NHI) listed aquatic species within aquatic system 4 N Y Vegetation is inundated in spring Shoreline Protection 1 N N Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable 2 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable 2 N N Densely rooted emergent or woody vegetation Storm and Floodwater Storage 1 Y Y Basin wetland, constricted outlet, has through-flow or is adjacent to a stream 2 Y Y Water flow through wetland is NOT channelized 4 N N Evidence of flashy hydrology 5 N N Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with <10% wetland 8 N N Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event Water Quality Protection 1 N N Stormwater or surface water from and floodwater based on previous section 2 Y Y Dense, persistent vegetation 6 N N N Stormwater or surface water from agricultural land is major hydrology source 8 | | | | |
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| WQ Water Quality Protection 1 N N Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% | | | | |
| 1 N N Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% | | | ., | |
| 2 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | N | N | |
| 3 Y Y Water flow through wetland is NOT channelized 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 4 N N Vegetated wetland associated with a lake or stream 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 5 Y Y Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | _ | | | |
| 7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50% | | | | |
| 9 N N Natural land cover in 100m buffer area < 50% GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| GW Groundwater Processes 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | _ | IN | IN | |
| 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic | | | | |
| 4 N N Wetland soils are organic | | | | |
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| 5 N N Wetland is within a wellhead protection area | | | | |
| | 5 | N | N | Wetland is within a wellhead protection area |

Section 1 Comments (Refer to Section 1 numbers) HU-5: The wetland is directly adjacent to this RED FLAG area, but likely does not share substantial hydrology with the fishery/stream. WH-6: The feature is located on the edge of a clearing and is otherwise surrounded by forest. WH-10/FA-2/4: The wetland could support aquatic invertebrates after periods of heavy rains. ST-1/3/WQ-2/5: The wetland is a shallow depression, with dense vegetation present at the time of the survey.

Wildlife Habitat and Species Observation (including amphibians and reptiles)
List: direct observation, tracks, scat, other sign; type of habitat: nesting, migratory, winter, etc.

| Observed | Potential | Species/Habitat/Comments |
|----------|-----------|--------------------------|
| | Y | Avian |
| | Υ | Small mammals |
| | Υ | Herpetofauna |
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Fish and Aquatic Life Habitat and Species Observations List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

| Observed | Potential | Species/Habitat |
|----------|-----------|-----------------------|
| | Υ | Aquatic invertebrates |
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SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

| | Low | Medium | High | Exceptional |
|--|--|---|--|--|
| Invasive species cover | > 50% | 20-50% | 10-20% | <10% |
| Strata | Missing stratum(a) or bare due to invasive species | All strata present but reduced native species | All strata present and good assemblage of native species | All strata present, conservative species represented |
| NHI plant community ranking | S4V | S3 | S2 | S1-S2 (S2 high quality) |
| Relative frequency of plant community in watershed | Abundant 🗸 | Common | Uncommon | Rare |
| FQI (optional) | <13 | 13-23 | 23-32 | >32 |
| Mean C (optional) | <2.4 | 2.4-4.2 | 4.3-4.7 | >4.7 |

^{*}Note: separate plant communities are described independently

Plant Species List (* dominant species) attach list of additional species

| Scientific Name | Common Name | C of | Plant communities | Comments (Estimate of % Cover, Abundance) |
|----------------------------|-------------|------|-------------------|---|
| Scirpus cyperinus* | | | PEM | Patchy |
| Agrostis gigantea* | | | PEM | Patchy |
| Juncus effusus | | | PEM | Rare |
| Persicaria hydropiperoides | | | PEM | Rare |
| Populus tremuloides | | | PEM | Rare |
| Fragaria virginiana | | | PEM | Barren |
| Alnus incana | | | PEM | Barren |
| Acer rubrum | | | PEM | Barren |
| Achillea millefolium | | | PEM | Barren |
| Geum aleppicum | | | PEM | Barren |
| Ranunculus acris | | | PEM | Barren |
| Rubus pubescens | | | PEM | Barren |
| Solidago canadensis | | | PEM | Barren |
| Solidago gigantea | | | PEM | Barren |
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SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities)

The floristic integrity of the feature is low due to low species diversity, the almost complete dominance of woolgrass and redtop (and thus the dominance of an invasive species), and the commonality of the disturbed plant community.

SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

| Assessment Area (AA) | Buffer | Historic | Impact Level* | Relative Frequency** | Stressor |
|-------------------------|--------|----------|------------------|-------------------------|---|
| • | | | | | Filling, berms (non-impounding) |
| | | | | | Drainage – tiles, ditches |
| | | | | | Hydrologic changes - high capacity wells, |
| | | | | | impounded water, increased runoff |
| | | | | | Point source or stormwater discharge |
| | | | | | Polluted runoff |
| | | | | | Pond construction |
| | | | | | Agriculture – row crops |
| | | | | | Agriculture – hay |
| | | | | | Agriculture – pasture |
| | | | | | Roads or railroad |
| | | | | | Utility corridor (above or subsurface) |
| | | | | | Dams, dikes or levees |
| | | | | | Soil subsidence, loss of soil structure |
| | | | | | Sediment input |
| | | | | | Removal of herbaceous stratum – mowing, |
| | | | | | grading, earthworms, etc. |
| | | | | | Removal of tree or shrub strata – logging, |
| | | | | | unprescribed fire |
| | Χ | | М | С | Human trails – unpaved |
| | | | | | Human trails – paved |
| | | | | | Removal of large woody debris |
| Χ | Χ | | Н | С | Cover of non-native and/or invasive species |
| | Χ | | М | С | Residential land use |
| | | | | | Urban, commercial or industrial use |
| | | | | | Parking lot |
| | | | | | Golf course |
| | | | | | Gravel pit |
| | | | | | Recreational use (boating, ATVs, etc.) |
| | | | | | Excavation or soil grading |
| | | | | | Other (list below): |
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^{*} L= Low, M = Medium, H = High

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

| The wetland is relatively isolated and located on the edge of a meadow resulted from clearing the land for a personal |
|---|
| residence (trailer). There is a two track access road in the buffer area. |
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^{**}Relative frequency of the impact in comparison to the general condition of wetlands and buffer areas in the region or watershed (C=Common, UC=Uncommon)

SUMMARY OF FUNCTIONAL VALUES

| FUNCTION | | | SIGNIFICANC | E | |
|-------------------------------|----------|--------|-------------|-------------|----------|
| | Low | Medium | High | Exceptional | NA |
| Floristic Integrity | / | | | | |
| Human Use Values | V | | | | |
| Wildlife Habitat | V | | | | |
| Fish and Aquatic Life Habitat | / | | | | |
| Shoreline Protection | | | | | / |
| Flood and Stormwater Storage | / | | | | |
| Water Quality Protection | ✓ | | | | |
| Groundwater Processes | ✓ | | | | |

| FUNCTION | RATIONALE |
|----------------------------------|---|
| Floristic Integrity | Missing strata, a lack of species diversity, and the dominance of redtop limit the floristic integrity. |
| Human Use Values | The wetland is small and isolated (but near a personal residence). |
| Wildlife Habitat | The wetland is small and has low species diversity. |
| Fish and Aquatic Life Habitat | The wetland could only provide aquatic habitat after periods of heavy rains. |
| Shoreline Protection | N/A |
| Flood and Stormwater Storage | The wetland is a shallow depression with persistent vegetation, but only likely capable of holding a small amount of water before overflow. |
| Water Quality Protection | The wetland is a small but densely vegetated shallow depression. |
| Groundwater Processes | The wetland is fed by surface water. |

Section 4: Project Impact Assessment

Brief Project Description

Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

| IMPACT: describe (+ or -) | Permanence/Reversibility | Significance (Low, Medium, High) |
|--|---|----------------------------------|
| Direct Impacts | Temporary trenching, soil storage, and backfilling. | Low |
| Secondary Impacts (including impacts which are indirectly attributable to the project) | Vegetation removal for construction. | Low |
| Cumulative Impacts | Operational vegetation maintenance. | Low |
| Spatial/Habitat Integrity | Temporary construction impacts. | Low |
| Rare Plant/Animal Communities/ Natural Areas | N/A | N/A |

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

| Project/Site: Line 5 Relocation Project | City/County: Ashla | and Sam | npling Date: 2020-06-03 |
|---|--|--|---------------------------|
| • | | State: Wisconsin Sa | |
| Investigator(s): SBR/DGL | | | |
| Landform (hillslope, terrace, etc.): Talf | | | |
| Subregion (LRR or MLRA): Northcentral Forests Lat: 46.5 | | | |
| Soil Map Unit Name: Sanborg-Badriver complex | | | |
| Are climatic / hydrologic conditions on the site typical for this ti | | | |
| Are Vegetation, Soil, or Hydrologysign | • | | |
| | - | | |
| Are Vegetation, Soil, or Hydrology nat | | | |
| SUMMARY OF FINDINGS – Attach site map sh | nowing sampling point | locations, transects, imp | portant features, etc. |
| Hydrophytic Vegetation Present? Yes No _ | Is the Sample | ed Area | |
| Hydric Soil Present? Yes No | | land? Yes I | No <u>/</u> |
| Wetland Hydrology Present? Yes No _ | If yes, optiona | al Wetland Site ID: | |
| Remarks: (Explain alternative procedures here or in a separ The upland is located upslope from the w | ate report.) | dow. The meadow ha | e hoon disturbed |
| by the activity of heavy machinery on the | | | is been disturbed |
| by the activity of fleavy flacilitiery off the | aujacent two-track. | | |
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| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | Secondary Indicators (| (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that | | | |
| | -Stained Leaves (B9) | Drainage Patterns | |
| | c Fauna (B13) | Moss Trim Lines (| |
| | Deposits (B15) | Dry-Season Water | |
| | gen Sulfide Odor (C1) | Crayfish Burrows (| |
| | ed Rhizospheres on Living Ro nce of Reduced Iron (C4) | oots (C3) Saturation Visible | |
| | t Iron Reduction in Tilled Soils | Stunted or Stresses (C6) Geomorphic Positi | |
| | luck Surface (C7) | Shallow Aquitard (| |
| , | (Explain in Remarks) | Microtopographic | |
| Sparsely Vegetated Concave Surface (B8) | (Explain in Remarks) | FAC-Neutral Test | |
| Field Observations: | | 1710 Hedital 1650 | (50) |
| Surface Water Present? Yes No _ ✓ Depth | ı (inches): | | |
| Water Table Present? Yes No V Depth | | | |
| Saturation Present? Yes No _v Depth | | Wetland Hydrology Present? | Yes No <u>/</u> |
| (includes capillary fringe) | rial photos, provious inspectio | no) if availables | |
| Describe Recorded Data (stream gauge, monitoring well, ae | nai photos, previous inspectio | ns), ir available: | |
| | | | |
| Remarks: | | | |
| No indicators of wetland hydrology were | observed. | | |
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| | VEGETATION - | Use | scientific | names | of plant | ts. |
|--|---------------------|------------|------------|-------|----------|-----|
|--|---------------------|------------|------------|-------|----------|-----|

| Percent of Dominant Species | EGETATION – Use scientific names of plants. | | | | Sampling Point: wasa1053_u | | |
|--|---|---------------|-------------|------|---|--|--|
| That Are OBL, FACW, or FAC: | Tree Stratum (Plot size: 30) | | | | | | |
| Species Across All Strata: | | | | | Number of Dominant Species That Are OBL, FACW, or FAC: (A) | | |
| That Are OBL, FACW, or FAC: | | | | | _ | | |
| Prevalence Index worksheet: Total % Cover of: | | | | | | | |
| Total % Cover of: | 5 | | | | That Are OBL, FACW, or FAC: U (A/B) | | |
| O | 6 | | | | Prevalence Index worksheet: | | |
| FACW species 5 | 7 | | | | Total % Cover of: Multiply by: | | |
| FAC species 5 | | 0 | = Total Co | ver | OBL species <u>0</u> x 1 = <u>0</u> | | |
| FACU species 62 | Sapling/Shrub Stratum (Plot size: 15) | | | | FACW species5 x 2 =10 | | |
| 2. | 1 | | | | | | |
| 3. | | | | | | | |
| 4 | | | | | | | |
| Prevalence Index = B/A =4.08 | | | | | Column Totals: <u>95</u> (A) <u>388</u> (B) | | |
| Hydrophytic Vegetation Indicators: The continuity of the properties of the continuity of the present? | | | | | Prevalence Index = B/A = 4.08 | | |
| The continuation of the | | | | | Hydrophytic Vegetation Indicators: | | |
| Commance Test is 560% Commance Test is 560% Commance Test is 560% Commance Test is 560% Commance Cest is 560% Comm | | | | | 1 - Rapid Test for Hydrophytic Vegetation | | |
| Herb Stratum (Plot size: 5) 1. Poa pratensis 30 Y FACU 2. Bromus inermis 20 Y UPL 3. Trifolium pratense 10 N FACU 4. Carex gracillima 10 N FACU 5. Ranunculus acris 5 N FACU 6. Carex projecta 5 N FACU 7. Lotus corniculatus 5 N FACU 8. Prunus pensylvanica 5 N FACU 9. Stellaria graminea 3 N UPL 10. Agrimonia gryposepala 2 N FACU 11. 12. 95 = Total Cover Woody Vine Stratum (Plot size: 30) | | _ | | ver | | | |
| 1. Poa pratensis 2. Bromus inermis 2. Dy UPL 3. Trifolium pratense 4. Carex gracillima 5. Ranunculus acris 6. Carex projecta 7. Lotus corniculatus 8. Prunus pensylvanica 9. Stellaria graminea 10. Agrimonia gryposepala 11. 12. 12. 13. Triolium pratense 10. N FACU 4. Moody Vine Stratum (Plot size: 30) 1. 2. 3. 3. 4. | Herh Stratum (Plot size: 5 | | | | | | |
| 3. Trifolium pratense 4. Carex gracillima 10. N. FACU 4. Carex gracillima 10. N. FACU 5. Ranunculus acris 6. Carex projecta 7. Lotus corniculatus 8. Prunus pensylvanica 9. Stellaria graminea 10. N. FACU 10. Projecta 10. N. FACU 10. FACU 10. FACU 10. FACU 10. Sapling/shrub – Woody plants a in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 10. Agrimonia gryposepala 10. N. FACU 10. Agrimonia gryposepala 11. Herb – All herbaceous (non-woody) plants, regardless of size, and woody vines greater than 3.28 ft in height. 11. Woody vines – All woody vines greater than 3.28 ft in height. 12. Woody vines – All woody vines greater than 3.28 ft in height. 13. Woody vines – All woody vines greater than 3.28 ft in height. 14. Urgophytic Vegetation Present? 15. N. FACU 16. Each of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 16. Carex projecta 17. FACU 18. FACU 19. FACU 29. FACU 20. FACU 20. FACU 21. Herb – All herbaceous (non-woody) plants, regardless of size, and woody vines greater than 3.28 ft in height. 17. Woody vines – All woody vines greater than 3.28 ft in height. 18. Prunus pensylvanica 20. FACU 31. Herb – All herbaceous (non-woody) plants, regardless of size, and woody vines greater than 3.28 ft in height. 18. Prunus pensylvanica 20. FACU 31. Herb – All woody vines greater than 3.28 ft in height. 19. FACU 20. Faculty of the upland area. 20. Total Cover 20. Faculty of the upland area. 21. Other areas are heavily disturbed by 10. FACU 21. FACU 22. Faculty of the upland area. | 1. <u>Poa pratensis</u> | _30_ | <u>Y</u> | FACU | 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) | | |
| 3. Trifolium pratense | • | 20 | Υ | UPL | Problematic Hydrophytic Vegetation ¹ (Explain) | | |
| 4. Carex gracillima 10. N FACU 5. Ranunculus acris 6. Carex projecta 7. Lotus corniculatus 8. Prunus pensylvanica 9. Stellaria graminea 10. N FACU 10. Agrimonia gryposepala 11. | | | N | FACU | | | |
| 5. Ranunculus acris 6. Carex projecta 7. Lotus corniculatus 8. Prunus pensylvanica 9. Stellaria graminea 10. Agrimonia gryposepala 11. 12. Woody Vine Stratum (Plot size: 30) 1 | • | | N | | | | |
| 5 N FACU 7. Lotus corniculatus 5 N FACU 8. Prunus pensylvanica 9. Stellaria graminea 10. Agrimonia gryposepala 11. 12. 12. 13. 14. 15. 16. Carex projecta 17. Lotus corniculatus 18. Prunus pensylvanica 19. Stellaria graminea 10. Agrimonia gryposepala 11. 12. 13. 14. 15. 16. Carex projecta 17. FACU 18. PACU 19. Stellaria graminea 19. Merb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 18. Woody Vines – All woody vines greater than 3.28 ft in height. 19. Woody Vine Stratum (Plot size: 30) 1. 2. 3. 4. | 3 | | N | | <u>'</u> | | |
| 7. Lotus corniculatus 8. Prunus pensylvanica 9. Stellaria graminea 10. Agrimonia gryposepala 11. 12. Woody Vine Stratum (Plot size: | | | N | | - | | |
| 8. Prunus pensylvanica 9. Stellaria graminea 3. N UPL 10. Agrimonia gryposepala 11. | • • | | | | | | |
| 9. <u>Stellaria graminea</u> 3 N UPL 10. <u>Agrimonia gryposepala</u> 11 | | | | | | | |
| 10. Agrimonia gryposepala 11 | | • | N | | | | |
| of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Woody Vine Stratum (Plot size: 30) Hydrophytic Vegetation Present? Yes Nov Remarks: (Include photo numbers here or on a separate sheet.) The sample point is mostly representative of the upland area. Other areas are heavily disturbed by | | | | | Herb – All herbaceous (non-woody) plants, regardless | | |
| Woody Vine Stratum (Plot size: 30) 1 | | - | | | | | |
| 95 | | | | | Woody vines – All woody vines greater than 3.28 ft in | | |
| Woody Vine Stratum (Plot size:30) 1 | | 95 | = Total Cov | ver | height. | | |
| 1 | Woody Vine Stratum (Plot size: 30) | | rotal oo | VCI | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | Hydrophytic | | |
| = Total Cover No No Remarks: (Include photo numbers here or on a separate sheet.) The sample point is mostly representative of the upland area. Other areas are heavily disturbed by | | | | | Vegetation | | |
| Remarks: (Include photo numbers here or on a separate sheet.) The sample point is mostly representative of the upland area. Other areas are heavily disturbed by | | _ | | ver | Present? Yes No _ ✓ | | |
| The sample point is mostly representative of the upland area. Other areas are heavily disturbed by | Remarks: (Include photo numbers here or on a separate | | | | | | |
| roavily magnitiony moving uniough and are mostly devold of vegetation. | The sample point is mostly representat | ive of th | | | | | |

SOIL Sampling Point: wasa1053_u

| Profile Desc | cription: (Des | cribe to | the dep | th needed to docum | ent the i | indicator | or confirm | the absence of indicato | rs.) | |
|--|---|------------|-----------------|------------------------------|----------------|---|------------------|--|---------------------------------|--|
| Depth | | ıtrix | | | <u>Feature</u> | | . 2 | | | |
| (inches) | Color (moi | | <u>%</u> 100 | Color (moist) | O | Type' | Loc ² | SICL | Remarks | |
| 0-14 | 5YR 4 | | 100 | | | . ——— | | | | |
| 14-20 | 2.5YR 4 | /3 | 100 | | | | | | | |
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| | | =Depleti | on, RM= | Reduced Matrix, MS | =Masked | Sand Gr | ains. | ² Location: PL=Pore Indicators for Proble | Lining, M=Matrix. | |
| Hydric Soil Histosol | | | | Polyvalue Below | Surface | (S8) (I RI | ? R | | (LRR K, L, MLRA 149B) | |
| | pipedon (A2) | | | MLRA 149B) | Carrace | (00) (EI | , | | ox (A16) (LRR K, L, R) | |
| | istic (A3) | | | Thin Dark Surface | | | | | or Peat (S3) (LRR K, L, R) | |
| | en Sulfide (A4) d Layers (A5) | | | Loamy Mucky M Loamy Gleyed N | | | , L) | Dark Surface (S7) Polyvalue Below S | Gurface (S8) (LRR K, L) | |
| | d Below Dark S | Surface (A | A11) | Depleted Matrix | (F3) | | | Thin Dark Surface (S9) (LRR K, L) | | |
| | ark Surface (A1 | | | Redox Dark Sur | | | | _ | Masses (F12) (LRR K, L, R) | |
| Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) | | | | | | Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | | | | |
| - | Redox (S5) | / | | | () | | | Red Parent Materi | | |
| | l Matrix (S6) rface (S7) (LR I | R R, MLF | RA 149E | 3) | | | | Very Shallow Dark Other (Explain in F | | |
| ³ Indicators o | f hydrophytic v | egetation | n and we | tland hydrology must | be prese | ent, unless | disturbed | or problematic. | | |
| Restrictive | Layer (if obse | rved): | | | | | | | | |
| Type: | | | | | | | | | | |
| | ches): | | | | | | | Hydric Soil Present? | Yes No | |
| Remarks: Red clay | ey soils w | ith no | redox | k features obs | erved. | ı | | | | |
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wasa1053_u_E



wasa1053_u_N