

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-05-20  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirc1005f\_w  
 Investigator(s): EJO/JSW Section, Township, Range: sec 22 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.455740 Long: -90.476368 Datum: WGS84  
 Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 18 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <b>Feature abruptly ends at trail road. Feature is a closed depression with surface water and atmospheric inputs. Feature is a black ash swamp dominated by fringed sedge in ground layer and surrounded by mesic hardwoods. Slash from previous logging operations present in wetland.</b>	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wirc1005f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Fraxinus nigra</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>30</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u>Rubus idaeus</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>30</u></td> <td>x 1 = <u>30</u></td> </tr> <tr> <td>FACW species <u>35</u></td> <td>x 2 = <u>70</u></td> </tr> <tr> <td>FAC species <u>4</u></td> <td>x 3 = <u>12</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>69</u> (A)</td> <td><u>112</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.62</u>	Total % Cover of:	Multiply by:	OBL species <u>30</u>	x 1 = <u>30</u>	FACW species <u>35</u>	x 2 = <u>70</u>	FAC species <u>4</u>	x 3 = <u>12</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>69</u> (A)	<u>112</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>30</u>	x 1 = <u>30</u>																	
FACW species <u>35</u>	x 2 = <u>70</u>																	
FAC species <u>4</u>	x 3 = <u>12</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>69</u> (A)	<u>112</u> (B)																	
2. <u>Salix bebbiana</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>4</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Carex crinita</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Scirpus cyperinus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
3. <u>Scirpus cf. hattorianus</u>	<u>3</u>	<u>N</u>	<u>OBL</u>															
4. <u>Solidago gigantea</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
5. <u>Rumex obtusifolius</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
6. <u>Juncus effusus</u>	<u>2</u>	<u>N</u>	<u>OBL</u>															
7. <u>Cardamine pensylvanica</u>	<u>1</u>	<u>N</u>	<u>FACW</u>															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>35</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) Feature is a black ash swamp dominated by fringed sedge in the ground layer and is fairly representative of the wetland.																		



## SOIL

Sampling Point: wirc1005f\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

Soils observed to be silty throughout.



wirc1005f\_w\_N



wirc1005f\_w\_SW



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

<b>WETLAND IDENTIFICATION</b>							
Project name: Line 5 Relocation Project		Evaluator(s): EJO/JSW					
File #: wirc1005		Date of visit(s): 2020-05-20					
Location: PLSS: <u>sec 22 T046N R001W</u>		Ecological Landscape: Superior Mineral Ranges					
Lat: <u>46.455603</u> Long: <u>-90.476383</u>		Watershed: LS11, Potato River					
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>							
<b>SITE DESCRIPTION</b>							
Soils: Mapped Type(s): Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 18 percent slopes  Field Verified: Series not verified. Soils were observed to be silty and reduced through most of the profile.		WWI Class: N/A  Wetland Type(s): PFO - hardwood swamp					
Hydrology: The hydrologic regime is seasonally saturated, and the wetland is likely inundated in spring.		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Wetland Size: 0.0270</td> <td style="padding: 5px;">Wetland Area Impacted 0.0270</td> </tr> <tr> <td colspan="2" style="padding: 5px;">           Vegetation:            Plant Community Description(s):            The feature is a black ash swamp dominated by an herbaceous layer of fringed sedge.         </td> </tr> </table>		Wetland Size: 0.0270	Wetland Area Impacted 0.0270	Vegetation: Plant Community Description(s): The feature is a black ash swamp dominated by an herbaceous layer of fringed sedge.	
Wetland Size: 0.0270	Wetland Area Impacted 0.0270						
Vegetation: Plant Community Description(s): The feature is a black ash swamp dominated by an herbaceous layer of fringed sedge.							

**SITE MAP**

# SECTION 1: Functional Value Assessment

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	Y	Used for recreation (hunting, birding, hiking, etc.). List: birding, hunting
2	N	Y	Used for educational or scientific purposes
3	N	Y	Visually or physically accessible to public
4	N	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			<b>Wildlife Habitat</b>
1	Y	Y	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	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 (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 ≥ 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			<b>Fish and Aquatic Life Habitat</b>
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			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	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			<b>Water Quality Protection</b>
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%
GW			<b>Groundwater Processes</b>
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

<p>HU-6, WH-7: The wetland has multiple strata and is part of a larger forested habitat, with the potential to support sensitive species.</p> <p>WH-6: The wetland has variable microtopography supporting both hydrophytic and upland-associated plants.</p> <p>ST-5: The wetland likely receives stormwater from surrounding uplands.</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

[illegible]

## List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

[illegible]

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

## WDNR WRAM v.2 data form - 4

### 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
X	X		M	C	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
X	X		M	C	Removal of tree or shrub strata – logging, unprescribed fire
X	X		M	C	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
					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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

Wetland is a part of forest that has been previously harvested, with slash present in wetland. Wetland is adjacent to forest trail used by heavy equipment. Surrounding forest has earthworms, which have potential to impact wetland vegetation.

## 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		✓			
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The wetland largely consists of native species, with low coverage of exotic species.
Human Use Values	The wetland is a part of large intact forest which hosts wildlife valuable to recreation.
Wildlife Habitat	Multiple strata are present, and the wetland is part of a large forested area.
Fish and Aquatic Life Habitat	The wetland was not observed to have standing water at the time of survey, but may be inundated at times, which could support aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely receives stormwater from surrounding uplands.
Water Quality Protection	The wetland has dense, persistent vegetation.
Groundwater Processes	The wetland has primarily recharge hydrology.



## 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 City/County: Iron Sampling Date: 2020-05-20  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirc1005\_u  
 Investigator(s): JSW/EJO Section, Township, Range: sec 22 T046N R001W  
 Landform (hillslope, terrace, etc.): Side Slope Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.455429 Long: -90.476494 Datum: WGS84  
 Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 18 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located on a slope near a logging road. The adjacent forest has recently received a selective harvest.	

## HYDROLOGY

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

**VEGETATION** – Use scientific names of plants.

Sampling Point: wirc1005\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Tilia americana</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>5</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x 3 = <u>75</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>65</u> (A)</td> <td><u>210</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.230769230769231</u>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>25</u>	x 3 = <u>75</u>	FACU species <u>30</u>	x 4 = <u>120</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>65</u> (A)	<u>210</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>5</u>	x 1 = <u>5</u>																	
FACW species <u>5</u>	x 2 = <u>10</u>																	
FAC species <u>25</u>	x 3 = <u>75</u>																	
FACU species <u>30</u>	x 4 = <u>120</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>65</u> (A)	<u>210</u> (B)																	
<u>10</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u><i>Rubus idaeus</i></u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>10</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u><i>Veronica officinalis</i></u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. <u><i>Prunella vulgaris</i></u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
3. <u><i>Carex crinita</i></u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
4. <u><i>Rubus idaeus</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
5. <u><i>Carex gracillima</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
6. <u><i>Agrostis gigantea</i></u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>50</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)  
 The upland is located near a logging road at the edge of a recently harvested forest.

## SOIL

Sampling Point: wirc1005\_u

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: Cobble

Depth (inches): 16.0

**Hydric Soil Present?** Yes \_\_\_\_\_ No ✓

Remarks:

Could not dig past 16 inches due to the presence of cobble.





wirc1005\_u\_N



wirc1005\_u\_W



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-05-20  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirc1004f\_w  
 Investigator(s): EJO/JSW Section, Township, Range: sec 22 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.455898 Long: -90.477398 Datum: WGS84  
 Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <b>Feature is a hardwood swamp basin dominated by a canopy of black ash and ground layer of fringed sedge. Feature likely influenced by previous logging activities as indicated by presence of ruts.</b>	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wirc1004f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Fraxinus nigra</i></u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>30</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u><i>Rubus idaeus</i></u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>30</u></td> <td>x 1 = <u>30</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>7</u></td> <td>x 3 = <u>21</u></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 = <u>8</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>69</u> (A)</td> <td><u>119</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.72</u>	Total % Cover of:	Multiply by:	OBL species <u>30</u>	x 1 = <u>30</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>7</u>	x 3 = <u>21</u>	FACU species <u>2</u>	x 4 = <u>8</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>69</u> (A)	<u>119</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>30</u>	x 1 = <u>30</u>																	
FACW species <u>30</u>	x 2 = <u>60</u>																	
FAC species <u>7</u>	x 3 = <u>21</u>																	
FACU species <u>2</u>	x 4 = <u>8</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>69</u> (A)	<u>119</u> (B)																	
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>5</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u><i>Carex crinita</i></u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u><i>Scirpus cyperinus</i></u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
3. <u><i>Cardamine concatenata</i></u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
4. <u><i>Rumex obtusifolius</i></u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
5. <u><i>Erythronium americanum</i></u>	<u>2</u>	<u>N</u>	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>36</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) Feature is a black ash swamp dominated by fringed sedge in the ground layer. Vegetation appears representative of feature.																		

## SOIL

Sampling Point: wirc1004f\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

Soils are clay loam over silt loam.





wirc1004f\_w\_NE



wirc1004f\_w\_SW

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

<b>WETLAND IDENTIFICATION</b>		
Project name: Line 5 Relocation Project	Evaluator(s): EJO/JSW	
File #: wirc1004	Date of visit(s): 2020-05-20	
Location: PLSS: <u>sec 22 T046N R001W</u>	Ecological Landscape: Superior Mineral Ranges	
Lat: <u>46.455898</u> Long: <u>-90.477398</u>	Watershed: LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>		
<b>SITE DESCRIPTION</b>		
Soils: Mapped Type(s): Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes  Field Verified: Series not verified. Soils were observed to be clay loam over silt loam.	WWI Class: T3/5K	
	Wetland Type(s): PFO - hardwood swamp	
	Wetland Size: 0.0742	Wetland Area Impacted 0.0742
Hydrology: The hydrologic regime is seasonally saturated, and likely influenced by rutting from previous logging operations.	Vegetation: Plant Community Description(s): The wetland is a hardwood swamp, with black ash dominant in the canopy and fringed sedge dominant in the herbaceous layer.	

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	Y	Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding
2	N	Y	Used for educational or scientific purposes
3	N	Y	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			<b>Wildlife Habitat</b>
1	Y	Y	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	N	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	Y	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
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			<b>Fish and Aquatic Life Habitat</b>
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			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
1	N	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	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	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			<b>Water Quality Protection</b>
1	N	Y	Provides substantial storage of storm and floodwater based on previous section
2	N	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	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			<b>Groundwater Processes</b>
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

### Section 1 Comments (Refer to Section 1 numbers)

HU-6, WH-7: The wetland has multiple strata and is part of larger forested habitat, with the potential to support sensitive species.  
WH-6: The wetland has variable microtopography, supporting both hydrophytic and upland-associated plant species.  
ST-5: The wetland likely receives stormwater from surrounding uplands.

### 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	Y	White-throated sparrow, least flycatcher observed in vicinity of wetland
	Y	Mammals, 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
	Y	Aquatic invertebrates

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

The wetland contains a good assemblage of native species, multiple strata are present, and there is minimal presence of exotic 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
X	X		M	C	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
X	X		L	C	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
	X		L	UC	Removal of tree or shrub strata – logging, unprescribed fire
X	X		M	C	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
X	X		L	UC	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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The wetland has rutting and compaction from previous logging operations, which likely have influenced its hydrology, and the wetland is adjacent to a forest trail used by heavy equipment. The wetland is a part of larger forest community, with earthworms present.

## 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		✓			
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	A good assemblage of native species was observed, with minimal coverage of exotic species.
Human Use Values	The wetland is a part of larger intact forest which supports wildlife valuable to recreation.
Wildlife Habitat	Multiple strata are present, and the feature is part of larger intact block of forest.
Fish and Aquatic Life Habitat	No standing water was observed in the wetland at the time of survey, but the wetland may be inundated at times.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely receives precipitation from surrounding uplands after rain events.
Water Quality Protection	The wetland has dense, persistent vegetation, and the potential filter water effectively.
Groundwater Processes	The wetland primarily exhibits recharge hydrology.

## 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 City/County: Iron Sampling Date: 2020-05-20  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirc1004\_u  
 Investigator(s): JSW/EJO Section, Township, Range: sec 22 T046N R001W  
 Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.455974 Long: -90.477391 Datum: WGS84  
 Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located in a recently harvested forest at the edge of a logging road.	

## HYDROLOGY

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

**VEGETATION** – Use scientific names of plants.

Sampling Point: wirc1004\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer rubrum</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>5</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u>Rubus idaeus</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>67</u></td> <td>x 3 = <u>201</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>87</u> (A)</td> <td><u>281</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.2298850574712645</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>67</u>	x 3 = <u>201</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>87</u> (A)	<u>281</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>67</u>	x 3 = <u>201</u>																	
FACU species <u>20</u>	x 4 = <u>80</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>87</u> (A)	<u>281</u> (B)																	
2. <u>Acer rubrum</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Prunus pensylvanica</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>60</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Erythronium americanum</u>	<u>50</u>	<u>Y</u>	_____	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Cardamine concatenata</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
3. <u>Dryopteris intermedia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
4. <u>Rubus idaeus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
5. <u>Osmunda claytoniana</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>72</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) <b>The forest recently received a selective harvest.</b>																		

## SOIL

Sampling Point: wirc1004\_u

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: Cobble

Depth (inches): 12.0

Hydric Soil Present? Yes            No ✓

Remarks:

Could not sample beyond 12 inches due to the presence of cobble.





wirc1004\_u\_NE



wirc1004\_u\_NW



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-05-20  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirc1003e\_w  
 Investigator(s): EJO/JSW Section, Township, Range: sec 22 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.456437 Long: -90.477793 Datum: WGS84  
 Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 18 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <b>Wetland is a linear wetland drainage swale that drains into waterbody sirc1003i. Wetland dominated by fringed sedge at time of survey.</b>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) _____ Water Marks (B1) _____ Sediment Deposits (B2) _____ Drift Deposits (B3) _____ Algal Mat or Crust (B4) _____ Iron Deposits (B5) _____ Inundation Visible on Aerial Imagery (B7) _____ Sparsely Vegetated Concave Surface (B8)	_____ Water-Stained Leaves (B9) _____ Aquatic Fauna (B13) _____ Marl Deposits (B15) _____ Hydrogen Sulfide Odor (C1) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Presence of Reduced Iron (C4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Thin Muck Surface (C7) _____ Other (Explain in Remarks)	_____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0.5</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <b>Hydrology is a mix of discharge and surface water drainage into tributary.</b>		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wirc1003e\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>26</u></td> <td>x 1 = <u>26</u></td> </tr> <tr> <td>FACW species <u>3</u></td> <td>x 2 = <u>6</u></td> </tr> <tr> <td>FAC species <u>2</u></td> <td>x 3 = <u>6</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>31</u> (A)</td> <td><u>38</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.2258064516129032</u>	Total % Cover of:	Multiply by:	OBL species <u>26</u>	x 1 = <u>26</u>	FACW species <u>3</u>	x 2 = <u>6</u>	FAC species <u>2</u>	x 3 = <u>6</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>31</u> (A)	<u>38</u> (B)
Total % Cover of:	Multiply by:																	
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Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Carex crinita</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Viola macloskeyi</u>	<u>2</u>	<u>N</u>	<u>OBL</u>															
3. <u>Scirpus cf. atrovirens</u>	<u>2</u>	<u>N</u>	<u>OBL</u>															
4. <u>Impatiens capensis</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
5. <u>Equisetum arvense</u>	<u>1</u>	<u>N</u>	<u>FAC</u>															
6. <u>Cardamine pensylvanica</u>	<u>1</u>	<u>N</u>	<u>FACW</u>															
7. <u>Juncus effusus</u>	<u>1</u>	<u>N</u>	<u>OBL</u>															
8. <u>Barbarea vulgaris</u>	<u>1</u>	<u>N</u>	<u>FAC</u>															
9. <u>Glyceria striata</u>	<u>1</u>	<u>N</u>	<u>OBL</u>															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>31</u> = Total Cover																
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Remarks: (Include photo numbers here or on a separate sheet.) Feature is a wet meadow dominated by fringed sedge. Vegetation is fairly representative of swale at time of survey.																		

**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 height.

**Hydrophytic Vegetation Present?**      Yes ☒      No \_\_\_\_\_

## SOIL

Sampling Point: wirc1003e\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☒ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 18.0

Hydric Soil Present? Yes ✓ No       

Remarks:

Soil is sandy loam over sandy clay loam. Fine particle soils with poor drainage.





wirc1003e\_w\_NW



wirc1003e\_w\_SE



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-05-20  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirc1003f\_w  
 Investigator(s): EJO/JSW Section, Township, Range: sec 22 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.456438 Long: -90.477795 Datum: WGS84  
 Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 18 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <b>Feature is seasonally flooded vernal pool that drains into waterbody sirc1003i. Vegetation is lacking within the pool surrounded by red maple, but is present upstream, outside the survey area.</b>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) ___ Water Marks (B1) ___ Sediment Deposits (B2) ___ Drift Deposits (B3) ___ Algal Mat or Crust (B4) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Sparsely Vegetated Concave Surface (B8)	___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13) ___ Marl Deposits (B15) ___ Hydrogen Sulfide Odor (C1) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Presence of Reduced Iron (C4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Thin Muck Surface (C7) ___ Other (Explain in Remarks)	___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>12</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <b>Wetland is a vernal pool that feeds waterbody sirc1003i. Hydrology is seasonally flooded.</b>		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wirc1003f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer rubrum</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>5</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>10</u> (A)</td> <td><u>30</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.0</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>10</u> (A)	<u>30</u> (B)
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UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>10</u> (A)	<u>30</u> (B)																	
<u>5</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Acer rubrum</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>5</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Definitions of Vegetation Strata:  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.) Vegetation absent from vernal pool located within the survey corridor. Immediately outside corridor is marsh marigold, Pennsylvania bittercress, jewelweed, fowl mannagrass, cinnamon fern, and fringed sedge.																		

## SOIL

Sampling Point: wirc1003f\_w

[illegible]



wirc1003f\_w\_NE



wirc1003f\_w\_SW



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

<b>WETLAND IDENTIFICATION</b>					
Project name: Line 5 Relocation Project	Evaluator(s): EJO/JSW				
File #: wirc1003	Date of visit(s): 2020-05-20				
Location: PLSS: <u>sec 22 T046N R001W</u>	Ecological Landscape: Superior Mineral Ranges				
Lat: <u>46.456437</u> Long: <u>-90.477793</u>	Watershed: LS11, Potato River				
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>					
<b>SITE DESCRIPTION</b>					
Soils: Mapped Type(s): Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 18 percent slopes. Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes.  Field Verified: Series not verified. In the emergent component soils were observed to be sandy loam over sandy clay loam and poorly drained. In the forested component, soils were observed to be loamy mucky mineral over coarse sandy loam.	WWI Class: N/A  Wetland Type(s): PEM/PFO - fresh wet meadow/hardwood swamp complex				
Hydrology: PEM hydrology is a mix of discharge and surface water drainage into tributary. PFO is a vernal pool with discharge hydrology that feeds waterbody sirc1003i. Hydrology is seasonally flooded.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;">Wetland Size: 0.0190</td> <td style="width: 50%; padding: 5px;">Wetland Area Impacted 0.0190</td> </tr> <tr> <td colspan="2" style="padding: 5px;">           Vegetation: Plant Community Description(s): The fresh wet meadow component is dominated by fringed sedge, and the hardwood swamp is a vernal pool with red maple overhanging.         </td> </tr> </table>	Wetland Size: 0.0190	Wetland Area Impacted 0.0190	Vegetation: Plant Community Description(s): The fresh wet meadow component is dominated by fringed sedge, and the hardwood swamp is a vernal pool with red maple overhanging.	
Wetland Size: 0.0190	Wetland Area Impacted 0.0190				
Vegetation: Plant Community Description(s): The fresh wet meadow component is dominated by fringed sedge, and the hardwood swamp is a vernal pool with red maple overhanging.					

**SITE MAP**

**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	Y	Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding
2	N	Y	Used for educational or scientific purposes
3	N	Y	Visually or physically accessible to public
4	N	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			<b>Wildlife Habitat</b>
1	Y	Y	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	Y	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.)
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	Y	Y	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			<b>Fish and Aquatic Life Habitat</b>
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			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	N	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	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			<b>Water Quality Protection</b>
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	N	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	Y	Y	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			<b>Groundwater Processes</b>
1	Y	Y	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	Y	Wetland remains saturated for an extended time period with no additional water inputs
4	Y	Y	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area



FA-2: The hardwood swamp is a vernal pool, with high potential to host aquatic life.  
GW-1: The forested and emergent components both displayed evidence of discharge hydrology.  
WQ-8: The forested and emergent components both contribute to surface water discharge.

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

## Fish and Aquatic Life Habitat and Species Observations

[illegible]

### Plant Community Integrity (circle)\*

\*Note: separate plant communities are described independently

[illegible]

As a whole, the wetland complex was observed to have good assemblage of native species, multiple strata present, and minimal presence of exotic 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
X	X		M	C	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
X	X		M	C	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
X	X		M	C	Removal of tree or shrub strata – logging, unprescribed fire
X	X		M	C	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
	X		M	C	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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The emergent component is located directly adjacent to a cleared logging road. The hardwood swamp drains into a waterbody that crosses a logging road. Earthworms are present in the surrounding upland forest with the potential to impact wetland vegetation.

## 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		✓			
Groundwater Processes			✓		

FUNCTION	RATIONALE
Floristic Integrity	The wetland exhibits a good assemblage of native species, multiple strata, and minimal presence of exotic species.
Human Use Values	The wetland is a part of larger intact forest which hosts wildlife valuable to recreation. Wetland, especially vernal pool, is aesthetically pleasing.
Wildlife Habitat	Multiple strata are present, and the feature is part of larger intact forest.
Fish and Aquatic Life Habitat	The vernal pool has the potential to host aquatic species, although none were directly observed at the time of survey.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely receives stormwater from surrounding uplands.
Water Quality Protection	The feature has sparse vegetation in the vernal pool itself, but the rest of the wetland complex is densely vegetated.
Groundwater Processes	The wetland is driven by both recharge and discharge hydrology.

## 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 City/County: Iron Sampling Date: 2020-05-20  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirc1003\_u  
 Investigator(s): JSW/EJO Section, Township, Range: sec 22 T046N R001W  
 Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): Convex Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.456432 Long: -90.477863 Datum: WGS84  
 Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located on a rise near a logging road and is dominated by hemlock and red raspberry.	

## HYDROLOGY

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



**VEGETATION – Use scientific names of plants.**

 Sampling Point: wirc1003\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Tsuga canadensis</i></u>	<u>75</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>75</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u><i>Rubus idaeus</i></u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>53</u></td> <td>x 3 = <u>159</u></td> </tr> <tr> <td>FACU species <u>85</u></td> <td>x 4 = <u>340</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>138</u> (A)</td> <td><u>499</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.6159420289855073</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>53</u>	x 3 = <u>159</u>	FACU species <u>85</u>	x 4 = <u>340</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>138</u> (A)	<u>499</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>53</u>	x 3 = <u>159</u>																	
FACU species <u>85</u>	x 4 = <u>340</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>138</u> (A)	<u>499</u> (B)																	
2. <u><i>Acer rubrum</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>45</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u><i>Erythronium americanum</i></u>	<u>10</u>	<u>Y</u>	_____	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u><i>Cardamine concatenata</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
3. <u><i>Carex gracillima</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
4. <u><i>Rubus idaeus</i></u>	<u>5</u>	<u>Y</u>	<u>FAC</u>															
5. <u><i>Equisetum arvense</i></u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
6. <u><i>Athyrium angustum</i></u>	<u>1</u>	<u>N</u>	<u>FAC</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>28</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) <b>Hemlock and red raspberry dominate the upland.</b>																		

## SOIL

Sampling Point: wirc1003\_u

[illegible]





wirc1003\_u\_S



wirc1003\_u\_W



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-05-19  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira012e\_xw  
 Investigator(s): EJO/JSW Section, Township, Range: sec 15 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.457732 Long: -90.479722 Datum: WGS84  
 Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <b>Feature is a saturated wet meadow dominated by Carex crinita and located along a forest road.</b> <b>Feature appears to be heavily rutted from logging or other heavy equipment.</b>	

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		_____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <b>Hydrology regime is saturated.</b>		

**VEGETATION** – Use scientific names of plants.

Sampling Point: wira012e\_xw

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>52</u></td> <td>x 1 = <u>52</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>4</u></td> <td>x 3 = <u>12</u></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 = <u>8</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>58</u> (A)</td> <td><u>72</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.2413793103448276</u>	Total % Cover of:	Multiply by:	OBL species <u>52</u>	x 1 = <u>52</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>4</u>	x 3 = <u>12</u>	FACU species <u>2</u>	x 4 = <u>8</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>58</u> (A)	<u>72</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>52</u>	x 1 = <u>52</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>4</u>	x 3 = <u>12</u>																	
FACU species <u>2</u>	x 4 = <u>8</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>58</u> (A)	<u>72</u> (B)																	
<u>2</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u>Rubus idaeus</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>2</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Carex crinita</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>															
2. <u>Cardamine concatenata</u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
3. <u>Scirpus cyperinus</u>	<u>2</u>	<u>N</u>	<u>OBL</u>															
4. <u>Matteuccia struthiopteris</u>	<u>1</u>	<u>N</u>	<u>FAC</u>															
5. <u>Rumex obtusifolius</u>	<u>1</u>	<u>N</u>	<u>FAC</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>56</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) <b>Sample appears representative of feature.</b>																		

**Hydrophytic Vegetation Indicators:**  
☒ 1 - Rapid Test for Hydrophytic Vegetation  
☒ 2 - Dominance Test is >50%  
☒ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
☐ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**  
  
**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes ☒      No ☐

## SOIL

Sampling Point: wira012e\_xw

[illegible]





wira012e\_xw\_E



wira012e\_xw\_W

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

<b>WETLAND IDENTIFICATION</b>							
Project name: Line 5 Relocation Project		Evaluator(s): EJO/JSW					
File #: wira012_x		Date of visit(s): 2020-05-19					
Location: PLSS: <u>sec 15 T046N R001W</u>		Ecological Landscape: Superior Mineral Ranges					
Lat: <u>46.457732</u> Long: <u>-90.479722</u>		Watershed: LS11, Potato River					
County: <u>Iron</u> Town/City/Village: <u>Gurney</u>							
<b>SITE DESCRIPTION</b>							
Soils: Mapped Type(s): Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes  Field Verified: Series not verified. Soil were observed to be clay loam over a cobble restrictive layer.		WWI Class: N/A  Wetland Type(s): <b>PEM - fresh wet meadow</b>					
Hydrology: The hydrologic regime is saturated. Some of the wetland is channelized/rutted from past heavy machinery travel through the wetland.		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Wetland Size: 0.0628</td> <td style="padding: 5px;">Wetland Area Impacted 0.0628</td> </tr> <tr> <td colspan="2" style="padding: 5px;">           Vegetation:            Plant Community Description(s):            The feature is a wet meadow in a forest opening/logging road dominated by fringed sedge (<i>Carex crinita</i>).         </td> </tr> </table>		Wetland Size: 0.0628	Wetland Area Impacted 0.0628	Vegetation: Plant Community Description(s): The feature is a wet meadow in a forest opening/logging road dominated by fringed sedge ( <i>Carex crinita</i> ).	
Wetland Size: 0.0628	Wetland Area Impacted 0.0628						
Vegetation: Plant Community Description(s): The feature is a wet meadow in a forest opening/logging road dominated by fringed sedge ( <i>Carex crinita</i> ).							

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	Y	Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding
2	N	N	Used for educational or scientific purposes
3	N	Y	Visually or physically accessible to public
4	N	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas 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			<b>Wildlife Habitat</b>
1	Y	Y	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	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	N	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 ≥ 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			<b>Fish and Aquatic Life Habitat</b>
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	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	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			<b>Water Quality Protection</b>
1	N	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	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			<b>Groundwater Processes</b>
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

WH-7: The wetland may support aquatic invertebrates providing food sources to other wildlife.  
WH-8: The wetland is located within a larger forest.  
ST-2: Ruts created by past heavy machinery have caused water flow to become channelized.  
ST-5: Stormwater flows into wetland from the logging road and potentially from the surrounding upland.

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

[illegible]

## List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

[illegible]

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

## WDNR WRAM v.2 data form - 4

### 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
X	X		H	C	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
X	X		M	C	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
X	X		H	C	Removal of tree or shrub strata – logging, unprescribed fire
X	X		H	C	Human trails – unpaved
					Human trails – paved
X	X		M	C	Removal of large woody debris
					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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The feature appears to be within a logging road with significant ruts, with the wetland canopy missing due to harvest. Earthworms are present in the surrounding forest, with the potential to remove the herbaceous layer in wetland. The logging road is somewhat maintained and is kept mowed/cleared of woody vegetation.



## 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		✓			
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The wetland is dominated by native species, and has moderate species diversity.
Human Use Values	The wetland is relatively small and within a forest road.
Wildlife Habitat	The wetland may support aquatic invertebrates and herpetofauna, with the potential to provide food sources to other wildlife.
Fish and Aquatic Life Habitat	See above
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland receives stormwater runoff from the logging road and potentially the surrounding upland, but portions may be compacted from previous logging operations.
Water Quality Protection	The wetland has dense and persistent vegetation.
Groundwater Processes	The wetland appears to primarily have recharge hydrology.

## 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: Iron Sampling Date: 2020-05-19  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira012e\_xu  
 Investigator(s): JSW/EJO Section, Township, Range: sec 15 T046N R001W  
 Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.457537 Long: -90.479885 Datum: WGS84  
 Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located in a mesic hardwood forest near a logging trail.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wira012e\_xu

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Acer saccharum</i></u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>20</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>36</u></td> <td>x 3 = <u>108</u></td> </tr> <tr> <td>FACU species <u>60</u></td> <td>x 4 = <u>240</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>96</u> (A)</td> <td><u>348</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.63</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>36</u>	x 3 = <u>108</u>	FACU species <u>60</u>	x 4 = <u>240</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>96</u> (A)	<u>348</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>36</u>	x 3 = <u>108</u>																	
FACU species <u>60</u>	x 4 = <u>240</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>96</u> (A)	<u>348</u> (B)																	
<u>30</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u><i>Acer saccharum</i></u>	<u>25</u>	<u>Y</u>	<u>FACU</u>															
2. <u><i>Betula alleghaniensis</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>30</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u><i>Dryopteris intermedia</i></u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u><i>Erythronium americanum</i></u>	<u>10</u>	<u>N</u>	_____															
3. <u><i>Cardamine concatenata</i></u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
4. <u><i>Osmunda claytoniana</i></u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
5. <u><i>Allium tricoccum</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
6. <u><i>Athyrium angustum</i></u>	<u>1</u>	<u>N</u>	<u>FAC</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>56</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) <b>Sugar maple is dominant but was not leafed out at the time of survey.</b>																		

## SOIL

Sampling Point: wira012e\_xu

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: Cobble

Depth (inches): 12

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks:

Could not dig beyond 12 inches due to the presence of cobble. No hydric soil indicators observed.





wira012e\_xu\_S



wira012e\_xu\_W



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-05-19  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira013f\_xw  
 Investigator(s): EJO/JSW Section, Township, Range: sec 15 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.459337 Long: -90.479993 Datum: WGS84  
 Soil Map Unit Name: Amasa cobbly fine sandy loam, 1 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <b>Feature is a hardwood swamp with black ash and yellow birch dominant in canopy, and Symphyotrichum lateriflorum dominant in ground layer. Carex gracimilla primarily occurring on hummocks within feature.</b>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <b>Feature is saturated, appearing to have discharge hydrology.</b>		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wira013f\_xw

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Betula alleghaniensis</i></u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u><i>Fraxinus nigra</i></u>	<u>10</u>	<u>Y</u>	<u>FACW</u>															
3. <u><i>Thuja occidentalis</i></u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>30</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>3</u></td> <td>x 1 = <u>3</u></td> </tr> <tr> <td>FACW species <u>18</u></td> <td>x 2 = <u>36</u></td> </tr> <tr> <td>FAC species <u>28</u></td> <td>x 3 = <u>84</u></td> </tr> <tr> <td>FACU species <u>4</u></td> <td>x 4 = <u>16</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>53</u> (A)</td> <td><u>139</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.62</u>	Total % Cover of:	Multiply by:	OBL species <u>3</u>	x 1 = <u>3</u>	FACW species <u>18</u>	x 2 = <u>36</u>	FAC species <u>28</u>	x 3 = <u>84</u>	FACU species <u>4</u>	x 4 = <u>16</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>53</u> (A)	<u>139</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>3</u>	x 1 = <u>3</u>																	
FACW species <u>18</u>	x 2 = <u>36</u>																	
FAC species <u>28</u>	x 3 = <u>84</u>																	
FACU species <u>4</u>	x 4 = <u>16</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>53</u> (A)	<u>139</u> (B)																	
<u>7</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u><i>Acer rubrum</i></u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u><i>Abies balsamea</i></u>	<u>2</u>	<u>Y</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>7</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u><i>Symphotrichum cf. lateriflorum</i></u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.   <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
2. <u><i>Rubus pubescens</i></u>	<u>2</u>	<u>Y</u>	<u>FACW</u>															
3. <u><i>Carex cf. gracillima</i></u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
4. <u><i>Ribes triste</i></u>	<u>2</u>	<u>Y</u>	<u>OBL</u>															
5. <u><i>Epilobium cf. coloratum</i></u>	<u>1</u>	<u>N</u>	<u>OBL</u>															
6. <u><i>Cardamine pensylvanica</i></u>	<u>1</u>	<u>N</u>	<u>FACW</u>															
7. <u><i>Cardamine concatenata</i></u>	<u>1</u>	<u>N</u>	<u>FACU</u>															
8. <u><i>Pyrola elliptica</i></u>	<u>1</u>	<u>N</u>	<u>FACU</u>															
9. <u><i>Trientalis borealis</i></u>	<u>1</u>	<u>N</u>	<u>FAC</u>															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>16</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) Plot vegetation appears representative of feature. Trees are not fully leafed out; canopy cover is expected to increase as the growing season progresses.																		

## SOIL

Sampling Point: wira013f\_xw

[illegible]





wira013f\_xw\_N



wira013f\_xw\_SW

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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project		Evaluator(s): EJO/JSW	
File #: wira013_x		Date of visit(s): 2020-05-19	
Location: PLSS: <u>sec 15 T046N R001W</u>		Ecological Landscape: Superior Mineral Ranges	
Lat: <u>46.459337</u> Long: <u>-90.479993</u>		Watershed: LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Amasa cobbly fine sandy loam, 1 to 6 percent slopes, Tula-Gogebic complex, 0 to 6 percent slopes, stony Field Verified: Series not verified. Soils were observed to be a silty mucky mineral overtop of clay.		WWI Class: T3/5K Wetland Type(s): <b>PFO - hardwood swamp</b>	
		Wetland Size: 0.0118	Wetland Area Impacted 0.0118
Hydrology: The hydrologic regime is saturated, appearing to have discharge hydrology.		Vegetation: Plant Community Description(s): The feature is a hardwood swamp dominated by black ash ( <i>Fraxinus nigra</i> ), with yellow birch ( <i>Betula alleghaniensis</i> ) occurring on rises within the wetland. Balsam fir ( <i>Abies balsamea</i> ) and red maple ( <i>Acer rubrum</i> ) are present in the subcanopy and shrub layer. Calico aster ( <i>Symphyotrichum lateriflorum</i> ) is the dominant ground layer species at the time of survey, with graceful sedge ( <i>Carex gracillima</i> ) present on hummocks.	

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	Y	Used for recreation (hunting, birding, hiking, etc.). List: birding, hunting
2	N	Y	Used for educational or scientific purposes
3	Y	Y	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			<b>Wildlife Habitat</b>
1	Y	Y	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	Y	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.)
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	Y	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			<b>Fish and Aquatic Life Habitat</b>
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			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	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			<b>Water Quality Protection</b>
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	N	Stormwater or surface water from agricultural land is major hydrology source
8	N	Y	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			<b>Groundwater Processes</b>
1	Y	Y	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	Y	Wetland remains saturated for an extended time period with no additional water inputs
4	N	Y	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

HU-6: The wetland contains tree/shrub/herbaceous strata, with the potential to support a variety of wildlife.  
WH-6: Variable wetland microtopography supports a variety of flora, which may in turn support various wildlife.  
WH-8: The wetland is part of a large intact forest.  
WQ-8: The wetland exhibits discharge hydrology.

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

## Fish and Aquatic Life Habitat and Species Observations

[illegible]

## SECTION 2: Floristic Integrity

### Plant Community Integrity (circle)\*

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

\*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)
Abies balsamea			PFO	Barren
Acer rubrum			PFO	Barren
Betula alleghaniensis*			PFO	Rare
Cardamine concatenata			PFO	Barren
Cardamine pensylvanica			PFO	Barren
Carex cf. gracillima*			PFO	Rare
Dryopteris intermedia			PFO	Barren
Epilobium cf. coloratum			PFO	Barren
Fraxinus nigra*			PFO	Rare
Glyceria striata			PFO	Barren
Lonicera canadensis			PFO	Barren
Maianthemum canadense			PFO	Barren
Mitchella repens			PFO	Barren
Pyrola elliptica			PFO	Barren
Ranunculus cf. recurvatus			PFO	Barren
Ribes triste			PFO	Barren
Rubus pubescens			PFO	Barren
Symphyotrichum lateriflorum*			PFO	Rare
Taraxacum officinale			PFO	Barren
Thuja occidentalis			PFO	Rare
Trientalis borealis			PFO	Barren
Tsuga canadensis			PFO	Barren

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

The wetland has high floristic integrity, with a good representation of native species and minimal presence of 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
					Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	X		M	C	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
X	X		M	C	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
	X		M	C	Removal of tree or shrub strata – logging, unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
					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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

Earthworm presence was observed in the surrounding upland, with the potential to impact the herbaceous layer; the wetland is located in the vicinity of logging roads and forest areas that have been previously logged/thinned.

## 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			✓		
Groundwater Processes			✓		

FUNCTION	RATIONALE
Floristic Integrity	Multiple strata are present, there is a good diversity of native species, and presence of non-native species is minimal.
Human Use Values	The wetland is aesthetically pleasing and has the potential to support a variety of wildlife valuable to recreation and/or hunting.
Wildlife Habitat	The wetland contains multiple strata with the potential to support a variety of wildlife. Multiple songbird species were observed in or near the wetland.
Fish and Aquatic Life Habitat	The wetland has the potential to support aquatic invertebrate.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland has the potential to absorb stormwater from the surrounding upland, but the feature also exhibits discharge hydrology that limits water retention.
Water Quality Protection	The wetland has dense and persistent vegetation important to water quality protection.
Groundwater Processes	Wetland has discharge hydrology.



## 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 City/County: Iron Sampling Date: 2020-05-19  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira013f\_xu  
 Investigator(s): JSW/EJO Section, Township, Range: sec 15 T046N R001W  
 Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.459327 Long: -90.479980 Datum: WGS84  
 Soil Map Unit Name: Amasa cobbly fine sandy loam, 1 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located in a mesic hardwood forest that has received a recent selective harvest.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wira013f\_xu

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Tilia americana</i></u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>8</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. <u><i>Acer saccharum</i></u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Tsuga canadensis</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>25</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>67</u></td> <td>x 3 = <u>201</u></td> </tr> <tr> <td>FACU species <u>35</u></td> <td>x 4 = <u>140</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>102</u> (A)</td> <td><u>341</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.343137254901961</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>67</u>	x 3 = <u>201</u>	FACU species <u>35</u>	x 4 = <u>140</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>102</u> (A)	<u>341</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>67</u>	x 3 = <u>201</u>																	
FACU species <u>35</u>	x 4 = <u>140</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>102</u> (A)	<u>341</u> (B)																	
<u>45</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u><i>Rubus idaeus</i></u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u><i>Abies balsamea</i></u>	<u>20</u>	<u>Y</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>45</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u><i>Erythronium americanum</i></u>	<u>20</u>	<u>Y</u>	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. <u><i>Carex pedunculata</i></u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
3. <u><i>Rubus idaeus</i></u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
4. <u><i>Maianthemum canadense</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
5. <u><i>Lonicera canadensis</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
6. <u><i>Trientalis borealis</i></u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>52</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The deciduous trees are leafless and the herbaceous stratum sparse at the time of survey.																		

## SOIL

Sampling Point: wira013f\_xu

[illegible]





wira013f\_xu\_S



wira013f\_xu\_W



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-03  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1005e\_w  
 Investigator(s): AGG/OTG Section, Township, Range: sec 17 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.464863 Long: -90.509122 Datum: WGS84  
 Soil Map Unit Name: Pits NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <b>The feature is a small basin wetland located along a gravel pit access road.</b>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) _____ Water Marks (B1) _____ Sediment Deposits (B2) _____ Drift Deposits (B3) _____ Algal Mat or Crust (B4) _____ Iron Deposits (B5) _____ Inundation Visible on Aerial Imagery (B7) _____ Sparsely Vegetated Concave Surface (B8)	_____ Water-Stained Leaves (B9) _____ Aquatic Fauna (B13) _____ Marl Deposits (B15) _____ Hydrogen Sulfide Odor (C1) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Presence of Reduced Iron (C4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Thin Muck Surface (C7) _____ Other (Explain in Remarks)	_____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <b>The wetland hydrology regime is seasonally saturated.</b>		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird1005e\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>18</u></td> <td>x 1 = <u>18</u></td> </tr> <tr> <td>FACW species <u>7</u></td> <td>x 2 = <u>14</u></td> </tr> <tr> <td>FAC species <u>2</u></td> <td>x 3 = <u>6</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>27</u> (A)</td> <td><u>38</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.41</u>	Total % Cover of:	Multiply by:	OBL species <u>18</u>	x 1 = <u>18</u>	FACW species <u>7</u>	x 2 = <u>14</u>	FAC species <u>2</u>	x 3 = <u>6</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>27</u> (A)	<u>38</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>18</u>	x 1 = <u>18</u>																	
FACW species <u>7</u>	x 2 = <u>14</u>																	
FAC species <u>2</u>	x 3 = <u>6</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>27</u> (A)	<u>38</u> (B)																	
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u>Salix interior</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>5</u> = Total Cover																
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Eleocharis sp.</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Typha sp.</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>															
3. <u>Scirpus cf. cyperinus</u>	<u>2</u>	<u>N</u>	<u>OBL</u>															
4. <u>Phalaris arundinacea</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
5. <u>Rumex crispus</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
6. <u>Juncus effusus</u>	<u>1</u>	<u>N</u>	<u>OBL</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>22</u> = Total Cover																
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Remarks: (Include photo numbers here or on a separate sheet.) <b>The vegetation of the area is dominated by cattails, spikerush, and bulrush.</b>																		

## SOIL

Sampling Point: wird1005e\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☒ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

Soils do not meet a hydric soil indicator. They are still assumed to be hydric but they are disturbed due to the location near a gravel pit access road.





wird1005e\_w\_E



wird1005e\_w\_N

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

<b>WETLAND IDENTIFICATION</b>							
Project name: Line 5 Relocation Project		Evaluator(s): AGG/OTG					
File #: wird1005		Date of visit(s): 2020-06-03					
Location: PLSS: <u>sec 17 T046N R001W</u>		Ecological Landscape: North Central Forest					
Lat: <u>46.464863</u> Long: <u>-90.509122</u>		Watershed: LS11, Potato River					
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>							
<b>SITE DESCRIPTION</b>							
Soils: Mapped Type(s): Pits  Field Verified: Series not verified. Soils were a sandy clay loam over sandy clay.		WWI Class: N/A  Wetland Type(s): PEM - Fresh wet meadow					
Hydrology: The wetland hydrology regime is seasonally saturated. Surface water and a high water table were observed in the feature at the time of survey.		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Wetland Size: 0.0236</td> <td style="padding: 5px;">Wetland Area Impacted 0.0236</td> </tr> <tr> <td colspan="2" style="padding: 5px;">           Vegetation:            Plant Community Description(s):            The vegetation of the area is dominated by cattails, spike rushes, and bulrush.         </td> </tr> </table>		Wetland Size: 0.0236	Wetland Area Impacted 0.0236	Vegetation: Plant Community Description(s): The vegetation of the area is dominated by cattails, spike rushes, and bulrush.	
Wetland Size: 0.0236	Wetland Area Impacted 0.0236						
Vegetation: Plant Community Description(s): The vegetation of the area is dominated by cattails, spike rushes, and bulrush.							

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	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
5	N	N	In or adjacent to RED FLAG areas 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			<b>Wildlife Habitat</b>
1	N	Y	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.)
7	N	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	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			<b>Fish and Aquatic Life Habitat</b>
1	N	N	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			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	N	N	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			<b>Water Quality Protection</b>
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	N	N	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	Y	Y	Natural land cover in 100m buffer area < 50%
GW			<b>Groundwater Processes</b>
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

### Section 1 Comments (Refer to Section 1 numbers)

FA-2: Standing water provides low-quality habitat, primarily for aquatic insects.  
ST-1: The feature is a small basin wetland along a gravel pit access 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
Y	Y	Insects
	Y	Amphibians

### 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

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

The overall diversity of the feature is low, with several invasive species 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)
	X		L	C	Drainage – tiles, ditches
	X		M	C	Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
	X		L	C	Polluted runoff
					Pond construction
	X		L	C	Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
X	X		H	C	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
X	X		M	C	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
X	X		M	C	Cover of non-native and/or invasive species
					Residential land use
X	X		H	C	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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The feature is highly polluted and disturbed by nearby land uses, predominantly including a gravel pit and adjacent roads.

## 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	✓				
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The diversity of the feature is very low, with invasive species present.
Human Use Values	No observed human uses.
Wildlife Habitat	Very small feature with very little potential habitat.
Fish and Aquatic Life Habitat	Potential for aquatic insects and degraded habitat for amphibians.
Shoreline Protection	N/A
Flood and Stormwater Storage	Very small feature located along a road.
Water Quality Protection	Feature holds and allows a small amount of water to infiltrate, but is sparsely vegetated.
Groundwater Processes	Groundwater recharge feature.



## 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: Iron Sampling Date: 2020-06-03  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1005\_u  
 Investigator(s): AGG/OTG Section, Township, Range: sec 17 T046N R001W  
 Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): Convex Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.464736 Long: -90.509255 Datum: WGS84  
 Soil Map Unit Name: Pits NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located along a gravel pit access road and is dominated by weedy upland species.	

## HYDROLOGY

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

**VEGETATION** – Use scientific names of plants.

Sampling Point: wird1005\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>30</u> (A)</td> <td><u>120</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.00</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>30</u>	x 4 = <u>120</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>30</u> (A)	<u>120</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>30</u>	x 4 = <u>120</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>30</u> (A)	<u>120</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Lotus corniculatus</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Dactylis glomerata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>30</u> = Total Cover																
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Remarks: (Include photo numbers here or on a separate sheet.) The area is dominated by bird's-foot trefoil and bare ground.																		

## SOIL

Sampling Point: wird1005\_u

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☒

Remarks:

Soils are too compact and rocky to be excavated. Soils are assumed to be non-hydric based on the landscape position and dominant vegetation.





wird1005\_u\_E



wird1005\_u\_W

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-03  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1003e\_w  
 Investigator(s): AGG/OTG Section, Township, Range: sec 17 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.465594 Long: -90.514212 Datum: WGS84  
 Soil Map Unit Name: Sayner loamy sand, 0 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <b>The feature is a shallow depressional basin located within an active gravel mine.</b>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) ___ Water Marks (B1) ___ Sediment Deposits (B2) ___ Drift Deposits (B3) ___ Algal Mat or Crust (B4) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Sparsely Vegetated Concave Surface (B8)	___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13) ___ Marl Deposits (B15) ___ Hydrogen Sulfide Odor (C1) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Presence of Reduced Iron (C4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Thin Muck Surface (C7) ___ Other (Explain in Remarks)	___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>3</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <b>The wetland hydrology regime is temporarily flooded.</b>		



**VEGETATION** – Use scientific names of plants.

Sampling Point: wird1003e\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>6</u></td> <td>x 3 = <u>18</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>6</u> (A)</td> <td><u>18</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.0</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>6</u>	x 3 = <u>18</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>6</u> (A)	<u>18</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>6</u>	x 3 = <u>18</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>6</u> (A)	<u>18</u> (B)																	
<u>0</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Equisetum arvense</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Persicaria sp.</u>	<u>2</u>	<u>Y</u>	_____															
3. <u>Euthamia graminifolia</u>	<u>1</u>	<u>N</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>8</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																		
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.) The feature is sparsely vegetated. There are few species present on the edges including smartweed and field horsetail.																		

## SOIL

Sampling Point: wird1003e\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☒ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

Redox was observed within the lower profile.



wird1003e\_w\_S



wird1003e\_w\_W

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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project		Evaluator(s): AGG/OTG	
File #: wird1003		Date of visit(s): 2020-06-03	
Location: PLSS: <u>sec 17 T046N R001W</u>		Ecological Landscape: North Central Forest	
Lat: <u>46.465615</u> Long: <u>-90.514248</u>		Watershed: LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Sayner loamy sand, 0 to 6 percent slopes. Pits.  Field Verified: Series not verified. Soils were a silty clay throughout the profile.		WWI Class: N/A  Wetland Type(s): PEM - temporarily flooded basin	
		Wetland Size: 0.0161	Wetland Area Impacted 0.0161
Hydrology: The wetland hydrology regime is temporarily flooded due to the disturbed nature of the feature.		Vegetation: Plant Community Description(s): The feature is sparsely vegetated. There are few species present on the edges, such as a smartweed species and field horsetail.	

**SITE MAP**

**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	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
5	N	N	In or adjacent to RED FLAG areas 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			<b>Wildlife Habitat</b>
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.)
7	N	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	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			<b>Fish and Aquatic Life Habitat</b>
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	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	N	N	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	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			<b>Water Quality Protection</b>
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	N	N	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	Y	Y	Natural land cover in 100m buffer area < 50%
GW			<b>Groundwater Processes</b>
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



**Section 1 Comments (Refer to Section 1 numbers)**

ST-1: The feature is a small depressional basin wetland surrounded by multiple large gravel pits.

**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	Y	Dragonfly
Y	Y	Tree swallows
	Y	Other avian species

**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 insects

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

## WDNR WRAM v.2 data form - 4

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
	X		M	C	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
	X		L	C	Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
X	X		M	C	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
		X	H	C	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
		X	H	C	Removal of tree or shrub strata – logging, unprescribed fire
	X		H	C	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
					Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
	X		M	C	Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

\* L= Low, M = Medium, H = High

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The feature is highly altered and degraded by nearby human uses, including large gravel pits.

## 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	✓				
Groundwater Processes					✓

FUNCTION	RATIONALE
Floristic Integrity	Very low diversity of species.
Human Use Values	No discernible uses.
Wildlife Habitat	Very little potential habitat.
Fish and Aquatic Life Habitat	Marginal potential for aquatic insects, but for little else.
Shoreline Protection	N/A
Flood and Stormwater Storage	Holds a very limited amount of runoff water.
Water Quality Protection	Does not appear to effect water quality of the area.
Groundwater Processes	Temporarily flooded basin.

## 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: Iron Sampling Date: 2020-06-03  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1003\_u  
 Investigator(s): AGG/OTG Section, Township, Range: sec 17 T046N R001W  
 Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.465573 Long: -90.513858 Datum: WGS84  
 Soil Map Unit Name: Pits NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located along a gravel pit access road. Rocks have been dumped in the area.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird1003\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>35</u></td> <td>x 4 = <u>140</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>35</u> (A)</td> <td><u>140</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.0</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>35</u>	x 4 = <u>140</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>35</u> (A)	<u>140</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>35</u>	x 4 = <u>140</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>35</u> (A)	<u>140</u> (B)																	
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Lotus corniculatus</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Melilotus officinalis</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Centaurea stoebe</u>	<u>5</u>	<u>N</u>																
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>40</u> = Total Cover																
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Remarks: (Include photo numbers here or on a separate sheet.) The area is dominated by weedy species including bird's-foot trefoil.																		

## SOIL

Sampling Point: wird1003\_u

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☒

Remarks:

Soils could not be dug due to the presence of rocks and crushed asphalt at the surface. Soils are assumed to be non-hydric based on the landscape position and dominant vegetation.





wird1003\_u\_E



wird1003\_u\_W

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-05-30  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird001f\_xw  
 Investigator(s): EJO/JSW Section, Township, Range: sec 15 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.467683 Long: -90.483377 Datum: WGS84  
 Soil Map Unit Name: Chabeneau-Channing-Gogebic complex, 0 to 6 percent slopes, stony NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The feature is a temporarily flooded floodplain forest dominated by black ash, silver maple, speckled alder, and ostrich fern at the sample plot. The feature is fairly extensive with variable microtopography; thus, both hydrophytic and upland-associated species are present in the larger floodplain.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: The feature is a temporarily flooded floodplain associated with stream sirc1005p.		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird001f\_xw

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Fraxinus nigra</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Acer saccharinum</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>80</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u>Alnus incana</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>108</u></td> <td>x 2 = <u>216</u></td> </tr> <tr> <td>FAC species <u>52</u></td> <td>x 3 = <u>156</u></td> </tr> <tr> <td>FACU species <u>1</u></td> <td>x 4 = <u>4</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>161</u> (A)</td> <td><u>376</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.3354037267080745</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>108</u>	x 2 = <u>216</u>	FAC species <u>52</u>	x 3 = <u>156</u>	FACU species <u>1</u>	x 4 = <u>4</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>161</u> (A)	<u>376</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>108</u>	x 2 = <u>216</u>																	
FAC species <u>52</u>	x 3 = <u>156</u>																	
FACU species <u>1</u>	x 4 = <u>4</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>161</u> (A)	<u>376</u> (B)																	
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>5</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Matteuccia struthiopteris</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Onoclea sensibilis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>															
3. <u>Thalictrum dasycarpum</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
4. <u>Maianthemum stellatum</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
5. <u>Laportea canadensis</u>	<u>1</u>	<u>N</u>	<u>FACW</u>															
6. <u>Anemone quinquefolia</u>	<u>1</u>	<u>N</u>	<u>FACU</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>76</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.) The feature is a floodplain forest dominated by black ash and silver maple in the canopy, speckled alder in the shrub layer, and ostrich fern and sensitive fern in the ground layer. The sample plot is not representative of the entire floodplain. Sugar maple, basswood, northern white cedar, green ash, and other tree species are all present in the wetland outside of the sample plot.																		



## SOIL

Sampling Point: wird001f\_xw

[illegible]



wird001f\_xw\_NE



wird001f\_xw\_SW

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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project	Evaluator(s): EJO/JSW		
File #: wird001_x	Date of visit(s): 2020-05-30		
Location: PLSS: <u>sec 15 T046N R001W</u>	Ecological Landscape: Superior Mineral Ranges		
Lat: <u>46.467683</u> Long: <u>-90.483377</u>	Watershed: LS11, Potato River		
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Chabeneau-Channing-Gogebic complex, 0 to 6 percent slopes, stony	WWI Class: T3Kw		
Field Verified: Series were not verified. Soils were observed to be silty loam with prominent redox.	Wetland Type(s): PFO - floodplain forest		
Hydrology: The feature is a temporarily flooded floodplain associated with stream sirc1005p (Potato River). Microtopography is variable.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;">Wetland Size:</td> <td style="width: 50%; padding: 5px;">Wetland Area Impacted</td> </tr> </table>	Wetland Size:	Wetland Area Impacted
Wetland Size:	Wetland Area Impacted		
	Vegetation: Plant Community Description(s): The wetland is a floodplain forest dominated by black ash and silver maple in the canopy, speckled alder in the shrub layer, and ostrich fern and sensitive fern in the herbaceous layer. The canopy is fairly diverse, with sugar maple, basswood, northern white cedar, eastern hemlock, green ash, and yellow birch also present in the canopy.		

**SITE MAP**



### SECTION 1: Functional Value Assessment

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	Y	Used for recreation (hunting, birding, hiking, etc.). List: hunting, fishing
2	N	N	Used for educational or scientific purposes
3	N	Y	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Y	Y	In or adjacent to RED FLAG areas List: Trout Streams: Potato River, Lawrence Creek
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			<b>Wildlife Habitat</b>
1	Y	Y	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	Y	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.)
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	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			<b>Fish and Aquatic Life Habitat</b>
1	Y	Y	Wetland is connected or contiguous with perennial stream or lake
2	N	N	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	Y	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
1	Y	Y	Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable
2	Y	Y	Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable
3	Y	Y	Densely rooted emergent or woody vegetation
ST			<b>Storm and Floodwater Storage</b>
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	Y	Y	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	Y	Y	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			<b>Water Quality Protection</b>
1	Y	Y	Provides substantial storage of storm and floodwater based on previous section
2	N	N	Basin wetland or constricted outlet
3	N	Y	Water flow through wetland is NOT channelized
4	N	Y	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	Y	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			<b>Groundwater Processes</b>
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

HU-5: The feature is a floodplain of the Potato River, which joins with Lawrence River to the east.

WQ-4: the wetland is a floodplain associated with the Potato River (sirc1005p).

WH-8: the wetland is part of a larger forest that likely supports sensitive or SGCN species.

WH-6: the wetland has variable microtopography supporting both hydrophytic and upland-associated species.

ST-8: The feature is a large floodplain of the Potato River, which upon flood events may function to temporarily retain much of this water.

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

[illegible]

## List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

[illegible]

## SECTION 2: Floristic Integrity

### Plant Community Integrity (circle)\*

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

\*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)
Fraxinus nigra*			PFO	Patchy
Matteuccia struthiopteris*			PFO	Patchy
Acer saccharinum*			PFO	Patchy
Acer saccharum*			PFO	Rare
Fraxinus pennsylvanica			PFO	Rare
Onoclea sensibilis			PFO	Rare
Abies balsamea			PFO	Rare
Thalictrum dasycarpum			PFO	Rare
Thuja occidentalis			PFO	Rare
Alnus incana			PFO	Rare
Maianthemum racemosum			PFO	Rare
Cardamine concatenata			PFO	Barren
Prunus serotina			PFO	Barren
Ulmus americana			PFO	Barren
Cardamine diphylla			PFO	Barren
Caulophyllum thalictroides			PFO	Barren
Allium tricoccum			PFO	Barren
Anemone quinquefolia			PFO	Barren
Arisaema triphyllum			PFO	Barren
Carex bromoides			PFO	Barren
Carex crinita			PFO	Barren
Maianthemum stellatum			PFO	Barren
Sanguinaria canadensis			PFO	Barren
Uvularia sessilifolia			PFO	Barren
Dicentra cucullaria			PFO	Barren
Laportea canadensis			PFO	Barren
Trillium cernuum			PFO	Barren
Viola pubescens			PFO	Barren

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

The wetland is an intact plant community with a diversity of native trees and shrubs, graminoids, and forbs, with many species typically found in floodplains 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
					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
	X		M	C	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
	X		M	C	Removal of tree or shrub strata – logging, unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
					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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

Logging has occurred in the surrounding forest. Earthworms are present in the surrounding forest with potential to impact the wetland's herbaceous layer. The feature is otherwise fairly undisturbed.

## 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			✓		
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The wetland is an intact and diverse plant community with a minimal presence of exotic species.
Human Use Values	The wetland is associated with the Potato River, and thus provides some opportunities.
Wildlife Habitat	The wetland has well-developed strata and is part of a larger forest that supports a diversity of wildlife.
Fish and Aquatic Life Habitat	The floodplain has insufficient durations of standing water, as water likely is not retained for long periods after flood events.
Shoreline Protection	The wetland is an intact floodplain adjacent to the Potato River.
Flood and Stormwater Storage	The wetland is a relatively large and intact floodplain.
Water Quality Protection	The wetland has dense and persistent vegetation important for absorbing and filtering surface water and precipitation.
Groundwater Processes	The wetland is a large, intact floodplain, which receives most of its water inputs from flooding, and not from 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

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-05-30  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird001f\_xu  
 Investigator(s): EJO/JSW Section, Township, Range: sec 15 T046N R001W  
 Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.468121 Long: -90.483841 Datum: WGS84  
 Soil Map Unit Name: Moquah-Arnheim complex, 0 to 3 percent slopes, frequently flooded NWI classification: PFO1C

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 ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The feature is a mesic hardwood forest with a canopy dominated by eastern hemlock, basswood, and white spruce. Balsam fir is dominant in the shrub layer, and interrupted fern, ostrich fern, and dogtooth violet are dominant in the ground layer. The wetland is located west of the survey area.	

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16</u> Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: The water table was observed 16 inches below the surface.		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird001f\_xu

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Tsuga canadensis</i></u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>43</u> (A/B)														
2. <u><i>Picea glauca</i></u>	<u>15</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Thuja occidentalis</i></u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
4. <u><i>Tilia americana</i></u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
5. <u><i>Acer saccharum</i></u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
6. <u><i>Fraxinus nigra</i></u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
7. <u><i>Abies balsamea</i></u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
		<u>85</u>	= Total Cover															
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u><i>Abies balsamea</i></u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>21</u></td> <td>x 2 = <u>42</u></td> </tr> <tr> <td>FAC species <u>45</u></td> <td>x 3 = <u>135</u></td> </tr> <tr> <td>FACU species <u>64</u></td> <td>x 4 = <u>256</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>130</u> (A)</td> <td><u>433</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.330769230769231</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>21</u>	x 2 = <u>42</u>	FAC species <u>45</u>	x 3 = <u>135</u>	FACU species <u>64</u>	x 4 = <u>256</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>130</u> (A)	<u>433</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>21</u>	x 2 = <u>42</u>																	
FAC species <u>45</u>	x 3 = <u>135</u>																	
FACU species <u>64</u>	x 4 = <u>256</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>130</u> (A)	<u>433</u> (B)																	
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>10</u>	= Total Cover															
Herb Stratum (Plot size: <u>5</u> )																		
1. <u><i>Erythronium americanum</i></u>	<u>20</u>	<u>Y</u>	_____	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u><i>Matteuccia struthiopteris</i></u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
3. <u><i>Osmunda claytoniana</i></u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
4. <u><i>Dryopteris intermedia</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
5. <u><i>Maianthemum racemosum</i></u>	<u>3</u>	<u>N</u>	<u>FACU</u>															
6. <u><i>Mitchella repens</i></u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
7. <u><i>Cardamine concatenata</i></u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
8. <u><i>Onoclea sensibilis</i></u>	<u>1</u>	<u>N</u>	<u>FACW</u>															
9. <u><i>Quercus rubra</i></u>	<u>1</u>	<u>N</u>	<u>FACU</u>															
10. <u><i>Maianthemum canadense</i></u>	<u>1</u>	<u>N</u>	<u>FACU</u>															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>55</u>	= Total Cover															
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u>	= Total Cover															
Remarks: (Include photo numbers here or on a separate sheet.) Sample plot recorded in a mesic hardwood forest. Sample appears representative of the surrounding upland area.																		

## SOIL

Sampling Point: wird001f\_xu

[illegible]





wird001f\_xu\_NE



wird001f\_xu\_NW





wird001f\_xu\_SE



wird001f\_xu\_SW

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-03  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1004e\_w  
 Investigator(s): AGG/OTG Section, Township, Range: sec 17 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.466800 Long: -90.514862 Datum: WGS84  
 Soil Map Unit Name: Sayner loamy sand, 0 to 6 percent slopes NWI classification: PUBH

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 ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Remarks: (Explain alternative procedures here or in a separate report.)  
 The feature is a small basin dominated by reed canary grass. Outside of the sample plot, sensitive fern and blister sedge are present.

## HYDROLOGY

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

**VEGETATION** – Use scientific names of plants.

Sampling Point: wird1004e\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>100</u></td> <td>x 2 = <u>200</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>200</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.0</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>100</u>	x 2 = <u>200</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>200</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>100</u>	x 2 = <u>200</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>100</u> (A)	<u>200</u> (B)																	
		<u>0</u> = Total Cover																
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Phalaris arundinacea</u>	<u>100</u>	<u>Y</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>100</u> = Total Cover																
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																		
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.) The sample plot is completely dominated by reed canary grass.																		

## SOIL

Sampling Point: wird1004e\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☒ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

Red silty clay with redox throughout the profile.





wird1004e\_w\_E



wird1004e\_w\_N



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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project		Evaluator(s): AGG/OTG	
File #: wird1004		Date of visit(s): 2020-06-03	
Location: PLSS: <u>sec 17 T046N R001W</u>		Ecological Landscape: North Central Forest	
Lat: <u>46.466837</u> Long: <u>-90.514834</u>		Watershed: LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Sayner loamy sand, 0 to 6 percent slopes		WWI Class: N/A	
Field Verified: Series not verified. Soils were a reduced silty clay throughout the profile.		Wetland Type(s): PEM - fresh wet meadow	
		Wetland Size: 0.1132	Wetland Area Impacted 0.1132
Hydrology: The wetland hydrology regime is seasonally saturated.		Vegetation: Plant Community Description(s): The sample plot is completely dominated by reed canary grass.	

**SITE MAP**

**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	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
5	N	N	In or adjacent to RED FLAG areas 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			<b>Wildlife Habitat</b>
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.)
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	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			<b>Fish and Aquatic Life Habitat</b>
1	N	N	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			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	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			<b>Water Quality Protection</b>
1	N	Y	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	Y	Y	Stormwater or surface water from agricultural land is major hydrology source
8	N	N	Discharge to surface water
9	Y	Y	Natural land cover in 100m buffer area < 50%
GW			<b>Groundwater Processes</b>
1	Y	Y	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

### Section 1 Comments (Refer to Section 1 numbers)

ST-5: The feature is dominated by a continuous cover of reed canary grass and carex vesicaria.  
WQ-9: The feature is near gravel quarries and agricultural fields.  
GW-1: The feature appears to seep onto a nearby unpaved 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
Y	Y	Amphibians
Y	Y	Insects
Y	Y	Birds

### 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

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

The overall diversity of the feature is very low.

### 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		L	C	Polluted runoff
					Pond construction
	X		H	C	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
	X		L	UC	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
					Removal of tree or shrub strata – logging, unprescribed fire
X	X		M	C	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
X	X		H	C	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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The feature is located along the edge of an agricultural field and is dominated by reed canary grass. Gravel quarries are also present nearby.



## 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		✓			
Groundwater Processes		✓			

FUNCTION	RATIONALE
Floristic Integrity	Very few species observed. Reed canary grass is dominant.
Human Use Values	No discernible uses.
Wildlife Habitat	Low diversity of species observed.
Fish and Aquatic Life Habitat	Very little potential, but aquatic insects could use this wetland temporarily.
Shoreline Protection	N/A
Flood and Stormwater Storage	Small depressional feature on the edge of an agricultural field.
Water Quality Protection	The feature is densely vegetated and surrounded by disturbed agricultural land.
Groundwater Processes	It appears that water seeps out of the feature onto the nearby unpaved road.

## 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: Iron Sampling Date: 2020-06-03  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1004\_u  
 Investigator(s): AGG/OTG Section, Township, Range: sec 17 T046N R001W  
 Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): Convex Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.466710 Long: -90.514970 Datum: WGS84  
 Soil Map Unit Name: Sayner loamy sand, 0 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) <u>The upland sample point is located along an unpaved road.</u>	

## HYDROLOGY

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

**VEGETATION** – Use scientific names of plants.

Sampling Point: wird1004\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Populus tremuloides</u>	<u>75</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>75</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>92</u></td> <td>x 3 = <u>276</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>107</u> (A)</td> <td><u>326</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.046728971962617</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>92</u>	x 3 = <u>276</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>107</u> (A)	<u>326</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>5</u>	x 2 = <u>10</u>																	
FAC species <u>92</u>	x 3 = <u>276</u>																	
FACU species <u>10</u>	x 4 = <u>40</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>107</u> (A)	<u>326</u> (B)																	
<u>0</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Carex blanda</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Taraxacum officinale</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Solidago gigantea</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
4. <u>Symphotrichum lateriflorum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
5. <u>Rubus idaeus</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>32</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																		
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.) The sample plot is dominated by quaking aspen and weedy species such as common dandelion.																		

## SOIL

Sampling Point: wird1004\_u

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☒

Remarks:

No hydric soil indicators were observed.



wird1004\_u\_E



wird1004\_u\_S



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-05-30  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirc1026e\_w  
 Investigator(s): EJO/JSW Section, Township, Range: sec 15 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.469494 Long: -90.483572 Datum: WGS84  
 Soil Map Unit Name: Wakefield loam, 6 to 18 percent slopes, stony NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The feature is a saturated wet meadow dominated by fringed sedge. Ruts are present in the wetland from vehicles or heavy equipment; these may be partially influencing wetland hydrology. The wetland appears to be a part of a cleared forest trail.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: The feature appears to be seasonally saturated. Standing water was observed in the wetland at the time of survey, but not at the sample point. Ruts are present in the wetland, which may be partially influencing the wetland's hydrology. The wetland exhibits both recharge and discharge hydrology.		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wirc1026e\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>80</u></td> <td>x 1 = <u>80</u></td> </tr> <tr> <td>FACW species <u>13</u></td> <td>x 2 = <u>26</u></td> </tr> <tr> <td>FAC species <u>3</u></td> <td>x 3 = <u>9</u></td> </tr> <tr> <td>FACU species <u>1</u></td> <td>x 4 = <u>4</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>97</u> (A)</td> <td><u>119</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.23</u>	Total % Cover of:	Multiply by:	OBL species <u>80</u>	x 1 = <u>80</u>	FACW species <u>13</u>	x 2 = <u>26</u>	FAC species <u>3</u>	x 3 = <u>9</u>	FACU species <u>1</u>	x 4 = <u>4</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>97</u> (A)	<u>119</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>80</u>	x 1 = <u>80</u>																	
FACW species <u>13</u>	x 2 = <u>26</u>																	
FAC species <u>3</u>	x 3 = <u>9</u>																	
FACU species <u>1</u>	x 4 = <u>4</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>97</u> (A)	<u>119</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Fraxinus nigra</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>2</u> = Total Cover																
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Carex crinita</u>	<u>80</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Impatiens capensis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
3. <u>Ranunculus cf. recurvatus</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
4. <u>Dryopteris intermedia</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
5. <u>Onoclea sensibilis</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
6. <u>Solidago gigantea</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
7. <u>Arisaema triphyllum</u>	<u>1</u>	<u>N</u>	<u>FAC</u>															
8. <u>Taraxacum officinale</u>	<u>1</u>	<u>N</u>	<u>FACU</u>															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>95</u> = Total Cover																
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Remarks: (Include photo numbers here or on a separate sheet.) The feature is a wet meadow dominated by fringed sedge. The sample plot is fairly representative of the feature.																		

**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 height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

## SOIL

Sampling Point: wirc1026e\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

Soils were observed to be silt loam with prominent redox.



wirc1026e\_w\_NW



wirc1026e\_w\_SE

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

<b>WETLAND IDENTIFICATION</b>		
Project name: Line 5 Relocation Project	Evaluator(s): EJO/JSW	
File #: wirc1026	Date of visit(s): 2020-05-30	
Location: PLSS: <u>sec 15 T046N R001W</u>	Ecological Landscape: Superior Mineral Ranges	
Lat: <u>46.469480</u> Long: <u>-90.483565</u>	Watershed: LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>		
<b>SITE DESCRIPTION</b>		
Soils: Mapped Type(s): Wakefield loam, 6 to 18 percent slopes, stony  Field Verified: Series were not verified. Soils were observed to be silty loam with prominent redox.	WWI Class: N/A	
	Wetland Type(s): PEM - fresh wet meadow	
	Wetland Size: 0.1818	Wetland Area Impacted 0.1818
Hydrology: The feature appears to be saturated. Standing water was observed in the wetland at the time of survey, but not at the sample point. Ruts are present in the wetland, which may be partially influencing the wetland's hydrology. The wetland exhibits both recharge and discharge hydrology.	Vegetation: Plant Community Description(s): The feature is a wet meadow dominated by fringed sedge. The sample plot is fairly representative of the feature. The feature is surrounded by forest.	

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	Y	Used for recreation (hunting, birding, hiking, etc.). List: Hunting
2	N	N	Used for educational or scientific purposes
3	N	Y	Visually or physically accessible to public
4	N	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Y	Y	In or adjacent to RED FLAG areas List: Trout Streams: Potato River
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			<b>Wildlife Habitat</b>
1	Y	Y	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	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 (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	Y	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
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			<b>Fish and Aquatic Life Habitat</b>
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	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
1	N	N	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	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	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			<b>Water Quality Protection</b>
1	N	N	Provides substantial storage of storm and floodwater based on previous section
2	N	Y	Basin wetland or constricted outlet
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			<b>Groundwater Processes</b>
1	Y	Y	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



### Section 1 Comments (Refer to Section 1 numbers)

HU-5: The RED FLAG area is within the buffer area.  
GW-1: Brome-like sedge in the wetland is an indicator of discharge hydrology.  
WQ-5: The wetland has a dense coverage of graminoids.  
FA-2: Standing water was present in the wetland at the time of survey, with potential to host aquatic life.

### 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	Mammals, herpetofauna, birds
Y	Y	A thrush nest with eggs was observed on the edge of the wetland

### 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

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

The wetland has a consistent coverage of native species, with a minimal presence of exotic 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
X	X		M	C	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
	X		M	C	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
X	X		M	C	Removal of tree or shrub strata – logging, unprescribed fire
X	X		M	C	Human trails – unpaved
					Human trails – paved
		X	M	C	Removal of large woody debris
					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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The wetland occurs on a forest trail, with ruts present; these may partially influence the wetland's hydrology. The forest trail and wetland was likely previously logged, as it is within a linear canopy opening within a forest. Woody debris was likely removed from the wetland.

## 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			✓		
Groundwater Processes			✓		

FUNCTION	RATIONALE
Floristic Integrity	The wetland is almost entirely comprised of native species, but has a relatively low species richness.
Human Use Values	The feature is located near a gravel road, and the open break in forest canopy presents hunting potential.
Wildlife Habitat	The wetland is part of a larger forest that supports a diversity of wildlife. A thrush nest and eggs were observed on the edge of the wetland.
Fish and Aquatic Life Habitat	The wetland had standing water at the time of the survey, with potential to host aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely receives and stores stormwater from the surrounding uplands and forest trail.
Water Quality Protection	The wetland has dense and persistent vegetation which can filter and store surface water and precipitation. The wetland is upslope of the Potato River.
Groundwater Processes	The wetland exhibits both discharge and recharge hydrology.

## 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: Iron Sampling Date: 2020-05-30  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirc1025f\_w  
 Investigator(s): EJO/JSW Section, Township, Range: sec 15 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.470107 Long: -90.483713 Datum: WGS84  
 Soil Map Unit Name: Wakefield loam, 6 to 18 percent slopes, stony NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The wetland is a saturated hardwood swamp dominated by black ash, yellow birch, and sugar maple. The wetland has been harvested, with stumps present. Ruts also intersect the wetland and may influence the wetland's hydrology.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>8</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: The feature is seasonally saturated. Standing water is present in the wetland at the time of survey, but not at the sample point. Ruts from heavy equipment intersect the wetland, likely influencing hydrology to some extent.		



**VEGETATION – Use scientific names of plants.**

 Sampling Point: wirc1025f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Betula alleghaniensis</i></u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>71</u> (A/B)														
2. <u><i>Acer saccharum</i></u>	<u>20</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Fraxinus nigra</i></u>	<u>15</u>	<u>Y</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>55</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>61</u></td> <td>x 1 = <u>61</u></td> </tr> <tr> <td>FACW species <u>54</u></td> <td>x 2 = <u>108</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x 3 = <u>75</u></td> </tr> <tr> <td>FACU species <u>25</u></td> <td>x 4 = <u>100</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>165</u> (A)</td> <td><u>344</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.0848484848485</u>	Total % Cover of:	Multiply by:	OBL species <u>61</u>	x 1 = <u>61</u>	FACW species <u>54</u>	x 2 = <u>108</u>	FAC species <u>25</u>	x 3 = <u>75</u>	FACU species <u>25</u>	x 4 = <u>100</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>165</u> (A)	<u>344</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>61</u>	x 1 = <u>61</u>																	
FACW species <u>54</u>	x 2 = <u>108</u>																	
FAC species <u>25</u>	x 3 = <u>75</u>																	
FACU species <u>25</u>	x 4 = <u>100</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>165</u> (A)	<u>344</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u><i>Fraxinus nigra</i></u>	<u>15</u>	<u>Y</u>	<u>FACW</u>															
2. <u><i>Acer saccharum</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>20</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u><i>Carex crinita</i></u>	<u>55</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u><i>Impatiens capensis</i></u>	<u>20</u>	<u>Y</u>	<u>FACW</u>															
3. <u><i>Dryopteris intermedia</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
4. <u><i>Polygonum cilinode</i></u>	<u>4</u>	<u>N</u>	_____															
5. <u><i>Ribes triste</i></u>	<u>2</u>	<u>N</u>	<u>OBL</u>															
6. <u><i>Epilobium cf. coloratum</i></u>	<u>2</u>	<u>N</u>	<u>OBL</u>															
7. <u><i>Juncus effusus</i></u>	<u>2</u>	<u>N</u>	<u>OBL</u>															
8. <u><i>Ranunculus cf. recurvatus</i></u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
9. <u><i>Onoclea sensibilis</i></u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>94</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The feature is a hardwood swamp dominated by yellow birch, black ash, and sugar maple, with black ash dominant in the shrub layer, and fringed sedge dominant in the ground layer.																		

## SOIL

Sampling Point: wirc1025f\_w

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

[illegible]<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☐

Remarks:

Soils were observed to be silty loam with redox below 8 inches.



wirc1025f\_w\_N



wirc1025f\_w\_S

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

<b>WETLAND IDENTIFICATION</b>					
Project name: Line 5 Relocation Project		Evaluator(s): EJO/JSW			
File #: wirc1025		Date of visit(s): 2020-05-30			
Location: PLSS: <u>sec 15 T046N R001W</u>		Ecological Landscape: Superior Mineral Ranges			
Lat: <u>46.470049</u> Long: <u>-90.483695</u>		Watershed: LS11, Potato River			
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>					
<b>SITE DESCRIPTION</b>					
Soils: Mapped Type(s): Wakefield loam, 6 to 18 percent slopes, stony  Field Verified: Series were not verified. Soils were observed to be silty loam.		WWI Class: N/A  Wetland Type(s): PFO - hardwood swamp			
Hydrology: The feature is saturated. The water table and saturation were observed at 8 and 4 inches below the surface, respectively. Standing water was present in the wetland at the time of survey but not at the sample point. Ruts from heavy equipment intersect the wetland, likely influencing hydrology to some extent.		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Wetland Size: 0.0806</td> <td style="padding: 5px;">Wetland Area Impacted 0.0806</td> </tr> </table> Vegetation: Plant Community Description(s): The feature is a hardwood swamp dominated by yellow birch, black ash, and sugar maple, with black ash dominant in the shrub layer, and fringed sedge dominant in the ground layer.		Wetland Size: 0.0806	Wetland Area Impacted 0.0806
Wetland Size: 0.0806	Wetland Area Impacted 0.0806				

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	Y	Used for recreation (hunting, birding, hiking, etc.). List: Hunting
2	N	N	Used for educational or scientific purposes
3	N	Y	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			<b>Wildlife Habitat</b>
1	Y	Y	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	Y	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.)
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
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			<b>Fish and Aquatic Life Habitat</b>
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	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
1	N	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	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	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			<b>Water Quality Protection</b>
1	N	N	Provides substantial storage of storm and floodwater based on previous section
2	N	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	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			<b>Groundwater Processes</b>
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

### Section 1 Comments (Refer to Section 1 numbers)

WH-6: The wetland has variable microtopography including hummocks and depressions.  
WH-7: The wetland is a part of a larger forest that may support SGCN species.  
FA-2: The wetland has standing water at the time of the survey, with potential to support aquatic life.  
ST-2: Ruts from heavy machinery have influenced hydrology, but water does not frequently flow through these ruts.

### 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	Mammals, avians, 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
	Y	Aquatic invertebrates



## SECTION 2: Floristic Integrity

### Plant Community Integrity (circle)\*

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

\*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)
Carex crinita*			PFO	Interrupted
Acer saccharum*			PFO	Rare
Betula alleghaniensis*			PFO	Rare
Impatiens capensis*			PFO	Rare
Fraxinus nigra*			PFO	Rare
Dryopteris intermedia			PFO	Rare
Polygonum cilinode			PFO	Rare
Athyrium filix-femina			PFO	Barren
Carex stipata			PFO	Barren
Epilobium cf. coloratum			PFO	Barren
Juncus effusus			PFO	Barren
Onoclea sensibilis			PFO	Barren
Ranunculus cf. recurvatus			PFO	Barren
Ribes triste			PFO	Barren
Scutellaria lateriflora			PFO	Barren
Symphyotrichum puniceum			PFO	Barren
Allium tricoccum			PFO	Barren
Carex canescens			PFO	Barren
Erythronium americanum			PFO	Barren
Glyceria striata			PFO	Barren

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

The wetland has a high floristic integrity, with a good diversity of native species, and minimal presence of exotic 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
X	X		M	C	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
	X		L	C	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	X		M	C	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
X	X		M	C	Removal of tree or shrub strata – logging, unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
					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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The wetland and surrounding area have been previously harvested. Compaction from previous logging equipment may have influenced wetland hydrology. Earthworms are present in the surrounding forest and may impact the wetland's herbaceous layer. A gravel road is present nearby the wetland.

## 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		✓			
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The wetland is an intact native plant community with a higher species richness and minimal presence of exotic species.
Human Use Values	The feature is relatively intact (except for previous logging), and has potential for hunting.
Wildlife Habitat	The wetland has multiple strata and is part of a larger forest that supports a diversity of wildlife.
Fish and Aquatic Life Habitat	The wetland had standing water present at the time of survey, with potential to support aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely receives and absorbs stormwater from the surrounding uplands, and has depressional topography.
Water Quality Protection	The wetland is intact with dense and persistent vegetation.
Groundwater Processes	The wetland is intact and primarily exhibits recharge hydrology.

## 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 City/County: Iron Sampling Date: 2020-05-30  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirc1025\_u  
 Investigator(s): JSW/EJO Section, Township, Range: sec 15 T046N R001W  
 Landform (hillslope, terrace, etc.): Side Slope Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.469957 Long: -90.483530 Datum: WGS84  
 Soil Map Unit Name: Wakefield loam, 6 to 18 percent slopes, stony NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located on a gentle slope in a mesic hardwood forest. Upland point is shared with wetland wirc1026e.	

## HYDROLOGY

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

**VEGETATION** – Use scientific names of plants.

Sampling Point: wirc1025\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Acer saccharum</i></u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>17</u> (A/B)														
2. <u><i>Tilia americana</i></u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>60</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u><i>Ostrya virginiana</i></u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>45</u></td> <td>x 3 = <u>135</u></td> </tr> <tr> <td>FACU species <u>145</u></td> <td>x 4 = <u>580</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>190</u> (A)</td> <td><u>715</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.76</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>45</u>	x 3 = <u>135</u>	FACU species <u>145</u>	x 4 = <u>580</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>190</u> (A)	<u>715</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>45</u>	x 3 = <u>135</u>																	
FACU species <u>145</u>	x 4 = <u>580</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>190</u> (A)	<u>715</u> (B)																	
2. <u><i>Quercus rubra</i></u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Acer saccharum</i></u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>40</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u><i>Allium burdickii</i></u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u><i>Athyrium angustum</i></u>	<u>25</u>	<u>Y</u>	<u>FAC</u>															
3. <u><i>Osmunda claytoniana</i></u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
4. <u><i>Dryopteris intermedia</i></u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
5. <u><i>Lonicera canadensis</i></u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
6. <u><i>Nabalus albus</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
7. <u><i>Erythronium americanum</i></u>	<u>5</u>	<u>N</u>	_____															
8. <u><i>Claytonia caroliniana</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>95</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) <b>The vegetation is consistent with that of a mesic hardwood forest.</b>																		



## SOIL

Sampling Point: wirc1025\_u

[illegible]



wirc1025\_u\_N



wirc1025\_u\_S



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-05-30  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirc1024f\_w  
 Investigator(s): EJO/JSW Section, Township, Range: sec 15 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.470673 Long: -90.483300 Datum: WGS84  
 Soil Map Unit Name: Wakefield loam, 6 to 18 percent slopes, stony NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The feature is a saturated hardwood swamp dominated by black ash, eastern hemlock, yellow birch, and sugar maple. Fringed sedge is dominant in the ground layer. Stumps are present in the wetland, a sign of previous harvests.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators</b> (minimum of one is required; check all that apply)		<b>Secondary Indicators</b> (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) _____ Water Marks (B1) _____ Sediment Deposits (B2) _____ Drift Deposits (B3) _____ Algal Mat or Crust (B4) _____ Iron Deposits (B5) _____ Inundation Visible on Aerial Imagery (B7) _____ Sparsely Vegetated Concave Surface (B8)	_____ Water-Stained Leaves (B9) _____ Aquatic Fauna (B13) _____ Marl Deposits (B15) _____ Hydrogen Sulfide Odor (C1) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Presence of Reduced Iron (C4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Thin Muck Surface (C7) _____ Other (Explain in Remarks)	_____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: The feature is a saturated depression with scattered hummocks. Standing water was observed in the wetland at the time of survey.		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wirc1024f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Tsuga canadensis</i></u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>8</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>63</u> (A/B)														
2. <u><i>Acer saccharum</i></u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Betula alleghaniensis</i></u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
4. <u><i>Fraxinus nigra</i></u>	<u>10</u>	<u>Y</u>	<u>FACW</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>50</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>25</u></td> <td>x 2 = <u>50</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>33</u></td> <td>x 4 = <u>132</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>93</u> (A)</td> <td><u>257</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.763440860215054</u>	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>20</u>	x 3 = <u>60</u>	FACU species <u>33</u>	x 4 = <u>132</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>93</u> (A)	<u>257</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>15</u>	x 1 = <u>15</u>																	
FACW species <u>25</u>	x 2 = <u>50</u>																	
FAC species <u>20</u>	x 3 = <u>60</u>																	
FACU species <u>33</u>	x 4 = <u>132</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>93</u> (A)	<u>257</u> (B)																	
<u>13</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u><i>Fraxinus nigra</i></u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u><i>Quercus rubra</i></u>	<u>3</u>	<u>Y</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>13</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u><i>Carex crinita</i></u>	<u>15</u>	<u>Y</u>	<u>OBL</u>	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.   <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
2. <u><i>Athyrium angustum</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
3. <u><i>Carex brunnescens</i></u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
4. <u><i>Dryopteris intermedia</i></u>	<u>5</u>	<u>Y</u>	<u>FAC</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>30</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The wetland is a hardwood swamp with a canopy dominated by eastern hemlock, black ash, sugar maple, and yellow birch. Black ash and red oak are dominant in the shrub layer; fringed sedge is dominant in the herbaceous layer. Fringed sedge has higher coverage within the wetland outside of the sample plot.																		

## SOIL

Sampling Point: wirc1024f\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☒ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

Soils observed to be silty loam with prominent redox.



wirc1024f\_w\_N



wirc1024f\_w\_S



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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project		Evaluator(s): EJO/JSW	
File #: wirc1024		Date of visit(s): 2020-05-30	
Location: PLSS: <u>sec 15 T046N R001W</u>		Ecological Landscape: Superior Mineral Ranges	
Lat: <u>46.470674</u> Long: <u>-90.483298</u>		Watershed: LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Wakefield loam, 6 to 18 percent slopes, stony		WWI Class: N/A	
Field Verified: Series were not verified. Soils were observed to be silt loam with prominent redox.		Wetland Type(s): PFO - hardwood swamp	
		Wetland Size: 0.0494	Wetland Area Impacted 0.0494
Hydrology: The feature is a saturated depression with scattered hummocks. Standing water was observed in the wetland at the time of survey.		Vegetation: Plant Community Description(s): The wetland is a hardwood swamp with a canopy dominated by eastern hemlock, black ash, sugar maple, and yellow birch. Black ash and red oak are dominant in the shrub layer; fringed sedge is dominant in the herbaceous layer. Fringed sedge has higher coverage within the wetland outside of the sample plot.	

**SITE MAP**

**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	Y	Used for recreation (hunting, birding, hiking, etc.). List: Hunting
2	N	N	Used for educational or scientific purposes
3	N	Y	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			<b>Wildlife Habitat</b>
1	Y	Y	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	Y	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.)
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
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			<b>Fish and Aquatic Life Habitat</b>
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	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	N	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			<b>Water Quality Protection</b>
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	N	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			<b>Groundwater Processes</b>
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

### Section 1 Comments (Refer to Section 1 numbers)

HU-3: The wetland is potentially visible from a nearby gravel road.

WH-7: The wetland is part of a larger forest which supports SGCN species.

WQ-2, FA-2: The wetland is a depression with standing water present at the time of survey and may support aquatic life.

### 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	Mammals, birds, 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
	Y	Aquatic invertebrates

## SECTION 2: Floristic Integrity

### Plant Community Integrity (circle)\*

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

\*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)
<i>Tsuga canadensis</i> *			PFO	Rare
<i>Carex crinita</i> *			PFO	Rare
<i>Acer saccharum</i> *			PFO	Rare
<i>Betula alleghaniensis</i> *			PFO	Rare
<i>Fraxinus nigra</i>			PFO	Rare
<i>Fraxinus nigra</i>			PFO	Rare
<i>Athyrium filix-femina</i>			PFO	Rare
<i>Carex brunnescens</i>			PFO	Rare
<i>Dryopteris intermedia</i>			PFO	Rare
<i>Onoclea sensibilis</i>			PFO	Rare
<i>Quercus rubra</i>			PFO	Barren
<i>Cornus alternifolia</i>			PFO	Barren
<i>Epilobium cf. coloratum</i>			PFO	Barren
<i>Hieracium cf. aurantiacum</i>			PFO	Barren
<i>Carex arctata</i>			PFO	Barren
<i>Carex communis</i>			PFO	Barren
<i>Erythronium americanum</i>			PFO	Barren
<i>Oryzopsis asperifolia</i>			PFO	Barren
<i>Taraxacum officinale</i>			PFO	Barren
<i>Thalictrum dasycarpum</i>			PFO	Barren

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

The wetland has a high floristic integrity, with a good diversity of native species and minimal exotic species 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)
	X		L	C	Drainage – tiles, ditches
	X		L	C	Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
	X		L	C	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	X		M	C	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	X		M	C	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
	X		M	C	Removal of tree or shrub strata – logging, unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
					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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The surrounding forest has had previous harvests. The wetland is located near a public gravel road. Earthworms are present in the surrounding forest with potential to impact the wetland's herbaceous layer.

## 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		✓			
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The wetland is an intact plant community with a good diversity of native species
Human Use Values	The wetland is aesthetically pleasing and potentially visible from a nearby gravel road.
Wildlife Habitat	The wetland has multiple strata and is part of a larger forest that supports a diversity of wildlife.
Fish and Aquatic Life Habitat	The wetland had areas of standing at the time of survey, which may support aquatic invertebrates.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is located in a depression and likely only receives stormwater from the surrounding upland areas.
Water Quality Protection	The wetland is a depression that contains fairly dense persistent vegetation.
Groundwater Processes	The wetland is intact and primarily exhibits recharge hydrology.



## 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 City/County: Iron Sampling Date: 2020-05-30  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirc1024\_u  
 Investigator(s): JSW/EJO Section, Township, Range: sec 15 T046N R001W  
 Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.470721 Long: -90.483375 Datum: WGS84  
 Soil Map Unit Name: Wakefield loam, 6 to 18 percent slopes, stony NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located in a transitional community dominated by hemlock and intermediate wood fern.	

## HYDROLOGY

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

**VEGETATION** – Use scientific names of plants.

Sampling Point: wirc1024\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Tsuga canadensis</i></u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. <u><i>Betula papyrifera</i></u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
3. <u><i>Fraxinus pennsylvanica</i></u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
4. <u><i>Tilia americana</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>75</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>45</u></td> <td>x 3 = <u>135</u></td> </tr> <tr> <td>FACU species <u>140</u></td> <td>x 4 = <u>560</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>195</u> (A)</td> <td><u>715</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.6666666666666665</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>45</u>	x 3 = <u>135</u>	FACU species <u>140</u>	x 4 = <u>560</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>195</u> (A)	<u>715</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>10</u>	x 2 = <u>20</u>																	
FAC species <u>45</u>	x 3 = <u>135</u>																	
FACU species <u>140</u>	x 4 = <u>560</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>195</u> (A)	<u>715</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u><i>Tsuga canadensis</i></u>	<u>75</u>	<u>Y</u>	<u>FACU</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>75</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u><i>Dryopteris intermedia</i></u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u><i>Osmunda claytoniana</i></u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
3. <u><i>Carex pedunculata</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
4. <u><i>Erythronium americanum</i></u>	<u>5</u>	<u>N</u>	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>50</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The vegetation is dominated by hemlock.				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>														

## SOIL

Sampling Point: wirc1024\_u

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☒

Remarks:

No indicators of hydric soil were observed.





wirc1024\_u\_NW



wirc1024\_u\_S



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-05-18  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird015e\_xw  
 Investigator(s): EJO/JSW Section, Township, Range: sec 10 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.482153 Long: -90.477772 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <b>Feature is a seasonally saturated wet meadow dominated by Juncus effusus and surrounded by a hay field/pasture.</b>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <b>Hydrologic regime is seasonally saturated. Standing water and water-stained leaves observed in interior of feature but not at sample point.</b>		



**VEGETATION** – Use scientific names of plants.

Sampling Point: wird015e\_xw

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>2</u></td> <td>x 2 = <u>4</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>32</u> (A)</td> <td><u>59</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.84</u>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>2</u>	x 2 = <u>4</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>32</u> (A)	<u>59</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>20</u>	x 1 = <u>20</u>																	
FACW species <u>2</u>	x 2 = <u>4</u>																	
FAC species <u>5</u>	x 3 = <u>15</u>																	
FACU species <u>5</u>	x 4 = <u>20</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>32</u> (A)	<u>59</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Juncus effusus</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Trifolium repens</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
3. <u>Ranunculus acris</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
4. <u>Scirpus cf. hattorianus</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>															
5. <u>Scirpus cyperinus</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>															
6. <u>Carex cf. scoparia</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>32</u> = Total Cover																
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Definitions of Vegetation Strata:  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.) Sample plot is fairly representative of overall wetland.																		

## SOIL

Sampling Point: wird015e\_xw

[illegible]



wird015e\_xw\_E



wird015e\_xw\_W

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-05-18  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird015f\_xw  
 Investigator(s): EJO/JSW Section, Township, Range: sec 10 T046N R001W  
 Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.482050 Long: -90.480745 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <b>Feature is a narrow red maple-dominated hardwood swamp with an understory of speckled alder. The community is part of a larger complex with a wet meadow component (wird015e).</b>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>10</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>9</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <b>Hydrology regime is saturated.</b>		

**VEGETATION** – Use scientific names of plants.

Sampling Point: wird015f\_xw

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status																																																												
1. <u>Acer rubrum</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																																																											
2. <u>Ulmus americana</u>	<u>5</u>	<u>N</u>	<u>FACW</u>																																																												
3. _____	_____	_____	_____																																																												
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OBL species	<u>11</u>	x 1 =	<u>11</u>																																																												
FACW species	<u>57</u>	x 2 =	<u>114</u>																																																												
FAC species	<u>30</u>	x 3 =	<u>90</u>																																																												
FACU species	<u>2</u>	x 4 =	<u>8</u>																																																												
UPL species	<u>0</u>	x 5 =	<u>0</u>																																																												
Column Totals:	<u>100</u> (A)		<u>223</u> (B)																																																												
Prevalence Index = B/A = <u>2.23</u>																																																															
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<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																																															
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Sapling/Shrub Stratum (Plot size: <u>15</u> )</th> <th style="width: 10%;">Absolute % Cover</th> <th style="width: 10%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> <th style="width: 30%;"></th> </tr> </thead> <tbody> <tr> <td>1. <u>Alnus incana</u></td> <td><u>50</u></td> <td><u>Y</u></td> <td><u>FACW</u></td> <td rowspan="7"> <b>Hydrophytic Vegetation Indicators:</b>  <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation  <input checked="" type="checkbox"/> 2 - Dominance Test is &gt;50%  <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0<sup>1</sup>  <input type="checkbox"/> 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  <input type="checkbox"/> Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)   <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.                         </td> </tr> <tr> <td>2. <u>Salix cf. discolor</u></td> <td><u>2</u></td> <td><u>N</u></td> <td><u>FACW</u></td> </tr> <tr><td>3. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>6. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>7. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr> <td colspan="2" style="text-align: right;"><u>52</u> = Total Cover</td> <td colspan="3"></td> </tr> </tbody> </table>					Sapling/Shrub Stratum (Plot size: <u>15</u> )	Absolute % Cover	Dominant Species?	Indicator Status		1. <u>Alnus incana</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	2. <u>Salix cf. discolor</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	3. _____	_____	_____	_____	4. _____	_____	_____	_____	5. _____	_____	_____	_____	6. _____	_____	_____	_____	7. _____	_____	_____	_____	<u>52</u> = Total Cover																								
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Remarks: (Include photo numbers here or on a separate sheet.) <b>Sample is fairly representative of the feature.</b>																																																															



## SOIL

Sampling Point: wird015f\_xw

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

Soils are sandy loam over sand with redox throughout the profile.





wird015f\_xw\_E



wird015f\_xw\_W

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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project		Evaluator(s): EJO/JSW	
File #: wird015_x		Date of visit(s): 2020-05-18	
Location: PLSS: <u>sec 10 T046N R001W</u>		Ecological Landscape: Lake Superior Clay Plain	
Lat: <u>46.482050</u> Long: <u>-90.480745</u>		Watershed: LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes		WWI Class: T3/5K	
Field Verified: Series not verified. Soils were a silty clay loam over sandy loam.		Wetland Type(s): PEM/PFO - Fresh wet meadow/Hardwood swamp	
		Wetland Size: 0.7087	Wetland Area Impacted 0.7087
Hydrology: Hydrologic regime is seasonally saturated. Standing water and water-stained leaves observed in interior of feature.		Vegetation: Plant Community Description(s): The fresh wet meadow component is dominated by sedges and rushes, with a narrow strip of red maple-dominated hardwood swamp running through the emergent component. The northern portion of the feature is located within/adjacent to a hayfield/pasture.	

**SITE MAP**

**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	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	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas 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			<b>Wildlife Habitat</b>
1	Y	Y	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.)
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
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			<b>Fish and Aquatic Life Habitat</b>
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	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	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	Y	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			<b>Water Quality Protection</b>
1	Y	Y	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	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			<b>Groundwater Processes</b>
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

**Section 1 Comments (Refer to Section 1 numbers)**

WH-4: The feature extends outside of the survey area, and the wetland in its entirety likely meets this condition, but the delineation within the survey area does not meet the >75% cover condition.  
ST-5, WQ-7: The wetland is surrounded by hayfield/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
	Y	Herpetofauna, avian
Y	Y	Ravens observed in a forest directly adjacent to the wetland.

**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



## SECTION 2: Floristic Integrity

### Plant Community Integrity (circle)\*

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

\*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)
Calamagrostis canadensis			PEM	Common
Carex cf. scoparia			PEM	Common
Dactylis glomerata			PEM	Uncommon
Epilobium cf. coloratum			PEM	Uncommon
Impatiens cf. capensis			PEM	Uncommon
Juncus effusus*			PEM	Abundant
Phalaris arundinacea			PEM	Common
Phleum pratense			PEM	Common
Ranunculus acris			PEM	Common
Scirpus cf. hattorianus			PEM	Common
Scirpus cyperinus			PEM	Common
Taraxacum officinale			PEM	Common
Trifolium repens			PEM	Common
Carex cf. stricta			PEM, PFO	Common
Equisetum sylvaticum			PEM, PFO	Common
Onoclea sensibilis			PEM, PFO	Common
Acer rubrum*			PFO	Common
Alnus incana			PFO	Common
Betula papyrifera			PFO	Uncommon
Potentilla simplex			PFO	Uncommon
Pyrola elliptica			PFO	Uncommon
Salix cf. discolor			PFO	Uncommon

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

Both plant communities were observed to be largely dominated by native species, with some presence of reed canary grass and non-native forbs and grasses often associated with pastures and hay fields.

### 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
X	X		L	C	Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
X	X		L	UC	Polluted runoff
					Pond construction
					Agriculture – row crops
X	X		M	C	Agriculture – hay
X	X		L	C	Agriculture – pasture
					Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
X	X		M	UC	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
X	X		M	C	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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

A portion of wetland is mowed/harvested as part of a hay field. The presence of reed canary grass and the wetland's adjacency to non-native pasture grasses have and/or have potential to reduce native vegetation cover.



## 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		✓			
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The feature has good representation of native species (albeit with the presence of non-native species).
Human Use Values	The feature is located on private land.
Wildlife Habitat	Strata have the potential to host a variety of wildlife, from aquatic invertebrates to birds.
Fish and Aquatic Life Habitat	the feature has the potential to support aquatic invertebrates.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature has potential to absorb and store rainwater and surrounding stormwater runoff.
Water Quality Protection	The feature is relatively large and has the capacity to buffer nutrient/stormwater runoff from the adjacent agricultural field.
Groundwater Processes	The feature is relatively large, but primarily exhibits recharge hydrology.

## 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 City/County: Iron Sampling Date: 2020-05-18  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird015\_xu  
 Investigator(s): EJO/JSW Section, Township, Range: sec 10 T046N R001W  
 Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.482300 Long: -90.480400 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) <b>Sample in upland pasture/hay field dominated by non-native grasses and forbs.</b>	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird015\_xu

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>87</u></td> <td>x 4 = <u>348</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>87</u> (A)</td> <td><u>348</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.0</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>87</u>	x 4 = <u>348</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>87</u> (A)	<u>348</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>87</u>	x 4 = <u>348</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>87</u> (A)	<u>348</u> (B)																	
<u>0</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Poa cf. compressa</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Trifolium repens</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
3. <u>Plantago cf. lanceolata</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
4. <u>Taraxacum officinale</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
5. <u>Dactylis glomerata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
6. <u>Schedonorus arundinaceus</u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>87</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) <b>Sample appears representative of surrounding upland hayfield/pasture.</b>																		

## SOIL

Sampling Point: wird015\_xu

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

[illegible]<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

___ Histosol (A1)	___ Polyvalue Below Surface (S8) ( <b>LRR R,</b>
___ Histic Epipedon (A2)	<b>MLRA 149B)</b>
___ Black Histic (A3)	___ Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
___ Stratified Layers (A5)	___ Loamy Gleyed Matrix (F2)
___ Depleted Below Dark Surface (A11)	___ Depleted Matrix (F3)
___ Thick Dark Surface (A12)	___ Redox Dark Surface (F6)
___ Sandy Mucky Mineral (S1)	___ Depleted Dark Surface (F7)
___ Sandy Gleyed Matrix (S4)	___ Redox Depressions (F8)
___ Sandy Redox (S5)	
___ Stripped Matrix (S6)	
___ Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☒

Remarks:

No hydric indicators observed.



wird015\_xu\_E



wird015\_xu\_W



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-05-18  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirc1001e\_w  
 Investigator(s): EJO/JSW Section, Township, Range: sec 10 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.482128 Long: -90.477747 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <b>Feature is a seasonally saturated wet meadow located within a roadside ditch.</b>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <b>Feature within roadside ditch. Hydrologic regime is saturated. Subsurface hydrology could not be evaluated.</b>		

**VEGETATION** – Use scientific names of plants.

Sampling Point: wirc1001e\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>1</u></td> <td>x 1 = <u>1</u></td> </tr> <tr> <td>FACW species <u>17</u></td> <td>x 2 = <u>34</u></td> </tr> <tr> <td>FAC species <u>2</u></td> <td>x 3 = <u>6</u></td> </tr> <tr> <td>FACU species <u>1</u></td> <td>x 4 = <u>4</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>21</u> (A)</td> <td><u>45</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.142857142857143</u>	Total % Cover of:	Multiply by:	OBL species <u>1</u>	x 1 = <u>1</u>	FACW species <u>17</u>	x 2 = <u>34</u>	FAC species <u>2</u>	x 3 = <u>6</u>	FACU species <u>1</u>	x 4 = <u>4</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>21</u> (A)	<u>45</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>1</u>	x 1 = <u>1</u>																	
FACW species <u>17</u>	x 2 = <u>34</u>																	
FAC species <u>2</u>	x 3 = <u>6</u>																	
FACU species <u>1</u>	x 4 = <u>4</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>21</u> (A)	<u>45</u> (B)																	
<u>6</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u>Alnus incana</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>															
2. <u>Salix sp.</u>	<u>1</u>	<u>N</u>	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>6</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Phalaris arundinacea</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>															
2. <u>Ranunculus acris</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
3. <u>Equisetum sylvaticum</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
4. <u>Juncus effusus</u>	<u>1</u>	<u>N</u>	<u>OBL</u>															
5. <u>Taraxacum officinale</u>	<u>1</u>	<u>N</u>	<u>FACU</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>16</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) <b>Feature appears representative of wetland. Juncus effusus cover will likely increase based on last year's biomass. Previous year's fertile stalks of sensitive fern also present at time of survey.</b>																		

**Hydrophytic Vegetation Indicators:**  
☒ 1 - Rapid Test for Hydrophytic Vegetation  
☒ 2 - Dominance Test is >50%  
☒ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
☐ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

**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 height.

**Hydrophytic Vegetation Present?**      Yes ☒      No \_\_\_\_\_

## SOIL

Sampling Point: wirc1001e\_w

[illegible]





wirc1001e\_w\_N



wirc1001e\_w\_S

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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project		Evaluator(s): EJO/JSW	
File #: wirc1001		Date of visit(s): 2020-05-18	
Location: PLSS: <u>sec 10 T046N R001W</u>		Ecological Landscape: Lake Superior Clay Plain	
Lat: <u>46.482128</u> Long: <u>-90.477747</u>		Watershed: LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes  Field Verified: Series not verified. Soils were not sampled due to location within roadside right-of-way and likely proximity to underground utilities. However, soils assumed to be hydric based on observed hydrophytic vegetation and wetland hydrology.		WWI Class: N/A  Wetland Type(s): <b>PEM - fresh wet meadow</b>	
Hydrology: The feature is located within a roadside ditch, and appears to be seasonally saturated.		Wetland Size: 0.0550	Wetland Area Impacted 0.0550
		Vegetation: Plant Community Description(s): The wetland is a fresh wet meadow dominated by soft rush and reed canary grass, with sparse coverage of speckled alder and black ash along the wetland edge.	

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	N	Used for recreation (hunting, birding, hiking, etc.). List:
2	N	N	Used for educational or scientific purposes
3	N	Y	Visually or physically accessible to public
4	N	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas 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			<b>Wildlife Habitat</b>
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.)
7	N	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	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			<b>Fish and Aquatic Life Habitat</b>
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			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	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			<b>Water Quality Protection</b>
1	N	Y	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	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			<b>Groundwater Processes</b>
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



HU-3: Ditch feature adjacent to and visible from a road.  
WQ-7: The feature is adjacent to a pasture/hayfield and receives runoff from the field.  
ST-5: The feature receives runoff from adjacent road and pasture.

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

[illegible]

## List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

[illegible]

## SECTION 2: Floristic Integrity

### Plant Community Integrity (circle)\*

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

\*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)
Agrimonia striata			PEM	Uncommon
Alnus incana			PEM	Uncommon
Carex gracillima			PEM	Common
Carex vulpinoidea			PEM	Uncommon
Equisetum sylvaticum			PEM	Common
Fragaria virginiana			PEM	Uncommon
Fraxinus pennsylvanica			PEM	Uncommon
Geum aleppicum			PEM	Uncommon
Juncus effusus*			PEM	Abundant
Lysimachia ciliata			PEM	Uncommon
Onoclea sensibilis			PEM	Common
Phalaris arundinacea*			PEM	Abundant
Prunella vulgaris			PEM	Uncommon
Ranunculus acris			PEM	Common
Rumex crispus			PEM	Uncommon
Rumex obtusifolius			PEM	Uncommon
Salix sp.			PEM	Uncommon
Scirpus cyperinus			PEM	Common
Solidago gigantea			PEM	Common
Taraxacum officinale			PEM	Common
Trifolium repens			PEM	Common

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

While many native species were observed in the wetland, the feature has high coverage of reed canary grass and non-native weedy species at time of survey.

### 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	X		H	C	Drainage – tiles, ditches
X	X		M	C	Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
X	X		L	C	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
X	X		M	C	Agriculture – pasture
	X		H	C	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
X	X		M	C	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
X	X		H	C	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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

Part of the wetland adjacent to the pasture appears to be mowed; non-native reed canary grass is dominant in wetland, likely outcompeting native vegetation. The feature is highly disturbed by its roadside location.

## 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		✓			
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	While reed canary grass is dominant, the feature has a fair representation of native species.
Human Use Values	The feature is relatively small in roadside ditch.
Wildlife Habitat	The feature is small and degraded due to invasive species abundance.
Fish and Aquatic Life Habitat	See Wildlife Habitat comment.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is somewhat small in size, and is located within an altered environment (i.e., road, agricultural field), but stores runoff from these features.
Water Quality Protection	Protection is likely lower due to small size of feature and its location between a road and agricultural field.
Groundwater Processes	Feature appears to have mostly recharge hydrology.

## 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: Iron Sampling Date: 2020-05-18  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirc1001\_u  
 Investigator(s): EJO/JSW Section, Township, Range: sec 10 T046N R001W  
 Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.482119 Long: -90.477924 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) <b>Sample recorded in upland hay field/pasture dominated by quackgrass and non-native forbs at time of survey.</b>	

## HYDROLOGY

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



**VEGETATION** – Use scientific names of plants.

Sampling Point: wirc1001\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>2</u></td> <td>x 3 = <u>6</u></td> </tr> <tr> <td>FACU species <u>31</u></td> <td>x 4 = <u>124</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>33</u> (A)</td> <td><u>130</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.9393939393939394</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>2</u>	x 3 = <u>6</u>	FACU species <u>31</u>	x 4 = <u>124</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>33</u> (A)	<u>130</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>2</u>	x 3 = <u>6</u>																	
FACU species <u>31</u>	x 4 = <u>124</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>33</u> (A)	<u>130</u> (B)																	
<u>0</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Elymus repens</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Plantago cf. lanceolata</u>	<u>7</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Taraxacum officinale</u>	<u>7</u>	<u>Y</u>	<u>FACU</u>															
4. <u>Trifolium repens</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
5. <u>Dactylis glomerata</u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
6. <u>Ranunculus acris</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>33</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																		
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.) Sample appears fairly representative of upland pasture/hay field. Some unidentifiable grasses are also present.																		

## SOIL

Sampling Point: wirc1001\_u

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

[illegible]<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☒

Remarks:

No hydric indicators observed.



wirc1001\_u\_N



wirc1001\_u\_S

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-17  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1012e\_w  
 Investigator(s): KDF/AGG Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.485424 Long: -90.483761 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No ☒  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The feature is located within a planted corn field dominated by wetland species. The feature exhibits wetland hydrology and hydric soils.	

## HYDROLOGY

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

**VEGETATION** – Use scientific names of plants.

Sampling Point: wird1012e\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>2</u></td> <td>x 2 = <u>4</u></td> </tr> <tr> <td>FAC species <u>1</u></td> <td>x 3 = <u>3</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>3</u> (A)</td> <td><u>7</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.333333333333335</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>2</u>	x 2 = <u>4</u>	FAC species <u>1</u>	x 3 = <u>3</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>3</u> (A)	<u>7</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>2</u>	x 2 = <u>4</u>																	
FAC species <u>1</u>	x 3 = <u>3</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>3</u> (A)	<u>7</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Cyperus sp.</u>	<u>80</u>	<u>Y</u>	_____															
2. <u>Zea mays</u>	<u>5</u>	<u>N</u>	_____															
3. <u>Phalaris arundinacea</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
4. <u>Equisetum arvense</u>	<u>1</u>	<u>N</u>	<u>FAC</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>88</u> = Total Cover																
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Remarks: (Include photo numbers here or on a separate sheet.) The vegetation is representative of seasonally flooded basin dominated by Cyperus sp. Planted corn is scattered throughout.																		

**Hydrophytic Vegetation Indicators:**  
☐ 1 - Rapid Test for Hydrophytic Vegetation  
☐ 2 - Dominance Test is >50%  
☒ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
☐ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

**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 height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

## SOIL

Sampling Point: wird1012e\_w

[illegible]





wird1012e\_w\_N



wird1012e\_w\_S

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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project	Evaluator(s): KDF/AGG		
File #: wird1012	Date of visit(s): 2020-06-17		
Location: PLSS: <u>sec 03 T046N R001W</u>	Ecological Landscape: North Central Forest		
Lat: <u>46.485424</u> Long: <u>-90.483761</u>	Watershed: LS11, Potato River		
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes  Field Verified: Series not verified.	WWI Class: N/A		
	Wetland Type(s): PEM - Seasonally flooded basin		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Wetland Size: 0.1885</td> <td style="width: 50%; padding: 2px;">Wetland Area Impacted 0.1885</td> </tr> </table>	Wetland Size: 0.1885	Wetland Area Impacted 0.1885
Wetland Size: 0.1885	Wetland Area Impacted 0.1885		
Hydrology: The hydrologic regime is temporarily flooded with recharge hydrology. The feature extends partially into a roadside ditch.	Vegetation: Plant Community Description(s): The vegetation is representative of seasonally flooded basin dominated by Cyperus sp. Planted corn is scattered throughout.		

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	N	Used for recreation (hunting, birding, hiking, etc.). List:
2	N	N	Used for educational or scientific purposes
3	Y	Y	Visually or physically accessible to public
4	N	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas 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			<b>Wildlife Habitat</b>
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.)
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	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			<b>Fish and Aquatic Life Habitat</b>
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	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	N	N	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			<b>Water Quality Protection</b>
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	N	N	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			<b>Groundwater Processes</b>
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

HU-3: The feature is visible from a public gravel roadway.

ST-5,WQ-7: The feature receives significant runoff from the adjacent gravel road and agricultural field.

ST-1,WQ-2: The feature is a small basin wetland.

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

[illegible]

## List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

[illegible]

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

The floristic integrity is low to moderate as native species diversity is limited diversity, and the vegetation is disturbed from agricultural land use practices.

### 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	X		M	C	Polluted runoff
					Pond construction
X	X		H	C	Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
					Roads or railroad
	X		L	UC	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
X	X		M	UC	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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The feature is highly impacted by the surrounding land use of row crops. The corn field is adjacent to a gravel road which provides runoff to the feature. The surrounding area is impacted by row crops within the field. There is an above-ground utility to the west of the feature. Invasive species are present within and around the feature.



## 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	✓				
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	There is limited diversity within the feature, and the vegetation is disturbed from agricultural land use practices.
Human Use Values	The feature is located on private land but is visible to the public from a gravel road. No human use values other than farming practices.
Wildlife Habitat	One stratum is represented with limited potential for wildlife habitat. Deer tracks were observed near the feature.
Fish and Aquatic Life Habitat	N/A
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is limited in stormwater storage capacity due to its small size but does receive runoff from the surrounding area, including a gravel road.
Water Quality Protection	The wetland can filter some stormwater runoff from the surrounding agriculture field.
Groundwater Processes	The feature exhibits recharge hydrology. No indicators of groundwater processes were observed.

## Section 4: Project Impact Assessment

### Brief Project Description

The project is a pipeline relocation that will result in temporary wetland impacts.

### Expected Project Impacts

IMPACT: describe ( + or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	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: Iron Sampling Date: 2020-06-17  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1012\_u  
 Investigator(s): KDF/AGG Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.485538 Long: -90.483948 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No ☒  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample plot is located within a planted corn field. Though species composition within the sample plot is similar that of the wetland area, the upland lacks wetland hydrology and hydric soils.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird1012\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>5</u> (A)</td> <td><u>5</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.0</u>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>5</u> (A)	<u>5</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>5</u>	x 1 = <u>5</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>5</u> (A)	<u>5</u> (B)																	
<u>0</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Cyperus sp.</u>	<u>90</u>	<u>Y</u>	_____															
2. <u>Zea mays</u>	<u>10</u>	<u>N</u>	_____															
3. <u>Persicaria amphibia</u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>105</u> = Total Cover																
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Remarks: (Include photo numbers here or on a separate sheet.) <b>The sample plot is representative of upland dominated by Cyperus sp. and corn.</b>																		

**Hydrophytic Vegetation Indicators:**  
 \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation  
 \_\_\_ 2 - Dominance Test is >50%  
☒ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**  
  
**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes ☒      No \_\_\_\_\_

## SOIL

Sampling Point: wird1012\_u

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☒

Remarks:

Soils are silt loam over silt with no redox. No indicators of hydric soils were observed.



wird1012\_u\_N



wird1012\_u\_W



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1008f\_w  
 Investigator(s): KDF/AGG Section, Township, Range: sec 10 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.484885 Long: -90.485476 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <b>The feature is located within mesic hardwood forest.</b>	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird1008f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Fraxinus nigra</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A)  Total Number of Dominant Species Across All Strata: <u>8</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Acer rubrum</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Abies balsamea</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
			<u>80</u> = Total Cover	<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>25</u></td> <td>x 1 = <u>25</u></td> </tr> <tr> <td>FACW species <u>100</u></td> <td>x 2 = <u>200</u></td> </tr> <tr> <td>FAC species <u>81</u></td> <td>x 3 = <u>243</u></td> </tr> <tr> <td>FACU species <u>4</u></td> <td>x 4 = <u>16</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>210</u> (A)</td> <td><u>484</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.3047619047619046</u>	Total % Cover of:	Multiply by:	OBL species <u>25</u>	x 1 = <u>25</u>	FACW species <u>100</u>	x 2 = <u>200</u>	FAC species <u>81</u>	x 3 = <u>243</u>	FACU species <u>4</u>	x 4 = <u>16</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>210</u> (A)	<u>484</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>25</u>	x 1 = <u>25</u>																	
FACW species <u>100</u>	x 2 = <u>200</u>																	
FAC species <u>81</u>	x 3 = <u>243</u>																	
FACU species <u>4</u>	x 4 = <u>16</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>210</u> (A)	<u>484</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Acer rubrum</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>															
2. <u>Fraxinus nigra</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>															
3. <u>Abies balsamea</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
			<u>40</u> = Total Cover															
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Carex crinita</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Cornus canadensis</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Carex intumescens</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>															
4. <u>Fraxinus nigra</u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
5. <u>Dryopteris carthusiana</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
6. <u>Gaultheria procumbens</u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
7. <u>Corylus cornuta</u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
8. <u>Trientalis borealis</u>	<u>1</u>	<u>N</u>	<u>FAC</u>															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
			<u>90</u> = Total Cover															
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
			<u>0</u> = Total Cover	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____														
Remarks: (Include photo numbers here or on a separate sheet.) The vegetation is representative of a hardwood swamp dominated by black ash and red maple, with ground cover dominated by sedge species. A few upland species are present within the feature, but overall the feature is dominated by hydrophytic vegetation.																		

## SOIL

Sampling Point: wird1008f\_w

[illegible]





wird1008f\_w\_E



wird1008f\_w\_W

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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project		Evaluator(s): KDF/AGG	
File #: wird1008		Date of visit(s): 2020-06-16	
Location: PLSS: <u>sec 10 T046N R001W</u>		Ecological Landscape: North Central Forest	
Lat: <u>46.484878</u> Long: <u>-90.485516</u>		Watershed: LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes, Denomie silt loam, 30 to 60 percent slope, Amas cobbly fine sandy loam 6 to 18 percent slopes		WWI Class: N/A	
Field Verified: Series not verified.		Wetland Type(s): PFO - Hardwood swamp	
		Wetland Size: 0.0554	Wetland Area Impacted 0.0554
Hydrology: The hydrologic regime is seasonally saturated with recharge hydrology.		Vegetation: Plant Community Description(s): The vegetation is representative of a hardwood swamp dominated by black ash and red maple, with ground cover dominated by sedge species. Upland species are present within the feature, but overall the feature is dominated by hydrophytic vegetation.	

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	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
5	N	N	In or adjacent to RED FLAG areas 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			<b>Wildlife Habitat</b>
1	Y	Y	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	N	N	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 ≥ 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			<b>Fish and Aquatic Life Habitat</b>
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	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	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	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			<b>Water Quality Protection</b>
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	N	N	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			<b>Groundwater Processes</b>
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



ST-1, WQ-2: The feature is a small forested basin within mesic hardwood forest.

WH-1/2/7: The wetland is within a large block of forest with all strata that may provide habitat for avians.

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

[illegible]

## List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

[illegible]

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

There is moderate diversity within the feature comprised of native wetland and upland species, and invasive species are absent.

### 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		M	C	Polluted runoff
					Pond construction
	X		M	C	Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	X		M	C	Roads or railroad
	X		L	UC	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
X	X		M	C	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
					Removal of tree or shrub strata – logging, unprescribed fire
	X		L	UC	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
	X		L	UC	Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
	X		L	UC	Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

\* L= Low, M = Medium, H = High

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The feature is relatively undisturbed but is impacted by earthworm activity. The surrounding area is impacted by earthworm activity within the forested areas and land use for row crops within the agriculture field. There is also a gravel road to the north and an unpaved trail west of the feature that may be used for ATV recreation.

## 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	✓				
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	There is moderate diversity within the feature comprised of native wetland and upland species.
Human Use Values	The feature is located on private land and is not visible to the public.
Wildlife Habitat	The feature is small, but multiple strata are represented providing potential habitat for wildlife.
Fish and Aquatic Life Habitat	No standing water was present at the time of survey.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is relatively isolated. Stormwater storage capacity is limited by its small size.
Water Quality Protection	See above.
Groundwater Processes	The feature exhibits recharge hydrology. No indicators of groundwater processes were observed.

## Section 4: Project Impact Assessment

### Brief Project Description

The project is a pipeline relocation that will result in temporary wetland impacts.

### Expected Project Impacts

IMPACT: describe ( + or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	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: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1008\_u  
 Investigator(s): KDF/AGG Section, Township, Range: sec 10 T046N R001W  
 Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): Convex Slope (%): 3-7%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.484957 Long: -90.485406 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) <u>The upland is located within mesic hardwood forest.</u>	

## HYDROLOGY

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



**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird1008\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Abies balsamea</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>29</u> (A/B)														
2. <u>Populus grandidentata</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Fraxinus pennsylvanica</u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
4. <u>Prunus serotina</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>80</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>45</u></td> <td>x 3 = <u>135</u></td> </tr> <tr> <td>FACU species <u>83</u></td> <td>x 4 = <u>332</u></td> </tr> <tr> <td>UPL species <u>2</u></td> <td>x 5 = <u>10</u></td> </tr> <tr> <td>Column Totals: <u>150</u> (A)</td> <td><u>517</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.4466666666666668</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>45</u>	x 3 = <u>135</u>	FACU species <u>83</u>	x 4 = <u>332</u>	UPL species <u>2</u>	x 5 = <u>10</u>	Column Totals: <u>150</u> (A)	<u>517</u> (B)
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<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u>Corylus cornuta</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u>Prunus serotina</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>20</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Mitchella repens</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.   <b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>														
2. <u>Maianthemum canadense</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
4. <u>Gaultheria procumbens</u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
5. <u>Carex arctata</u>	<u>2</u>	<u>N</u>	_____															
6. <u>Maianthemum racemosum</u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
7. <u>Trientalis borealis</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
8. <u>Prunus serotina</u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
9. <u>Eurybia macrophylla</u>	<u>2</u>	<u>N</u>	<u>UPL</u>															
10. <u>Acer saccharum</u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
11. <u>Athyrium angustum</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
12. <u>Acer rubrum</u>	<u>1</u>	<u>N</u>	<u>FAC</u>															
<u>52</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The vegetation is representative of upland dominated by balsam fir and big-tooth aspen, with ground cover dominated by partridgeberry and false lily-of-the-valley. Outside of the sample plot, big-tooth aspen becomes more prevalent with less balsam fir.																		

## SOIL

Sampling Point: wird1008\_u

[illegible]





wird1008\_u\_E



wird1008\_u\_W



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1009e\_w  
 Investigator(s): KDF/AGG Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.485458 Long: -90.486094 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabab complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No ☒  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The feature is located within a planted corn field. The area appears to be intentionally not planted due to wet conditions.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: The feature is located within a small depression of a corn field that extends partially into a roadside ditch. There are tire ruts evident within the lowest part of the wetland. The hydrologic regime is temporarily flooded with recharge hydrology. FAC-Neutral test could not be evaluated because plants were not identified to species.		

Sampling Point: wird1009e\_w

Tree Stratum (Plot size: <u>30</u> )				Absolute % Cover	Dominant Species?	Indicator Status
1.						
2.						
3.						
4.						
5.						
6.						
7.						
				<u>0</u>	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15</u> )						
1.						
2.						
3.						
4.						
5.						
6.						
7.						
				<u>0</u>	= Total Cover	
Herb Stratum (Plot size: <u>5</u> )						
1.	<u>Cyperus sp.</u>	<u>50</u>	<u>Y</u>			
2.	<u>Persicaria sp.</u>	<u>10</u>	<u>N</u>			
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
				<u>60</u>	= Total Cover	
Woody Vine Stratum (Plot size: <u>30</u> )						
1.						
2.						
3.						
4.						
				<u>0</u>	= Total Cover	

**Dominance Test worksheet:**  
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  
  
Total Number of Dominant Species Across All Strata: 1 (B)  
  
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**  

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>0</u> (A)	<u>0</u> (B)

  
Prevalence Index = B/A = NaN

**Hydrophytic Vegetation Indicators:**  
   1 - Rapid Test for Hydrophytic Vegetation  
   2 - Dominance Test is >50%  
   3 - Prevalence Index is ≤3.0<sup>1</sup>  
   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
☒ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**  
  
**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)  
The vegetation is representative of a seasonally flooded basin dominated by Cyperus sp. The feature is located within a planted corn field. Because plants could not be identified to species, indicator statuses are unknown. The area has been disturbed by farming; however, the presence of Persicaria and absence of planted corn suggest this area is sufficiently wet to support hydrophytic species.

## SOIL

Sampling Point: wird1009e\_w

[illegible]





wird1009e\_w\_E



wird1009e\_w\_N

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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project	Evaluator(s): KDF/AGG		
File #: wird1009	Date of visit(s): 2020-06-16		
Location: PLSS: <u>sec 03 T046N R001W</u>	Ecological Landscape: North Central Forest		
Lat: <u>46.485458</u> Long: <u>-90.486094</u>	Watershed: LS11, Potato River		
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Kellogg-Allendale-Ashwabab complex, 2 to 6 percent slopes  Field Verified: Series not verified.	WWI Class: N/A Wetland Type(s): PEM - Seasonally flooded basin		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Wetland Size: 0.1158</td> <td style="width: 50%; padding: 2px;">Wetland Area Impacted 0.1158</td> </tr> </table>	Wetland Size: 0.1158	Wetland Area Impacted 0.1158
Wetland Size: 0.1158	Wetland Area Impacted 0.1158		
Hydrology: The feature is located within a small basin of a corn field that extends partially into a roadside ditch. There are tire ruts evident within the wettest part of the wetland. The hydrologic regime is temporarily flooded with recharge hydrology .	Vegetation: Plant Community Description(s): The vegetation is representative of a seasonally flooded basin dominated by Cyperus sp. The feature is located within a planted corn field, but the wetland area appears to have been intentionally not planted.		

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	N	Used for recreation (hunting, birding, hiking, etc.). List:
2	N	N	Used for educational or scientific purposes
3	Y	Y	Visually or physically accessible to public
4	N	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas 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			<b>Wildlife Habitat</b>
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.)
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	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			<b>Fish and Aquatic Life Habitat</b>
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	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	N	N	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			<b>Water Quality Protection</b>
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	N	N	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			<b>Groundwater Processes</b>
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

HU-3: The feature is visible from a public gravel roadway.

ST-5/WQ-7: The feature receives significant runoff from the adjacent gravel road and agricultural field.

ST-1/WQ-2: The feature is a small basin wetland.

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

[illegible]

## List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

[illegible]

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

The floristic integrity is low as there is limited diversity within the feature and the vegetation is disturbed from agricultural land use practices.

### 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	X		M	C	Polluted runoff
					Pond construction
X	X		H	C	Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	X		M	C	Roads or railroad
	X		L	UC	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
X	X		L	UC	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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The feature is highly impacted by the surrounding land use of row crops. The corn field is adjacent to a gravel road which provides runoff to the feature. The surrounding area is impacted by earthworm activity within the forested areas and row crops within the field. There is an above-ground utility to the west of the feature. Invasive species are present within and around the feature.



## 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	✓				
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	There is limited diversity within the feature and the vegetation is disturbed from agricultural land use practices.
Human Use Values	The feature is located on private land within a planted corn field.
Wildlife Habitat	One stratum is represented with limited potential for wildlife habitat. Deer tracks were observed within the feature.
Fish and Aquatic Life Habitat	N/A
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is limited in stormwater storage capacity due to its small size but does receive runoff from the surrounding area, including a gravel road. The feature is not densely vegetated.
Water Quality Protection	The wetland holds stormwater runoff from the surrounding agriculture field, but provides limited filtration.
Groundwater Processes	The feature exhibits recharge hydrology.

## Section 4: Project Impact Assessment

### Brief Project Description

The project is a pipeline relocation that will result in temporary wetland impacts.

### Expected Project Impacts

<b>IMPACT: describe ( + or -)</b>	<b>Permanence/Reversibility</b>	<b>Significance (Low, Medium, High)</b>
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	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: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1009\_u  
 Investigator(s): KDF/AGG Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): Convex Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.485506 Long: -90.486648 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No ☒  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) <u>The upland is located within a planted corn field. Sample point is shared with wetland wird016f.</u>	

## HYDROLOGY

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

**VEGETATION** – Use scientific names of plants.

Sampling Point: wird1009\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Cyperus sp.</u>	<u>90</u>	<u>Y</u>	_____	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Zea mays</u>	<u>10</u>	<u>N</u>	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>100</u> = Total Cover																
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Remarks: (Include photo numbers here or on a separate sheet.) The vegetation is representative of upland located within a planted corn field. The feature is dominated by Cyperus sp. growing between the rows of corn. Cyperus is present in both the wetland and upland plots; however, the wetland plot includes Persicaria sp. which is notably absent from this area.																		

## SOIL

Sampling Point: wird1009\_u

[illegible]



wird1009\_u\_N



wird1009\_u\_NW



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird021f\_xw  
 Investigator(s): KDF/AGG Section, Township, Range: sec 10 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.485196 Long: -90.487248 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <b>The feature is located within mesic hardwood forest near a gravel road.</b>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>12</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>12</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <b>The hydrologic regime is seasonally saturated with recharge hydrology.</b>		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird021f\_xw

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Acer rubrum</i></u>	<u>60</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u><i>Fraxinus nigra</i></u>	<u>15</u>	<u>Y</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>75</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u><i>Fraxinus nigra</i></u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>25</u></td> <td>x 1 = <u>25</u></td> </tr> <tr> <td>FACW species <u>47</u></td> <td>x 2 = <u>94</u></td> </tr> <tr> <td>FAC species <u>82</u></td> <td>x 3 = <u>246</u></td> </tr> <tr> <td>FACU species <u>1</u></td> <td>x 4 = <u>4</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>155</u> (A)</td> <td><u>369</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.3806451612903228</u>	Total % Cover of:	Multiply by:	OBL species <u>25</u>	x 1 = <u>25</u>	FACW species <u>47</u>	x 2 = <u>94</u>	FAC species <u>82</u>	x 3 = <u>246</u>	FACU species <u>1</u>	x 4 = <u>4</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>155</u> (A)	<u>369</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>25</u>	x 1 = <u>25</u>																	
FACW species <u>47</u>	x 2 = <u>94</u>																	
FAC species <u>82</u>	x 3 = <u>246</u>																	
FACU species <u>1</u>	x 4 = <u>4</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>155</u> (A)	<u>369</u> (B)																	
2. <u><i>Acer rubrum</i></u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>30</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u><i>Carex crinita</i></u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u><i>Fraxinus nigra</i></u>	<u>10</u>	<u>Y</u>	<u>FACW</u>															
3. <u><i>Dryopteris intermedia</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
4. <u><i>Athyrium angustum</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
5. <u><i>Carex intumescens</i></u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
6. <u><i>Trientalis borealis</i></u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
7. <u><i>Maianthemum canadense</i></u>	<u>1</u>	<u>N</u>	<u>FACU</u>															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>50</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The vegetation is representative of a hardwood swamp dominated by red maple and black ash, with ground cover dominated by sedge species.																		

## SOIL

Sampling Point: wird021f\_xw

[illegible]





wird021f\_xw\_S



wird021f\_xw\_W

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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project	Evaluator(s): KDF/AGG		
File #: wird021_x	Date of visit(s): 2020-06-16		
Location: PLSS: <u>sec 10 T046N R001W</u>	Ecological Landscape: North Central Forest		
Lat: <u>46.485201</u> Long: <u>-90.487283</u>	Watershed: LS11, Potato River		
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes  Field Verified: The soil series was not verified.	WWI Class: N/A  Wetland Type(s): PFO - hardwood swamp		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Wetland Size: 0.0314</td> <td style="width: 50%; padding: 2px;">Wetland Area Impacted 0.0314</td> </tr> </table>	Wetland Size: 0.0314	Wetland Area Impacted 0.0314
Wetland Size: 0.0314	Wetland Area Impacted 0.0314		
Hydrology: The hydrologic regime is seasonally saturated with recharge hydrology.	Vegetation: Plant Community Description(s): The vegetation is representative of a hardwood swamp dominated by red maple and black ash, with ground cover dominated by sedge species.		

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	N	Used for recreation (hunting, birding, hiking, etc.). List:
2	N	N	Used for educational or scientific purposes
3	Y	Y	Visually or physically accessible to public
4	N	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas 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			<b>Wildlife Habitat</b>
1	Y	Y	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	N	N	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 ≥ 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			<b>Fish and Aquatic Life Habitat</b>
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	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	N	N	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			<b>Water Quality Protection</b>
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	N	N	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	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			<b>Groundwater Processes</b>
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



ST-1, 5, WQ-2: Small basin wetland that receives runoff from an adjacent gravel road.

WH-1/2: The wetland is located in a forested area and has three strata to provide habitat for wildlife species.

WQ-7: The feature is located across a road from an agriculture field and may receive overflow runoff from the field after major rain events.

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

[illegible]

## List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

[illegible]

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

The floristic integrity is moderate. Vegetation is comprised of native species., but there is low overall diversity within the extended part of 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
X	X		M	C	Polluted runoff
					Pond construction
	X		M	C	Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	X		M	C	Roads or railroad
	X		L	UC	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
X	X		M	C	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
					Removal of tree or shrub strata – logging, unprescribed fire
	X		M	UC	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
	X		L	UC	Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
	X		L	UC	Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

\* L= Low, M = Medium, H = High

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The feature is largely impacted by its proximity to a gravel road to the north and its associated runoff stressors. The surrounding area is impacted by earthworm activity within the forested areas and land use for row crops within the agriculture field. There is also an unpaved trail east of the feature that may be used for ATV recreation.

## 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	✓				
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The vegetation is comprised of native species, but has low diversity.
Human Use Values	The feature is visible from a roadway but is located on private land.
Wildlife Habitat	Multiple strata are present within the feature providing habitat for birds.
Fish and Aquatic Life Habitat	No standing water was present at the time of survey.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature receives runoff from a nearby gravel road. Stormwater storage capacity is limited by its small size.
Water Quality Protection	The feature may receive runoff from a nearby agriculture field, but fairly sparse vegetation likely doesn't provide adequate filtration.
Groundwater Processes	The feature exhibits recharge hydrology.

## Section 4: Project Impact Assessment

### Brief Project Description

The project is a pipeline relocation that will result in temporary wetland impacts.

### Expected Project Impacts

IMPACT: describe ( + or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	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: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird021f\_xu  
 Investigator(s): KDF/AGG Section, Township, Range: sec 10 T046N R001W  
 Landform (hillslope, terrace, etc.): Riser Local relief (concave, convex, none): Convex Slope (%): 3-7%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.485241 Long: -90.487132 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) <u>The upland is located within mesic hardwood forest.</u>	

## HYDROLOGY

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



**VEGETATION** – Use scientific names of plants.

Sampling Point: wird021f\_xu

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Acer rubrum</i></u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)														
2. <u><i>Betula papyrifera</i></u>	<u>25</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Betula alleghaniensis</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>80</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>97</u></td> <td>x 3 = <u>291</u></td> </tr> <tr> <td>FACU species <u>107</u></td> <td>x 4 = <u>428</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>204</u> (A)</td> <td><u>719</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.5245098039215685</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>97</u>	x 3 = <u>291</u>	FACU species <u>107</u>	x 4 = <u>428</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>204</u> (A)	<u>719</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>97</u>	x 3 = <u>291</u>																	
FACU species <u>107</u>	x 4 = <u>428</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>204</u> (A)	<u>719</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u><i>Betula papyrifera</i></u>	<u>50</u>	<u>Y</u>	<u>FACU</u>															
2. <u><i>Abies balsamea</i></u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>60</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u><i>Diervilla lonicera</i></u>	<u>25</u>	<u>Y</u>	_____	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u><i>Acer saccharum</i></u>	<u>20</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Athyrium angustum</i></u>	<u>20</u>	<u>Y</u>	<u>FAC</u>															
4. <u><i>Clintonia borealis</i></u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
5. <u><i>Maianthemum canadense</i></u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
6. <u><i>Brachyelytrum erectum</i></u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
7. <u><i>Trientalis borealis</i></u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>89</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The vegetation is representative of upland dominated by paper birch and red maple, with ground cover dominated by false lily-of-the-valley and bluebead lily, though bush honeysuckle, lady fern, and sugar maple saplings provide some cover over the ground layer species.				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>														

## SOIL

Sampling Point: wird021f\_xu

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☒

Remarks:

Soils are silt over silt loam. No indicators of hydric soils were observed.



wird021f\_xu\_NE



wird021f\_xu\_S



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird016e\_xw  
 Investigator(s): KDF/AGG Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.485560 Long: -90.487258 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No ☒  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The feature extension is located within a planted corn field. The wetland itself appears to have been intentionally unplanted in contrast to the upland area. Feature shares an upland point with wird1009e.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: The hydrologic regime is temporarily flooded with recharge hydrology. Tire ruts are evident within the wettest parts of the feature. Vegetation is hydrophytic but does not meet the FAC-Neutral indicator because vegetation was not identified to species. Standing water is present within a deep tire rut but is likely a result of recent rains.		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird016e\_xw

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <u>Persicaria sp.</u>	<u>50</u>	<u>Y</u>	_____															
2. <u>Cyperus sp.</u>	<u>15</u>	<u>Y</u>	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>65</u> = Total Cover																
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Remarks: (Include photo numbers here or on a separate sheet.) The vegetation is representative of a seasonally flooded basin dominated by Cyperus sp. and Persicaria sp. The Persicaria is most likely FACW or OBL; however, the indicator status cannot be confirmed without identifying to species. The area has been disturbed by agricultural activity.																		

**Hydrophytic Vegetation Indicators:**  
 \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation  
 \_\_\_ 2 - Dominance Test is >50%  
 \_\_\_ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
☒ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

**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 height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

## SOIL

Sampling Point: wird016e\_xw

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

Soils are silt loam above silt with redox occurring throughout the profile. Soils meet the F6 indicator for hydric soils.





wird016e\_xw\_N



wird016e\_xw\_S



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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project	Evaluator(s): KDF/AGG		
File #: wird016_x	Date of visit(s): 2020-06-16		
Location: PLSS: <u>sec 03 T046N R001W</u>	Ecological Landscape: North Central Forest		
Lat: <u>46.485558</u> Long: <u>-90.487261</u>	Watershed: LS11, Potato River		
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes  Field Verified: The soil series was not verified.	WWI Class: N/A  Wetland Type(s): PEM - Seasonally flooded basin		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Wetland Size: 0.0536</td> <td style="width: 50%; padding: 2px;">Wetland Area Impacted 0.0536</td> </tr> </table>	Wetland Size: 0.0536	Wetland Area Impacted 0.0536
Wetland Size: 0.0536	Wetland Area Impacted 0.0536		
Hydrology: The hydrologic regime is temporarily flooded with recharge hydrology. Tire ruts are evident within the wettest parts of the feature. Vegetation is hydrophytic but does not meet the FAC-neutral indicator because vegetation was not identified to species. Standing water is present within a deep tire rut but is likely an artifact of recent rains and not groundwater processes.	Vegetation: Plant Community Description(s): The vegetation is representative of a seasonally flooded basin dominated by <i>Cyperus</i> sp. and <i>Persicaria</i> sp.		

**SITE MAP**

**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	N	Used for recreation (hunting, birding, hiking, etc.). List:
2	N	N	Used for educational or scientific purposes
3	Y	Y	Visually or physically accessible to public
4	N	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas 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			<b>Wildlife Habitat</b>
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.)
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.)
FA			<b>Fish and Aquatic Life Habitat</b>
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	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	N	N	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			<b>Water Quality Protection</b>
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	N	N	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			<b>Groundwater Processes</b>
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

HU-3: The feature is visible from a public gravel roadway.

ST-5, WQ-7: The feature receives significant runoff from the adjacent gravel road and agricultural field.

WH-10, FA-2: Shallow standing water present within the feature after rain events may provide temporary habitat for frogs and toads.

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

[illegible]

## List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

[illegible]

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

The floristic integrity is low due to location within an active agricultural field and limited diversity within 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	X		M	C	Polluted runoff
					Pond construction
X	X		H	C	Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	X		M	C	Roads or railroad
	X		L	UC	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	X		M	C	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
	X		L	UC	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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The feature is highly impacted by the surrounding land use of row crops. The corn field is adjacent to a gravel road which provides runoff to the feature. The surrounding area is impacted by earthworm activity within the forested areas and row crops within the field. There is an above-ground utility to the west of the feature.



## 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	✓				
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	There is limited diversity within the feature. Vegetation is disturbed from agricultural land use practices.
Human Use Values	The feature is located on private land within a planted corn field.
Wildlife Habitat	One stratum is represented with limited potential for wildlife habitat. There is standing water present at the time of survey, likely due to recent rain, that may provide habitat for frogs and toads.
Fish and Aquatic Life Habitat	Standing water present within the feature at time of survey would not support fish or aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is limited in stormwater storage capacity due to its small size but does receive runoff from the surrounding area, including a gravel road.
Water Quality Protection	The feature receives significant runoff of from the surrounding agriculture field.
Groundwater Processes	The feature exhibits recharge hydrology. No indicators of groundwater were observed at the time of survey.

## Section 4: Project Impact Assessment

### Brief Project Description

The project is a pipeline relocation that will result in temporary wetland impacts.

### Expected Project Impacts

IMPACT: describe ( + or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	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: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1010f\_w  
 Investigator(s): KDF/AGG Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.486032 Long: -90.486938 Datum: WGS84  
 Soil Map Unit Name: Denomie silt loam, 30 to 60 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The feature is located within mesic hardwood forest adjacent to a planted corn field.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: The hydrologic regime is seasonally saturated with recharge and discharge hydrology. The feature is associated with a stream to the northwest, and receives runoff from the surrounding agricultural field.		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird1010f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Ulmus americana</i></u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80</u> (A/B)														
2. <u><i>Fraxinus pennsylvanica</i></u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
3. <u><i>Populus tremuloides</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
4. <u><i>Acer saccharum</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>70</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>62</u></td> <td>x 1 = <u>62</u></td> </tr> <tr> <td>FACW species <u>84</u></td> <td>x 2 = <u>168</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>171</u> (A)</td> <td><u>315</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.8421052631578947</u>	Total % Cover of:	Multiply by:	OBL species <u>62</u>	x 1 = <u>62</u>	FACW species <u>84</u>	x 2 = <u>168</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>171</u> (A)	<u>315</u> (B)
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OBL species <u>62</u>	x 1 = <u>62</u>																	
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UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>171</u> (A)	<u>315</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u><i>Ulmus americana</i></u>	<u>10</u>	<u>Y</u>	<u>FACW</u>															
2. <u><i>Acer saccharum</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Fraxinus pennsylvanica</i></u>	<u>5</u>	<u>Y</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>20</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u><i>Carex crinita</i></u>	<u>60</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u><i>Geum sp.</i></u>	<u>15</u>	<u>N</u>	_____															
3. <u><i>Athyrium angustum</i></u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
4. <u><i>Equisetum pratense</i></u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
5. <u><i>Glyceria striata</i></u>	<u>2</u>	<u>N</u>	<u>OBL</u>															
6. <u><i>Carex sp.</i></u>	<u>2</u>	<u>N</u>	_____															
7. <u><i>Onoclea sensibilis</i></u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
8. <u><i>Solidago gigantea</i></u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>98</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The vegetation is representative of a hardwood swamp dominated by American elm with sugar maple and green ash scattered throughout. Ground cover is dominated by fringed sedge. Ostrich fern is prevalent outside of the sample plot to the south.																		

## SOIL

Sampling Point: wird1010f\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

- |                                                                       |                                                                            |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                                | <input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>      |
| <input type="checkbox"/> Histic Epipedon (A2)                         | <b>MLRA 149B)</b>                                                          |
| <input type="checkbox"/> Black Histic (A3)                            | <input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b> |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                        | <input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>       |
| <input type="checkbox"/> Stratified Layers (A5)                       | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                          |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)            | <input type="checkbox"/> Depleted Matrix (F3)                              |
| <input type="checkbox"/> Thick Dark Surface (A12)                     | <input checked="" type="checkbox"/> Redox Dark Surface (F6)                |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                     | <input type="checkbox"/> Depleted Dark Surface (F7)                        |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                     | <input type="checkbox"/> Redox Depressions (F8)                            |
| <input type="checkbox"/> Sandy Redox (S5)                             |                                                                            |
| <input type="checkbox"/> Stripped Matrix (S6)                         |                                                                            |
| <input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b> |                                                                            |

### Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

Soils are silt above silt loam with redox occurring below 6 inches. Soils meet the F6 indicator for hydric soils.





wird1010f\_w\_N



wird1010f\_w\_S



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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project		Evaluator(s): KDF/AGG	
File #: wird1010		Date of visit(s): 2020-06-16	
Location: PLSS: <u>sec 03 T046N R001W</u>		Ecological Landscape: North Central Forest	
Lat: <u>46.486032</u> Long: <u>-90.486938</u>		Watershed: LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Denomie silt loam, 30 to 60 percent slopes		WWI Class: N/A	
Field Verified: The soils series was not verified.		Wetland Type(s): PFO - Hardwood swamp	
		Wetland Size: 0.1522	Wetland Area Impacted 0.1522
Hydrology: The hydrologic regime is seasonally saturated with recharge and discharge hydrology. The feature is associated with a stream to the north. The feature receives runoff from agriculture to the south.		Vegetation: Plant Community Description(s): The vegetation is representative of a hardwood swamp dominated by American elm and quaking aspen, with green ash and sugar maple scattered throughout. Ground cover is dominated by fringed sedge and ostrich fern.	

**SITE MAP**

**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	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
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			<b>Wildlife Habitat</b>
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	N	N	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	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			<b>Fish and Aquatic Life Habitat</b>
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	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
1	Y	Y	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	Y	Y	Densely rooted emergent or woody vegetation
ST			<b>Storm and Floodwater Storage</b>
1	Y	Y	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	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			<b>Water Quality Protection</b>
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	Y	Y	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	Y	Y	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			<b>Groundwater Processes</b>
1	Y	Y	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

SP-1: The feature is associated with a stream.

WH-2: The wetland is composed of three strata and likely provides habitat for a variety of wildlife.

ST-5: The feature is located near a gravel road and likely receives runoff from the road.

WQ-7: The feature is adjacent to an active agriculture field planted with corn.

WQ-8/GW-1: The feature exhibits some discharge hydrology to the associated stream to the north.

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

[illegible]

## List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

[illegible]

## SECTION 2: Floristic Integrity

### Plant Community Integrity (circle)\*

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

\*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)
Carex crinita*			PFO	Interrupted
Matteuccia struthiopteris*			PFO	Patchy
Populus tremuloides*			PFO	Patchy
Athyrium filix-femina			PFO	Rare
Fraxinus pennsylvanica			PFO	Rare
Ulmus americana			PFO	Rare
Acer saccharum			PFO	Rare
Tilia americana			PFO	Rare
Impatiens capensis			PFO	Barren
Osmunda claytoniana			PFO	Barren
Rubus idaeus			PFO	Barren
Solidago gigantea			PFO	Barren
Carex sp.			PFO	Barren
Equisetum pratense			PFO	Barren
Geum macrophyllum			PFO	Barren
Geum sp.			PFO	Barren
Glyceria striata			PFO	Barren
Mitchella repens			PFO	Barren
Onoclea sensibilis			PFO	Barren
Pteridium aquilinum			PFO	Barren
Quercus rubra			PFO	Barren
Ranunculus acris			PFO	Barren
Rubus pubescens			PFO	Barren
Taraxacum officinale			PFO	Barren

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

The floristic integrity is moderate to high. The wetland has relatively high native diversity within the feature and generally low non-native species cover.

### 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		M	C	Polluted runoff
					Pond construction
	X		H	C	Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	X		M	C	Roads or railroad
	X		L	UC	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	X		M	C	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
X	X		L	UC	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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The feature is impacted by earthworm activity and runoff from the surrounding area, including agriculture and roadways. There is low cover of non-native species within and around the wetland. The surrounding area is largely impacted by land use practices for row crops.

## 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		✓			
Groundwater Processes		✓			

FUNCTION	RATIONALE
Floristic Integrity	There is relatively high diversity within the feature, and relatively low abundance of non-native species.
Human Use Values	The feature is located on private land and is not visible to the public. The area is unlikely to be used for recreation purposes.
Wildlife Habitat	Multiple strata are represented within the feature that provide habitat for wildlife.
Fish and Aquatic Life Habitat	Standing water was not present within the feature at the time of survey, but the connected stream may provide habitat for amphibians and aquatic invertebrates.
Shoreline Protection	A portion of the wetland abuts a stream.
Flood and Stormwater Storage	The feature is a densely vegetated basin wetland associated with a stream to the north. The feature receives runoff from a gravel road.
Water Quality Protection	The wetland can filter some stormwater runoff from the adjacent agriculture field.
Groundwater Processes	The feature exhibits recharge and discharge hydrology.



## Section 4: Project Impact Assessment

### Brief Project Description

The project is a pipeline relocation that will result in temporary wetland impacts.

### Expected Project Impacts

IMPACT: describe ( + or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	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: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1010\_u  
 Investigator(s): KDF/AGG Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Side Slope Local relief (concave, convex, none): None Slope (%): 8-15%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.486095 Long: -90.486763 Datum: WGS84  
 Soil Map Unit Name: Denomie silt loam, 30 to 60 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) <u>The upland is representative of mesic hardwood forest located near a planted corn field.</u>	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird1010\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Ulmus americana</i></u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>29</u> (A/B)														
2. <u><i>Betula papyrifera</i></u>	<u>25</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Populus tremuloides</i></u>	<u>25</u>	<u>Y</u>	<u>FAC</u>															
4. <u><i>Acer saccharum</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>95</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>40</u></td> <td>x 2 = <u>80</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x 3 = <u>75</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>165</u> (A)</td> <td><u>555</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.36363636363638</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>40</u>	x 2 = <u>80</u>	FAC species <u>25</u>	x 3 = <u>75</u>	FACU species <u>100</u>	x 4 = <u>400</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>165</u> (A)	<u>555</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>40</u>	x 2 = <u>80</u>																	
FAC species <u>25</u>	x 3 = <u>75</u>																	
FACU species <u>100</u>	x 4 = <u>400</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>165</u> (A)	<u>555</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u><i>Acer saccharum</i></u>	<u>50</u>	<u>Y</u>	<u>FACU</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>50</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u><i>Maianthemum canadense</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u><i>Mitchella repens</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Ribes cf. cynosbati</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
4. <u><i>Maianthemum racemosum</i></u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
5. <u><i>Taraxacum officinale</i></u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
6. <u><i>Acer saccharum</i></u>	<u>1</u>	<u>N</u>	<u>FACU</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>20</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The vegetation is representative of upland dominated by American elm, paper birch, and quaking aspen, with ground cover dominated by partridgeberry and false lily-of-the-valley. Sugar maple saplings are common in the understory and ground layer.																		

## SOIL

Sampling Point: wird1010\_u

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☒

Remarks:

Soils are silt throughout the profile. No indicators of hydric soils were observed.





wird1010\_u\_N



wird1010\_u\_S

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1011f\_w  
 Investigator(s): KDF/AGG Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.488630 Long: -90.486396 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 0 to 15 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <b>The feature is located within mesic hardwood forest.</b>	

## HYDROLOGY

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



**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird1011f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Populus tremuloides</u>	<u>80</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>80</u>	= Total Cover	<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>10</u></td> <td>x 1 = <u>10</u></td> </tr> <tr> <td>FACW species <u>17</u></td> <td>x 2 = <u>34</u></td> </tr> <tr> <td>FAC species <u>98</u></td> <td>x 3 = <u>294</u></td> </tr> <tr> <td>FACU species <u>7</u></td> <td>x 4 = <u>28</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>132</u> (A)</td> <td><u>366</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.772727272727273</u>	Total % Cover of:	Multiply by:	OBL species <u>10</u>	x 1 = <u>10</u>	FACW species <u>17</u>	x 2 = <u>34</u>	FAC species <u>98</u>	x 3 = <u>294</u>	FACU species <u>7</u>	x 4 = <u>28</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>132</u> (A)	<u>366</u> (B)
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Column Totals: <u>132</u> (A)	<u>366</u> (B)																	
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u>Acer saccharum</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Fraxinus nigra</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>10</u>	= Total Cover															
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Carex crinita</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Osmunda claytoniana</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Carex intumescens</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
4. <u>Athyrium angustum</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>															
5. <u>Onoclea sensibilis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
6. <u>Juncus cf. dudleyi</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
7. <u>Symphyotrichum sp.</u>	<u>2</u>	<u>N</u>	_____															
8. <u>Acer rubrum</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
9. <u>Carex gracillima</u>	<u>1</u>	<u>N</u>	<u>FACU</u>															
10. <u>Arisaema triphyllum</u>	<u>1</u>	<u>N</u>	<u>FAC</u>															
11. <u>Brachyelytrum erectum</u>	<u>1</u>	<u>N</u>	<u>FACU</u>															
12. <u>Hieracium sp.</u>	<u>1</u>	<u>N</u>	_____															
		<u>45</u>	= Total Cover															
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u>	= Total Cover	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____														
Remarks: (Include photo numbers here or on a separate sheet.) The vegetation is representative of a hardwood swamp dominated by quaking aspen, with ground cover dominated by sedges and fern species. Upland species are present in areas of microtopographical rises within the feature.																		

## SOIL

Sampling Point: wird1011f\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

- |                                                                       |                                                                            |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                                | <input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>      |
| <input type="checkbox"/> Histic Epipedon (A2)                         | <b>MLRA 149B)</b>                                                          |
| <input type="checkbox"/> Black Histic (A3)                            | <input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b> |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                        | <input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>       |
| <input type="checkbox"/> Stratified Layers (A5)                       | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                          |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)            | <input type="checkbox"/> Depleted Matrix (F3)                              |
| <input type="checkbox"/> Thick Dark Surface (A12)                     | <input type="checkbox"/> Redox Dark Surface (F6)                           |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                     | <input type="checkbox"/> Depleted Dark Surface (F7)                        |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                     | <input type="checkbox"/> Redox Depressions (F8)                            |
| <input type="checkbox"/> Sandy Redox (S5)                             |                                                                            |
| <input type="checkbox"/> Stripped Matrix (S6)                         |                                                                            |
| <input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b> |                                                                            |

### Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☒ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

Soils are silt loam above silt with redox occurring below 5 inches. Soils meet the F21 indicator for hydric soils.





wird1011f\_w\_E



wird1011f\_w\_W

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

<b>WETLAND IDENTIFICATION</b>		
Project name: Line 5 Relocation Project	Evaluator(s): KDF/AGG	
File #: wird1011	Date of visit(s): 2020-06-16	
Location: PLSS: <u>sec 03 T046N R001W</u>	Ecological Landscape: Superior Coastal Plain	
Lat: <u>46.488644</u> Long: <u>-90.486391</u>	Watershed: LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>		
<b>SITE DESCRIPTION</b>		
Soils: Mapped Type(s): Kellogg-Allendale-Ashwabay complex, 0 to 15 percent slopes	WWI Class: N/A	
Field Verified: The soil series was not verified.	Wetland Type(s): PFO - Hardwood swamp	
	Wetland Size: 0.0103	Wetland Area Impacted 0.0103
Hydrology: The feature is a small depression with recharge hydrology. The hydrologic regime is seasonally saturated.	Vegetation: Plant Community Description(s): The vegetation is representative of a hardwood swamp dominated by quaking aspen, with ground cover dominated by sedges and fern species. Upland species are present in areas of microtopographical relief within the feature.	

**SITE MAP**



### SECTION 1: Functional Value Assessment

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	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
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			<b>Wildlife Habitat</b>
1	Y	Y	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	N	N	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 ≥ 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			<b>Fish and Aquatic Life Habitat</b>
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	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	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	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			<b>Water Quality Protection</b>
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	N	N	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			<b>Groundwater Processes</b>
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

### Section 1 Comments (Refer to Section 1 numbers)

WH-1/2: The wetland is within a large forested area and has three strata, indicating it has potential to support sensitive wildlife species.  
ST-1/WQ-2: The wetland is a small depression in a hardwood forest.

### 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	Avians

### 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



**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

The floristic integrity is relatively high due to high diversity of native species within an undisturbed wetland and low to absent cover of 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
					Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	X		M	C	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
X	X		M	C	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
X	X		M	UC	Removal of tree or shrub strata – logging, unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
	X		L	UC	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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The feature is impacted by previous logging activities resulting in dominance of young-growth aspen trees and earthworm activity within the surrounding area. The surrounding area is also impacted by low invasive species cover, a roadway to the east, and an inactive railroad to the south.

## 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	✓				
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	There is relatively high diversity and vegetation is comprised of native species.
Human Use Values	The feature is located on private land and is not visible to the public. The area is unlikely to be used for recreation purposes.
Wildlife Habitat	Multiple strata are present within the feature that provide habitat for wildlife.
Fish and Aquatic Life Habitat	Standing water was not present within the feature at the time of survey.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a small basin wetland. Stormwater storage is limited due to the feature's size.
Water Quality Protection	The wetland can filter small amounts of stormwater from adjacent, intact uplands.
Groundwater Processes	The feature exhibits recharge hydrology.

## Section 4: Project Impact Assessment

### Brief Project Description

The project is a pipeline relocation that will result in temporary wetland impacts.

### Expected Project Impacts

<b>IMPACT: describe ( + or -)</b>	<b>Permanence/Reversibility</b>	<b>Significance (Low, Medium, High)</b>
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	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: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1011\_u  
 Investigator(s): KDF/AGG Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.488758 Long: -90.486452 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 0 to 15 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) <u>The upland sample plot is located within mesic hardwood forest.</u>	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird1011\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status																																																					
1. <u><i>Populus tremuloides</i></u>	<u>80</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)																																																				
2. <u><i>Fraxinus nigra</i></u>	<u>10</u>	<u>N</u>	<u>FACW</u>																																																					
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<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>																																																								
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b> <table style="width: 100%;"> <tr> <td>1. <u><i>Acer saccharum</i></u></td> <td><u>75</u></td> <td><u>Y</u></td> <td><u>FACU</u></td> </tr> <tr> <td>2. <u><i>Acer rubrum</i></u></td> <td><u>5</u></td> <td><u>N</u></td> <td><u>FAC</u></td> </tr> <tr> <td>3. <u><i>Prunus serotina</i></u></td> <td><u>5</u></td> <td><u>N</u></td> <td><u>FACU</u></td> </tr> <tr><td>4. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>6. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>7. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr> <td colspan="2" style="text-align: right;"><u>85</u> = Total Cover</td> <td colspan="2"></td> </tr> </table>					1. <u><i>Acer saccharum</i></u>	<u>75</u>	<u>Y</u>	<u>FACU</u>	2. <u><i>Acer rubrum</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>	3. <u><i>Prunus serotina</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>	4. _____	_____	_____	_____	5. _____	_____	_____	_____	6. _____	_____	_____	_____	7. _____	_____	_____	_____	<u>85</u> = Total Cover																							
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Remarks: (Include photo numbers here or on a separate sheet.) The vegetation is representative of upland dominated by quaking aspen and sugar maple, with ground cover dominated by sugar maple saplings and fern species.																																																								



## SOIL

Sampling Point: wird1011\_u

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☒

Remarks:

Soils are silt loam above silt. No indicators of wetland hydrology were observed.



wird1011\_u\_N



wird1011\_u\_W



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird030f\_xw1  
 Investigator(s): SBR/DGL Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.489950 Long: -90.486121 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The wetland is a hardwood swamp dominated by red maple and yellow birch in the overstory. Ferns and fringed sedge are common in the understory.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: The hydrologic regime is saturated.		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird030f\_xw1

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Acer rubrum</i></u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u><i>Betula alleghaniensis</i></u>	<u>25</u>	<u>Y</u>	<u>FAC</u>															
3. <u><i>Acer saccharum</i></u>	<u>15</u>	<u>N</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>90</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>25</u></td> <td>x 1 = <u>25</u></td> </tr> <tr> <td>FACW species <u>55</u></td> <td>x 2 = <u>110</u></td> </tr> <tr> <td>FAC species <u>85</u></td> <td>x 3 = <u>255</u></td> </tr> <tr> <td>FACU species <u>15</u></td> <td>x 4 = <u>60</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>180</u> (A)</td> <td><u>450</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.50</u>	Total % Cover of:	Multiply by:	OBL species <u>25</u>	x 1 = <u>25</u>	FACW species <u>55</u>	x 2 = <u>110</u>	FAC species <u>85</u>	x 3 = <u>255</u>	FACU species <u>15</u>	x 4 = <u>60</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>180</u> (A)	<u>450</u> (B)
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Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u><i>Dryopteris carthusiana</i></u>	<u>25</u>	<u>Y</u>	<u>FACW</u>															
2. <u><i>Osmundastrum cinnamomeum</i></u>	<u>20</u>	<u>Y</u>	<u>FACW</u>															
3. <u><i>Carex crinita</i></u>	<u>15</u>	<u>Y</u>	<u>OBL</u>															
4. <u><i>Calamagrostis canadensis</i></u>	<u>10</u>	<u>N</u>	<u>OBL</u>															
5. <u><i>Acer rubrum</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
6. <u><i>Carex intumescens</i></u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
7. <u><i>Onoclea sensibilis</i></u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
8. <u><i>Arisaema triphyllum</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
9. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
<u>90</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The sample point is fairly representative of the wetland feature. Some bare areas of leaf litter are present and cover is not 100%.				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____														

## SOIL

Sampling Point: wird030f\_xw1

[illegible]





wird030f\_xw1\_E



wird030f\_xw1\_W



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird030f\_xw2  
 Investigator(s): SBR/DGL Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.489080 Long: -90.485736 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 0 to 15 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <b>The wetland is a hardwood swamp dominated by fringed sedge in the understory.</b>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>8</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <b>The hydrologic regime is saturated.</b>		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird030f\_xw2

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Acer rubrum</i></u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)														
2. <u><i>Fraxinus nigra</i></u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
3. <u><i>Acer saccharum</i></u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
4. <u><i>Prunus serotina</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>75</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>50</u></td> <td>x 1 = <u>50</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>60</u></td> <td>x 3 = <u>180</u></td> </tr> <tr> <td>FACU species <u>25</u></td> <td>x 4 = <u>100</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>165</u> (A)</td> <td><u>390</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.3636363636363638</u>	Total % Cover of:	Multiply by:	OBL species <u>50</u>	x 1 = <u>50</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>60</u>	x 3 = <u>180</u>	FACU species <u>25</u>	x 4 = <u>100</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>165</u> (A)	<u>390</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>50</u>	x 1 = <u>50</u>																	
FACW species <u>30</u>	x 2 = <u>60</u>																	
FAC species <u>60</u>	x 3 = <u>180</u>																	
FACU species <u>25</u>	x 4 = <u>100</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>165</u> (A)	<u>390</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u><i>Hamamelis virginiana</i></u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>10</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u><i>Carex crinita</i></u>	<u>50</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u><i>Arisaema triphyllum</i></u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
3. <u><i>Anthoxanthum hirtum</i></u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
4. <u><i>Onoclea sensibilis</i></u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
5. <u><i>Impatiens capensis</i></u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>80</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The sample point is fairly representative of the wetland periphery.																		

## SOIL

Sampling Point: wird030f\_xw2

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

Three distinct soil colors within the profile and redox present throughout.





wird030f\_xw2\_N



wird030f\_xw2\_S

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird030f\_xw3  
 Investigator(s): KDF/AGG Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.489274 Long: -90.486781 Datum: WGS84  
 Soil Map Unit Name: Denomie silt loam, 30 to 60 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <u>The feature is located within mesic hardwood forest with interrupted canopy cover.</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>The hydrologic regime is seasonally saturated with recharge and discharge hydrology. The feature is a headwater to an intermittent stream to the west.</u>		



**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird030f\_xw3

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer saccharum</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. <u>Acer rubrum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>60</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>87</u></td> <td>x 1 = <u>87</u></td> </tr> <tr> <td>FACW species <u>14</u></td> <td>x 2 = <u>28</u></td> </tr> <tr> <td>FAC species <u>27</u></td> <td>x 3 = <u>81</u></td> </tr> <tr> <td>FACU species <u>56</u></td> <td>x 4 = <u>224</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>184</u> (A)</td> <td><u>420</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.282608695652174</u>	Total % Cover of:	Multiply by:	OBL species <u>87</u>	x 1 = <u>87</u>	FACW species <u>14</u>	x 2 = <u>28</u>	FAC species <u>27</u>	x 3 = <u>81</u>	FACU species <u>56</u>	x 4 = <u>224</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>184</u> (A)	<u>420</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>87</u>	x 1 = <u>87</u>																	
FACW species <u>14</u>	x 2 = <u>28</u>																	
FAC species <u>27</u>	x 3 = <u>81</u>																	
FACU species <u>56</u>	x 4 = <u>224</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>184</u> (A)	<u>420</u> (B)																	
<u>10</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u>Quercus rubra</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Populus tremuloides</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>10</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Carex crinita</u>	<u>75</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Carex stipata</u>	<u>10</u>	<u>N</u>	<u>OBL</u>															
3. <u>Osmunda claytoniana</u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
4. <u>Impatiens capensis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
5. <u>Juncus effusus</u>	<u>2</u>	<u>N</u>	<u>OBL</u>															
6. <u>Solidago gigantea</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
7. <u>Carex intumescens</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
8. <u>Acer rubrum</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
9. <u>Brachyelytrum erectum</u>	<u>1</u>	<u>N</u>	<u>FACU</u>															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>114</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.) The vegetation is representative of a hardwood swamp dominated by sugar maple and red maple, with ground cover dominated by sedge and fern species. Ground cover is limited in the wettest parts of the wetland.																		



## SOIL

Sampling Point: wird030f\_xw3

[illegible]



wird030f\_xw3\_N



wird030f\_xw3\_W

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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project	Evaluator(s): SBR/DGL		
File #: wird030_x	Date of visit(s): 2020-06-16		
Location: PLSS: <u>sec 03 T046N R001W</u>	Ecological Landscape: Superior Coastal Plain		
Lat: <u>46.489939</u> Long: <u>-90.486115</u>	Watershed: LS11, Potato River		
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes  Field Verified: The soils were not field verified.	WWI Class: N/A  Wetland Type(s): PFO hardwood swamp		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Wetland Size: 1.4881</td> <td style="width: 50%; padding: 2px;">Wetland Area Impacted 1.4881</td> </tr> </table>	Wetland Size: 1.4881	Wetland Area Impacted 1.4881
Wetland Size: 1.4881	Wetland Area Impacted 1.4881		
Hydrology: The hydrologic regime is saturated and surface water is the main source of hydrology. Water stained leaves are a major indicator of hydrology.	Vegetation: Plant Community Description(s): The wetland is a large hardwood swamp and appears to be dominated by spinulose wood fern and cinnamon fern and fringed sedge. The overstory is mostly red maple and yellow birch.		

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	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	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			<b>Wildlife Habitat</b>
1	Y	Y	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	N	N	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 ≥ 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			<b>Fish and Aquatic Life Habitat</b>
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			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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			<b>Water Quality Protection</b>
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%
GW			<b>Groundwater Processes</b>
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

HU-4 there is a lack of degradation and pollution.

WH-1/2: The wetland is located within a large forested block and likely provides habitat for sensitive species.

WH-10/FA-2/4: The wetland appears to have had standing water present at some time and could likely support aquatics.

ST-1/2/3/WQ-2/3/5: The wetland is a depression without channels and with dense vegetation.

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

[illegible]

## List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

[illegible]

## SECTION 2: Floristic Integrity

### Plant Community Integrity (circle)\*

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

\*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)
Acer rubrum*			PFO	Patchy
Betula alleghaniensis*			PFO	Patchy
Acer saccharum*			PFO	Patchy
Carex crinita*			PFO	Patchy
Dryopteris carthusiana			PFO	Rare
Osmunda cinnamomea			PFO	Rare
Calamagrostis canadensis			PFO	Rare
Carex brunnescens			PFO	Rare
Fraxinus nigra			PFO	Rare
Hamamelis virginiana			PFO	Rare
Onoclea sensibilis			PFO	Rare
Oxalis montana			PFO	Rare
Populus tremuloides			PFO	Rare
Arisaema triphyllum			PFO	Barren
Brachyelytrum cf erectum			PFO	Barren
Impatiens capensis			PFO	Barren
Maianthemum canadense			PFO	Barren
Prunus serotina			PFO	Barren
Rubus pubescens			PFO	Barren
Acer saccharum			PFO	Barren
Anthoxanthum hirtum			PFO	Barren
Laportea canadensis			PFO	Barren
Lycopus cf uniflorus			PFO	Barren
Polygonatum pubescens			PFO	Barren
Trientalis borealis			PFO	Barren
Carex intumescens			PFO	Barren

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

The floristic integrity is moderate due to the relative diversity of native species and lack 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
	X		L	UC	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
					Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
	X		L	UC	Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

\* L= Low, M = Medium, H = High

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

A two track and a utility corridor are within the buffer area of the wetland.

## 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		✓			
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The wetland is dominated by native species and has dense persistent vegetation in two strata.
Human Use Values	The wetland is relatively isolated.
Wildlife Habitat	The wetland has strata with a mix of native species.
Fish and Aquatic Life Habitat	The wetland can likely only support aquatic life after periods of sustained inundation.
Shoreline Protection	
Flood and Stormwater Storage	The wetland is moderate in size with persistent vegetation and can hold runoff from the surrounding uplands.
Water Quality Protection	The wetland has dense persistent vegetation to help filter a runoff.
Groundwater Processes	The wetland likely serves as groundwater recharge.

## Section 4: Project Impact Assessment

### Brief Project Description

The project is a pipeline relocation that will result in temporary wetland impacts.

### Expected Project Impacts

IMPACT: describe ( + or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	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: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird030f\_xu1  
 Investigator(s): SBR/DGL Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.489771 Long: -90.486500 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 0 to 15 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland rise is an island within a wetland feature. It is dominated by red and sugar maple in the overstory and shade-tolerant forbs and tree seedlings in the understory.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird030f\_xu1

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Acer saccharum</i></u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>14</u> (A/B)														
2. <u><i>Acer rubrum</i></u>	<u>35</u>	<u>Y</u>	<u>FAC</u>															
3. <u><i>Tsuga canadensis</i></u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
4. <u><i>Betula alleghaniensis</i></u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>95</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>62</u></td> <td>x 3 = <u>186</u></td> </tr> <tr> <td>FACU species <u>140</u></td> <td>x 4 = <u>560</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>207</u> (A)</td> <td><u>756</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.652173913043478</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>62</u>	x 3 = <u>186</u>	FACU species <u>140</u>	x 4 = <u>560</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>207</u> (A)	<u>756</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>5</u>	x 2 = <u>10</u>																	
FAC species <u>62</u>	x 3 = <u>186</u>																	
FACU species <u>140</u>	x 4 = <u>560</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>207</u> (A)	<u>756</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u><i>Corylus cornuta</i></u>	<u>25</u>	<u>Y</u>	<u>FACU</u>															
2. <u><i>Quercus rubra</i></u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Abies balsamea</i></u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
<u>37</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u><i>Quercus rubra</i></u>	<u>15</u>	<u>Y</u>	<u>FACU</u>															
2. <u><i>Acer saccharum</i></u>	<u>15</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Prunus serotina</i></u>	<u>15</u>	<u>Y</u>	<u>FACU</u>															
4. <u><i>Acer rubrum</i></u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
5. <u><i>Pteridium aquilinum</i></u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
6. <u><i>Oryzopsis asperifolia</i></u>	<u>5</u>	<u>N</u>	_____															
7. <u><i>Dryopteris carthusiana</i></u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
8. <u><i>Trientalis borealis</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
9. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>80</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The sample point is representative of the upland.				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>														

## SOIL

Sampling Point: wird030f\_xu1

[illegible]





wird030f\_xu1\_S



wird030f\_xu1\_W

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird030f\_xu2  
 Investigator(s): SBR/DGL Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.489128 Long: -90.485467 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) <u>The upland is a small rise along a fence line beside the wetland.</u>	

## HYDROLOGY

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



**VEGETATION** – Use scientific names of plants.

Sampling Point: wird030f\_xu2

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer saccharum</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>8</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25</u> (A/B)														
2. <u>Prunus serotina</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Acer rubrum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>80</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>125</u></td> <td>x 4 = <u>500</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>165</u> (A)</td> <td><u>620</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.7575757575758</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>125</u>	x 4 = <u>500</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>165</u> (A)	<u>620</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>40</u>	x 3 = <u>120</u>																	
FACU species <u>125</u>	x 4 = <u>500</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>165</u> (A)	<u>620</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Hamamelis virginiana</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Prunus serotina</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
<u>20</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Carex gracillima</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Acer rubrum</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Rubus idaeus</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
4. <u>Carex arctata</u>	<u>10</u>	<u>N</u>	_____															
5. <u>Mitchella repens</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
6. <u>Hieracium aurantiacum</u>	<u>5</u>	<u>N</u>	_____															
7. <u>Trientalis borealis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
8. <u>Carex pensylvanica</u>	<u>5</u>	<u>N</u>	_____															
9. <u>Hieracium caespitosum</u>	<u>5</u>	<u>N</u>	_____															
10. <u>Quercus rubra</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>90</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The sample point is representative of the upland area. Tree cover and shade-tolerant forbs increase outside the sample plot, which is relatively more open.				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>														

## SOIL

Sampling Point: wird030f\_xu2

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☒

Remarks:

A red soil with no observed redox.





wird030f\_xu2\_E



wird030f\_xu2\_W

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird030f\_xu3  
 Investigator(s): KDF/AGG Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.489237 Long: -90.486878 Datum: WGS84  
 Soil Map Unit Name: Denomie silt loam, 30 to 60 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland is within mesic hardwood forest upslope from a forested wetland and an intermittent stream.	

## HYDROLOGY

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



**VEGETATION** – Use scientific names of plants.

Sampling Point: wird030f\_xu3

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Acer saccharum</i></u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>14</u> (A/B)														
2. <u><i>Ostrya virginiana</i></u>	<u>15</u>	<u>Y</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>65</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>32</u></td> <td>x 3 = <u>96</u></td> </tr> <tr> <td>FACU species <u>139</u></td> <td>x 4 = <u>556</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>171</u> (A)</td> <td><u>652</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.8128654970760234</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>32</u>	x 3 = <u>96</u>	FACU species <u>139</u>	x 4 = <u>556</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>171</u> (A)	<u>652</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>32</u>	x 3 = <u>96</u>																	
FACU species <u>139</u>	x 4 = <u>556</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>171</u> (A)	<u>652</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u><i>Quercus rubra</i></u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
2. <u><i>Acer saccharum</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Prunus serotina</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>20</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u><i>Pteridium aquilinum</i></u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u><i>Acer rubrum</i></u>	<u>30</u>	<u>Y</u>	<u>FAC</u>															
3. <u><i>Gaultheria procumbens</i></u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
4. <u><i>Trientalis borealis</i></u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
5. <u><i>Maianthemum canadense</i></u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>86</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The vegetation is representative of upland dominated by sugar maple, with ground cover dominated by bracken fern and red maple saplings.																		

## SOIL

Sampling Point: wird030f\_xu3

[illegible]



wird030f\_xu3\_E



wird030f\_xu3\_W



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira1009f\_w  
 Investigator(s): SBR/DGL Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.490540 Long: -90.486269 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The wetland is a hardwood swamp that is very sparsely vegetated in some parts. The canopy is a mixture of red and sugar maple, with yellow birch and American elm.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wira1009f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Betula alleghaniensis</i></u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83</u> (A/B)														
2. <u><i>Ulmus americana</i></u>	<u>20</u>	<u>Y</u>	<u>FACW</u>															
3. <u><i>Acer saccharum</i></u>	<u>20</u>	<u>Y</u>	<u>FACU</u>															
4. <u><i>Acer rubrum</i></u>	<u>20</u>	<u>Y</u>	<u>FAC</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>80</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>55</u></td> <td>x 3 = <u>165</u></td> </tr> <tr> <td>FACU species <u>28</u></td> <td>x 4 = <u>112</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>118</u> (A)</td> <td><u>342</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.8983050847457625</u>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>55</u>	x 3 = <u>165</u>	FACU species <u>28</u>	x 4 = <u>112</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>118</u> (A)	<u>342</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>5</u>	x 1 = <u>5</u>																	
FACW species <u>30</u>	x 2 = <u>60</u>																	
FAC species <u>55</u>	x 3 = <u>165</u>																	
FACU species <u>28</u>	x 4 = <u>112</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>118</u> (A)	<u>342</u> (B)																	
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u><i>Carex brunnescens</i></u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u><i>Osmunda claytoniana</i></u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
3. <u><i>Brachyelytrum cf erectum</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
4. <u><i>Carex tuckermanii</i></u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
5. <u><i>Athyrium angustum</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
6. <u><i>Maianthemum racemosum</i></u>	<u>3</u>	<u>N</u>	<u>FACU</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>38</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																		
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.) The sample point is somewhat representative of the feature. Other areas are more densely vegetated in the herbaceous layer.																		

## SOIL

Sampling Point: wira1009f\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

A dark silty loam surface over a reddish sandy soil.





wira1009f\_w\_SE



wira1009f\_w\_SW

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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project	Evaluator(s): SBR/DGL		
File #: wira1009	Date of visit(s): 2020-06-16		
Location: PLSS: <u>sec 03 T046N R001W</u>	Ecological Landscape: Superior Coastal Plain		
Lat: <u>46.490497</u> Long: <u>-90.486229</u>	Watershed: LS11, Potato River		
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes  Field Verified: The soils were not field verified.	WWI Class: N/A  Wetland Type(s): PFO hardwood swamp		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">           Wetland Size:            0.1337         </td> <td style="width: 50%; padding: 2px;">           Wetland Area Impacted            0.1337         </td> </tr> </table>	Wetland Size: 0.1337	Wetland Area Impacted 0.1337
Wetland Size: 0.1337	Wetland Area Impacted 0.1337		
Hydrology: The hydrologic regime is saturated and no standing water is present at the time of survey. The main source of hydrology is from surface water.	Vegetation: Plant Community Description(s): The wetland is a hardwood swamp that is sparsely vegetated in some areas. The canopy is a mixture of mostly red and sugar maple intermixed with yellow birch and some American elm. The herbaceous layer is mostly dominated by ferns, such as cinnamon fern and interrupted fern.		

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	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	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			<b>Wildlife Habitat</b>
1	Y	Y	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	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	N	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	Y	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
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			<b>Fish and Aquatic Life Habitat</b>
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			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	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	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			<b>Water Quality Protection</b>
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	N	N	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			<b>Groundwater Processes</b>
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

WH-10/FA-2/4: The wetland shows signs inundation and could potentially support aquatic fauna during those times.

WH-1/4/8: The wetland is located within a large block of forest and likely provides habitat for sensitive species.

ST-1/2/WQ-2/3: The wetland is a depression without channels.

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

[illegible]

## List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

[illegible]

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

The floristic integrity is moderate due to relatively diverse native vegetation and absence 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
	X		L	UC	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
	X		L	UC	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
					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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The wetland is near a two track and a utility corridor.



## 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		✓			
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The floristic integrity is low moderate due to dominance by native vegetation and absence of invasive species.
Human Use Values	The wetland is isolated.
Wildlife Habitat	The wetland is small with a sparse herbaceous layer and a missing shrub layer, but it is located within a largely forested area.
Fish and Aquatic Life Habitat	The wetland can likely only support aquatic invertebrates during periods of inundation.
Shoreline Protection	
Flood and Stormwater Storage	The wetland is small overall. and holds runoff from the surrounding uplands.
Water Quality Protection	The wetland is a small depression with sparse vegetation with low capacity for filtering water, but is surrounded by intact forest.
Groundwater Processes	The wetland likely serves as groundwater recharge.

## Section 4: Project Impact Assessment

### Brief Project Description

The project is a pipeline relocation that will result in temporary wetland impacts.

### Expected Project Impacts

<b>IMPACT: describe ( + or -)</b>	<b>Permanence/Reversibility</b>	<b>Significance (Low, Medium, High)</b>
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	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: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira1009\_u  
 Investigator(s): SBR/DGL Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.490410 Long: -90.486317 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland is located slightly upslope from the wetland. The overstory is dominated by sugar and red maple with maple seedlings dominating the herbaceous layer.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wira1009\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Acer saccharum</i></u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. <u><i>Acer rubrum</i></u>	<u>40</u>	<u>Y</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>90</u>	= Total Cover	<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>85</u></td> <td>x 3 = <u>255</u></td> </tr> <tr> <td>FACU species <u>75</u></td> <td>x 4 = <u>300</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>160</u> (A)</td> <td><u>555</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.46875</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>85</u>	x 3 = <u>255</u>	FACU species <u>75</u>	x 4 = <u>300</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>160</u> (A)	<u>555</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>85</u>	x 3 = <u>255</u>																	
FACU species <u>75</u>	x 4 = <u>300</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>160</u> (A)	<u>555</u> (B)																	
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u>	= Total Cover															
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u><i>Acer rubrum</i></u>	<u>35</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u><i>Acer saccharum</i></u>	<u>15</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Lonicera canadensis</i></u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
4. <u><i>Trientalis borealis</i></u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>70</u>	= Total Cover															
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u>	= Total Cover															
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b> The sample point is representative of the upland. Vegetative cover is not 100% due to cover by leaf litter.																		

## SOIL

Sampling Point: wira1009\_u

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

[illegible]<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

___ Histosol (A1)	___ Polyvalue Below Surface (S8) ( <b>LRR R,</b>
___ Histic Epipedon (A2)	<b>MLRA 149B)</b>
___ Black Histic (A3)	___ Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
___ Stratified Layers (A5)	___ Loamy Gleyed Matrix (F2)
___ Depleted Below Dark Surface (A11)	___ Depleted Matrix (F3)
___ Thick Dark Surface (A12)	___ Redox Dark Surface (F6)
___ Sandy Mucky Mineral (S1)	___ Depleted Dark Surface (F7)
___ Sandy Gleyed Matrix (S4)	___ Redox Depressions (F8)
___ Sandy Redox (S5)	
___ Stripped Matrix (S6)	
___ Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☒

Remarks:

No observed redox.





wira1009\_u\_NW



wira1009\_u\_SE



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira1008f\_w  
 Investigator(s): SBR/DGL Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.491313 Long: -90.486402 Datum: WGS84  
 Soil Map Unit Name: Denomie silt loam, 30 to 60 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The wetland is a hardwood swamp with standing water present at the time of the survey. The understory is dominated by obligate sedge species.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wira1008f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Abies balsamea</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Acer rubrum</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Ulmus americana</u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
4. <u>Acer saccharum</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>55</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>50</u></td> <td>x 1 = <u>50</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>115</u> (A)</td> <td><u>235</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.04</u>	Total % Cover of:	Multiply by:	OBL species <u>50</u>	x 1 = <u>50</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>35</u>	x 3 = <u>105</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>115</u> (A)	<u>235</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>50</u>	x 1 = <u>50</u>																	
FACW species <u>20</u>	x 2 = <u>40</u>																	
FAC species <u>35</u>	x 3 = <u>105</u>																	
FACU species <u>10</u>	x 4 = <u>40</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>115</u> (A)	<u>235</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Carex tuckermanii</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Carex disperma</u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
3. <u>Glyceria grandis</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>															
4. <u>Carex trisperma</u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
5. <u>Carex crinita</u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
6. <u>Osmundastrum cinnamomeum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
7. <u>Impatiens capensis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>60</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Definitions of Vegetation Strata:  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.) The sample point is fairly representative of the wetland feature. Open water limits cover to below 100%.																		

## SOIL

Sampling Point: wira1008f\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input checked="" type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☐

Remarks:

A loamy mucky mineral soil over a fine sand.





wira1008f\_w\_E



wira1008f\_w\_W

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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project	Evaluator(s): SBR/DGL		
File #: wira1008	Date of visit(s): 2020-06-16		
Location: PLSS: <u>sec 03 T046N R001W</u>	Ecological Landscape: Superior Coastal Plain		
Lat: <u>46.491281</u> Long: <u>-90.486405</u>	Watershed: LS11, Potato River		
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Denomie silt loam, 30 to 60 percent slopes; Kellogg-Allendale-Ashwabay complex, 0 to 15 percent slopes, Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes  Field Verified: The soils were not field verified.	WWI Class: N/A  Wetland Type(s): PFO hardwood swamp		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Wetland Size: 0.4514</td> <td style="width: 50%; padding: 2px;">Wetland Area Impacted 0.4514</td> </tr> </table>	Wetland Size: 0.4514	Wetland Area Impacted 0.4514
Wetland Size: 0.4514	Wetland Area Impacted 0.4514		
Hydrology: The hydrologic regime is saturated and surface water is the main source of input. Standing water is present at the time of the survey.	Vegetation: Plant Community Description(s): The wetland is a hardwood swamp dominated by obligate sedge species in the herbaceous layer.		

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	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	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			<b>Wildlife Habitat</b>
1	Y	Y	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	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 (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	Y	Y	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			<b>Fish and Aquatic Life Habitat</b>
1	N	N	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			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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			<b>Water Quality Protection</b>
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%
GW			<b>Groundwater Processes</b>
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



HU-4: There is a lack of degradation and pollution.

WH-1/4/8: The wetland is located within a large block of forest that likely provides habitat for sensitive species.

WH-10/FA-2/4: The wetland has standing water present at the time of survey and can support aquatic fauna. Tadpoles were observed.

ST-1/2/3/WQ-2/3/5: The wetland is a depression without channels and with dense vegetation.

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

[illegible]

## List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

[illegible]

## SECTION 2: Floristic Integrity

### Plant Community Integrity (circle)\*

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

\*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)
Carex crinita*			PFO	Patchy
Carex tuckermanii*			PFO	Patchy
Abies balsamea*			PFO	Rare
Acer rubrum*			PFO	Rare
Acer saccharum			PFO	Rare
Osmunda cinnamomea*			PFO	Rare
Tsuga canadensis*			PFO	Rare
Glyceria grandis			PFO	Rare
Osmunda claytoniana			PFO	Rare
Ulmus americana			PFO	Rare
Betula alleghaniensis			PFO	Rare
Dryopteris intermedia			PFO	Rare
Fraxinus nigra			PFO	Rare
Impatiens capensis			PFO	Rare
Onoclea sensibilis			PFO	Rare
Waldsteinia fragarioides			PFO	Rare
Athyrium filix-femina			PFO	Barren
Carex disperma			PFO	Barren
Carex intumescens			PFO	Barren
Carex scabrata			PFO	Barren
Carex trisperma			PFO	Barren
Equisetum sylvaticum			PFO	Barren
Maianthemum canadense			PFO	Barren
Rubus pubescens			PFO	Barren
Thuja occidentalis			PFO	Barren

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

The floristic integrity is high based on diversity of native species and low invasive species cover.

### 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
					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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The wetland is relatively isolated and undisturbed.

## 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		✓			
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The wetland is dominated by a fairly diverse assemblage of native species and has minimal to absent invasive species cover.
Human Use Values	The wetland is isolated.
Wildlife Habitat	The wetland has dense vegetation for cover but is dominated by a few species.
Fish and Aquatic Life Habitat	The wetland has moderate areas of standing water to provide aquatic habitats.
Shoreline Protection	
Flood and Stormwater Storage	The wetland is moderate in size but relatively shallow and can hold runoff from the surrounding uplands.
Water Quality Protection	The wetland has dense vegetation but is shallow and could overflow which large amounts of water.
Groundwater Processes	The wetland likely serves as groundwater recharge.

## Section 4: Project Impact Assessment

### Brief Project Description

The project is a pipeline relocation that will result in temporary wetland impacts.

### Expected Project Impacts

<b>IMPACT: describe ( + or -)</b>	<b>Permanence/Reversibility</b>	<b>Significance (Low, Medium, High)</b>
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	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: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira1008\_u  
 Investigator(s): SBR/DGL Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.491463 Long: -90.486520 Datum: WGS84  
 Soil Map Unit Name: Denomie silt loam, 30 to 60 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland is located slightly upslope from the wetland beneath a canopy of mostly red and sugar maple. The understory is composed of shade-tolerant forbs.	

## HYDROLOGY

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



**VEGETATION** – Use scientific names of plants.

Sampling Point: wira1008\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer rubrum</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>9</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>22</u> (A/B)														
2. <u>Acer saccharum</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Populus tremuloides</u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>90</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>70</u></td> <td>x 3 = <u>210</u></td> </tr> <tr> <td>FACU species <u>110</u></td> <td>x 4 = <u>440</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>180</u> (A)</td> <td><u>650</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.611111111111111</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>70</u>	x 3 = <u>210</u>	FACU species <u>110</u>	x 4 = <u>440</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>180</u> (A)	<u>650</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>70</u>	x 3 = <u>210</u>																	
FACU species <u>110</u>	x 4 = <u>440</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>180</u> (A)	<u>650</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Corylus americana</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Acer saccharum</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Ostrya virginiana</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
4. <u>Lonicera canadensis</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
<u>20</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Pteridium aquilinum</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Clintonia borealis</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Corylus cornuta</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
4. <u>Acer saccharum</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
5. <u>Mitchella repens</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
6. <u>Trientalis borealis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
7. <u>Pyrola cf elliptica</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
8. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
<u>70</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The sample point is representative of the upland area. Vegetative cover is not 100% due to cover by leaf litter.				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>														

## SOIL

Sampling Point: wira1008\_u

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☒

Remarks:

No indicators of hydric soil were observed.



wira1008\_u\_E



wira1008\_u\_N



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-10  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirb1001e\_w  
 Investigator(s): SBR/DGL Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.491196 Long: -90.487324 Datum: WGS84  
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The wetland is a small wet meadow within a utility corridor. The wetland is mostly dominated by fringed sedge.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wirb1001e\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>83</u></td> <td>x 1 = <u>83</u></td> </tr> <tr> <td>FACW species <u>14</u></td> <td>x 2 = <u>28</u></td> </tr> <tr> <td>FAC species <u>2</u></td> <td>x 3 = <u>6</u></td> </tr> <tr> <td>FACU species <u>1</u></td> <td>x 4 = <u>4</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>121</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.21</u>	Total % Cover of:	Multiply by:	OBL species <u>83</u>	x 1 = <u>83</u>	FACW species <u>14</u>	x 2 = <u>28</u>	FAC species <u>2</u>	x 3 = <u>6</u>	FACU species <u>1</u>	x 4 = <u>4</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>121</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>83</u>	x 1 = <u>83</u>																	
FACW species <u>14</u>	x 2 = <u>28</u>																	
FAC species <u>2</u>	x 3 = <u>6</u>																	
FACU species <u>1</u>	x 4 = <u>4</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>100</u> (A)	<u>121</u> (B)																	
		<u>0</u> = Total Cover																
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Carex crinita</u>	<u>80</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Phalaris arundinacea</u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
3. <u>Juncus effusus</u>	<u>3</u>	<u>N</u>	<u>OBL</u>															
4. <u>Athyrium angustum</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
5. <u>Onoclea sensibilis</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
6. <u>Solidago gigantea</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
7. <u>Pteridium aquilinum</u>	<u>1</u>	<u>N</u>	<u>FACU</u>															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>100</u> = Total Cover																
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Remarks: (Include photo numbers here or on a separate sheet.) <b>The sample point is fairly representative of the small wetland.</b>																		

**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 height.

**Hydrophytic Vegetation Present?**      Yes ☒      No \_\_\_\_\_

## SOIL

Sampling Point: wirb1001e\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☐

Remarks:

A dark sandy loam soil.





wirb1001e\_w\_NW



wirb1001e\_w\_SW

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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project		Evaluator(s): SBR/DGL	
File #: wirb1001		Date of visit(s): 2020-06-10	
Location: PLSS: <u>sec 03 T046N R001W</u>		Ecological Landscape: Superior Coastal Plain	
Lat: <u>46.491195</u> Long: <u>-90.487345</u>		Watershed: LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes		WWI Class: N/A	
Field Verified: The soils were not field verified.		Wetland Type(s): PEM wet meadow	
		Wetland Size: 0.2911	Wetland Area Impacted 0.2911
Hydrology: The hydrologic regime is saturated and surface water is the main source of hydrology.		Vegetation: Plant Community Description(s): The wetland is a wet meadow found within an open utility corridor. The feature is dominated by fringed sedge.	

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	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
5	N	N	In or adjacent to RED FLAG areas 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			<b>Wildlife Habitat</b>
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.)
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	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			<b>Fish and Aquatic Life Habitat</b>
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	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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			<b>Water Quality Protection</b>
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%
GW			<b>Groundwater Processes</b>
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

### Section 1 Comments (Refer to Section 1 numbers)

ST-1.2, /WQ-2/3: The wetland is a small depression that is not channelized.  
ST-3/WQ-5: The wetland has dense persistent vegetation.

### 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
	Y	Deer
	Y	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

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

## WDNR WRAM v.2 data form - 4

### 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	X		M	UC	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
X	X		L	UC	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
X	X		L	C	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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The wetland is located in an occasionally mowed utility corridor.



## 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	✓				
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The wetland is small with, overall low species diversity and presence of invasive species.
Human Use Values	The wetland is hard to access.
Wildlife Habitat	The wetland only has one strata present and is mostly dominated by a single species.
Fish and Aquatic Life Habitat	The wetland does not appear to hold enough water to provide aquatic habitats.
Shoreline Protection	
Flood and Stormwater Storage	The wetland is a very small and very shallow depression with low capacity for stormwater storage.
Water Quality Protection	The wetland has dense vegetation but it is very shallow and can likely only hold a small amount of water before overflow occurs.
Groundwater Processes	The wetland likely serves as groundwater recharge.

## Section 4: Project Impact Assessment

### Brief Project Description

The project is a pipeline relocation that will result in temporary wetland impacts.

### Expected Project Impacts

<b>IMPACT: describe ( + or -)</b>	<b>Permanence/Reversibility</b>	<b>Significance (Low, Medium, High)</b>
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	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: Iron Sampling Date: 2020-06-10  
Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wirb1001\_u  
Investigator(s): SBR/DGL Section, Township, Range: sec 03 T046N R001W  
Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%): 0-2%  
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.491199 Long: -90.487530 Datum: WGS84  
Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland is located slightly upslope from the wetland and has a closed canopy of mostly sugar and red maple. The understory is relatively open and maple seedlings, common lady fern, false-lily of the valley, and leaf litter.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>
<b>Primary Indicators (minimum of one is required; check all that apply)</b>		_____ 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)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>	
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____		
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> 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.		

**VEGETATION** – Use scientific names of plants.

Sampling Point: wirb1001\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer rubrum</u>	<u>70</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. <u>Acer saccharum</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>95</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>100</u></td> <td>x 3 = <u>300</u></td> </tr> <tr> <td>FACU species <u>71</u></td> <td>x 4 = <u>284</u></td> </tr> <tr> <td>UPL species <u>3</u></td> <td>x 5 = <u>15</u></td> </tr> <tr> <td>Column Totals: <u>174</u> (A)</td> <td><u>599</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.44</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>100</u>	x 3 = <u>300</u>	FACU species <u>71</u>	x 4 = <u>284</u>	UPL species <u>3</u>	x 5 = <u>15</u>	Column Totals: <u>174</u> (A)	<u>599</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>100</u>	x 3 = <u>300</u>																	
FACU species <u>71</u>	x 4 = <u>284</u>																	
UPL species <u>3</u>	x 5 = <u>15</u>																	
Column Totals: <u>174</u> (A)	<u>599</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Ostrya virginiana</u>	<u>1</u>	<u>N</u>	<u>FACU</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
<u>1</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Maianthemum canadense</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Athyrium angustum</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Acer saccharum</u>	<u>15</u>	<u>N</u>	<u>FACU</u>															
4. <u>Pteridium aquilinum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
5. <u>Acer rubrum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
6. <u>Apocynum androsaemifolium</u>	<u>3</u>	<u>N</u>	<u>UPL</u>															
7. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>78</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The sample point is fairly representative of the upland area.																		

## SOIL

Sampling Point: wirb1001\_u

[illegible]





wirb1001\_u\_N



wirb1001\_u\_S



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira1007s\_w  
 Investigator(s): SBR/DGL Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.492464 Long: -90.486221 Datum: WGS84  
 Soil Map Unit Name: Denomie silt loam, 30 to 60 percent slopes NWI classification: R5UBH

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 ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Remarks: (Explain alternative procedures here or in a separate report.)  
 The wetland is an alder swamp with standing water present. Sedge species dominate the herbaceous layer. The community is part of a larger wetland complex associated with Vaughn Creek.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks: The hydrologic regime is saturated.		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wira1007s\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>70</u></td> <td>x 1 = <u>70</u></td> </tr> <tr> <td>FACW species <u>75</u></td> <td>x 2 = <u>150</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>145</u> (A)</td> <td><u>220</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.5172413793103448</u>	Total % Cover of:	Multiply by:	OBL species <u>70</u>	x 1 = <u>70</u>	FACW species <u>75</u>	x 2 = <u>150</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>145</u> (A)	<u>220</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>70</u>	x 1 = <u>70</u>																	
FACW species <u>75</u>	x 2 = <u>150</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>145</u> (A)	<u>220</u> (B)																	
		<u>45</u> = Total Cover																
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u>Alnus incana</u>	<u>45</u>	<u>Y</u>	<u>FACW</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>45</u> = Total Cover																
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Carex lacustris</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>															
2. <u>Phalaris arundinacea</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>															
3. <u>Scirpus microcarpus</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>															
4. <u>Glyceria grandis</u>	<u>10</u>	<u>N</u>	<u>OBL</u>															
5. <u>Equisetum pratense</u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
6. <u>Carex crinita</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>															
7. <u>Ranunculus recurvatus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
8. <u>Lemna minor</u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
9. <u>Alopecurus aequalis</u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
10. <u>Alnus incana</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
11. <u>Sagittaria cf latifolia</u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
12. _____	_____	_____	_____															
		<u>100</u> = Total Cover																
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Remarks: (Include photo numbers here or on a separate sheet.) Cover is not 100% throughout due to open water but the sample point is fairly representative of the wetland.																		

**Hydrophytic Vegetation Indicators:**  
☒ 1 - Rapid Test for Hydrophytic Vegetation  
☒ 2 - Dominance Test is >50%  
☒ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
☐ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**  
  
**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes ☒      No ☐

## SOIL

Sampling Point: wira1007s\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input checked="" type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

A sandy soil with observed redox.





wira1007s\_w\_S



wira1007s\_w\_W

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira1007f\_w  
 Investigator(s): SBR/DGL Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.492777 Long: -90.486245 Datum: WGS84  
 Soil Map Unit Name: Denomie silt loam, 30 to 60 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The wetland is a hardwood swamp with standing water present at the time of the survey. Common duckweed is present in small areas of the open water. Fringed sedge dominates the edges of the open water. The community is part of a larger wetland complex associated with Vaughn Creek.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>2</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: The hydrolgic regime is saturated. Surface water is present at the time of the survey.		



**VEGETATION – Use scientific names of plants.**

 Sampling Point: wira1007f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Fraxinus nigra</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83</u> (A/B)														
2. <u>Abies balsamea</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Acer saccharum</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>55</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>55</u></td> <td>x 1 = <u>55</u></td> </tr> <tr> <td>FACW species <u>43</u></td> <td>x 2 = <u>86</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>15</u></td> <td>x 4 = <u>60</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>153</u> (A)</td> <td><u>321</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.0980392156862746</u>	Total % Cover of:	Multiply by:	OBL species <u>55</u>	x 1 = <u>55</u>	FACW species <u>43</u>	x 2 = <u>86</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>15</u>	x 4 = <u>60</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>153</u> (A)	<u>321</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>55</u>	x 1 = <u>55</u>																	
FACW species <u>43</u>	x 2 = <u>86</u>																	
FAC species <u>40</u>	x 3 = <u>120</u>																	
FACU species <u>15</u>	x 4 = <u>60</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>153</u> (A)	<u>321</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Abies balsamea</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
2. <u>Fraxinus nigra</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>20</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Carex crinita</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Lemna minor</u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
3. <u>Equisetum scirpoides</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
4. <u>Carex cf projecta</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
5. <u>Athyrium angustum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
6. <u>Impatiens capensis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
7. <u>Ranunculus recurvatus</u>	<u>3</u>	<u>N</u>	<u>FACW</u>															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>78</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The feature is large and the sample point is only somewhat representative of the entire feature. Open water limits cover to below 100%.																		



## SOIL

Sampling Point: wira1007f\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

A dark silty loam soil with redox throughout and gravel in the lower half.



wira1007f\_w\_NE



wira1007f\_w\_SW



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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project	Evaluator(s): SBR/DGL		
File #: wira1007	Date of visit(s): 2020-06-16		
Location: PLSS: <u>sec 03 T046N R001W</u>	Ecological Landscape: Superior Coastal Plain		
Lat: <u>46.492468</u> Long: <u>-90.486220</u>	Watershed: LS11, Potato River		
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Denomie silt loam, 30 to 60 percent slopes  Field Verified: The soils were not field verified.	WWI Class: T5/S3Kw  Wetland Type(s): PFO - Hardwood swamp/PSS - Alder swamp		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Wetland Size: 0.5556</td> <td style="width: 50%; padding: 2px;">Wetland Area Impacted 0.5556</td> </tr> </table>	Wetland Size: 0.5556	Wetland Area Impacted 0.5556
Wetland Size: 0.5556	Wetland Area Impacted 0.5556		
Hydrology: The hydrologic regime is saturated and surface water is the main source of hydrology. Surface water, a shallow observed water table (4in) and saturation (2in), aquatic fauna, and water stained leaves are major indicators of hydrology.	Vegetation: Plant Community Description(s): The wetland is a hardwood swamp-alder swamp complex. Standing water is present and discharged to surface water. Fringed sedge and other sedge species are the dominant herbaceous vegetation.		

**SITE MAP**

### SECTION 1: Functional Value Assessment

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	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	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Y	Y	In or adjacent to RED FLAG areas List: Vaughn Creek
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			<b>Wildlife Habitat</b>
1	Y	Y	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	Y	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.)
7	N	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	Y	Y	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			<b>Fish and Aquatic Life Habitat</b>
1	N	N	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			<b>Shoreline Protection</b>
1	Y	Y	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	Y	Y	Densely rooted emergent or woody vegetation
ST			<b>Storm and Floodwater Storage</b>
1	Y	Y	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	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			<b>Water Quality Protection</b>
1	N	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	Y	Y	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	Y	Y	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			<b>Groundwater Processes</b>
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

### Section 1 Comments (Refer to Section 1 numbers)

HU-5/ST-1: The wetland is adjacent to Vaughn Creek, a designated trout stream  
WH-1/2/4/8: The wetland is located within a large block of forest and likely provides habitat for sensitive species  
WH-10/FA-2/4 the wetland has standing water present at the time of survey and can support aquatic fauna.  
SP-1/3 the wetland discharges to a river and has dense vegetation

### 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	Y	Avian
	Y	deer
Y	Y	Amphibians
	Y	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
Y	Y	Aquatic invertebrates
Y	Y	Minnows

## SECTION 2: Floristic Integrity

### Plant Community Integrity (circle)\*

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

\*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)
Carex crinita*			PFO	Patchy
Abies balsamea*			PFO	Patchy
Acer saccharum*			PFO	Rare
Alnus incana*			PSS	Rare
Fraxinus nigra*			PFO	Rare
Acer rubrum*			PFO	Rare
Carex lacustris*			PSS	Rare
Fraxinus pennsylvanica*			PFO	Rare
Phalaris arundinacea*			PSS	Rare
Athyrium filix-femina			PFO	Rare
Carex cf projecta			PFO	Rare
Carex stipata			PSS	Rare
Carex stipata			PSS	Rare
Equisetum scirpoides			PFO	Rare
Impatiens capensis			PFO	Rare
Lemna minor			PFO	Rare
Ranunculus recurvatus			PFO	Rare
Scirpus microcarpus*			PSS	Rare
Ulmus americana			PSS	Rare
Carex cf scabrata			PSS	Barren
Juncus effusus			PSS	Barren
Myosotis sp			PSS	Barren
Onoclea sensibilis			PSS	Barren
Poa pratensis			PSS	Barren
Anemone quinquefolia			PSS	Barren
Barbarea vulgaris			PSS	Barren
Carex gracillima			PSS	Barren
Cerastium cf fontanum			PSS	Barren

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

The floristic integrity is moderate based on low invasive species cover, presence of all three strata, and overall diversity of native plants.

Additional species: Dryopteris intermedia (Plant Communities: PSS, Abundance: Barren), Equisetum hyemale (Plant Communities: PSS, Abundance: Barren), Equisetum sylvaticum (Plant Communities: PSS, Abundance: Barren), Fallopia cf cilinodis (Plant Communities: PSS, Abundance: Barren), Galium aparine (Plant Communities: PSS, Abundance: Barren), Glyceria grandis (Plant Communities: PSS, Abundance: Barren), Laportea canadensis (Plant Communities: PSS, Abundance: Barren), Matteuccia struthiopteris (Plant Communities: PSS, Abundance: Barren), Rubus idaeus (Plant Communities: PSS, Abundance: Barren), Rubus parviflorus (Plant Communities: PSS, Abundance: Barren), Rumex acetosella (Plant Communities: PSS, Abundance: Barren), Rumex crispus (Plant Communities: PSS, Abundance: Barren), Sagittaria latifolia (Plant Communities: PSS, Abundance: Barren), Solidago canadensis (Plant Communities: PSS, Abundance: Barren), Solidago gigantea (Plant Communities: PSS, Abundance: Barren), Typha sp. (Plant Communities: PSS, Abundance: Barren), Veronica americana (Plant Communities: PSS, Abundance: Barren), Alopecurus aequalis (Plant Communities: PSS, 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
					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
					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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The wetland is generally isolated and undisturbed.

## 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		✓			
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The wetland has dense vegetation across three strata and a good assemblage of native species; however some invasive species are present.
Human Use Values	The wetland is isolated.
Wildlife Habitat	The wetland has three strata to provide food and cover for wildlife.
Fish and Aquatic Life Habitat	The wetland has standing water present and pools to provide habitat for aquatics.
Shoreline Protection	The wetland has dense vegetation along Vaughn Creek.
Flood and Stormwater Storage	The wetland's size allows for a moderate amount of water to be held.
Water Quality Protection	The wetlands size and dense vegetation would likely filter moderate amounts of water.
Groundwater Processes	The wetland may serve as groundwater recharge in some areas.

## Section 4: Project Impact Assessment

### Brief Project Description

The project is a pipeline relocation that will result in temporary wetland impacts.

### Expected Project Impacts

IMPACT: describe ( + or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	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: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira1007\_u  
 Investigator(s): SBR/DGL Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.492654 Long: -90.486238 Datum: WGS84  
 Soil Map Unit Name: Denomie silt loam, 30 to 60 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland is located upslope from the wetland and beneath a canopy of sugar maple and eastern hemlock. The ground layer is sparse and dominated by partridgeberry.	

## HYDROLOGY

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

**VEGETATION** – Use scientific names of plants.

Sampling Point: wira1007\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Tsuga canadensis</i></u>	<u>45</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>17</u> (A/B)														
2. <u><i>Acer saccharum</i></u>	<u>30</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Betula alleghaniensis</i></u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
4. <u><i>Abies balsamea</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>90</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>110</u></td> <td>x 4 = <u>440</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>145</u> (A)</td> <td><u>540</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.7241379310344827</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>110</u>	x 4 = <u>440</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>145</u> (A)	<u>540</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>5</u>	x 2 = <u>10</u>																	
FAC species <u>30</u>	x 3 = <u>90</u>																	
FACU species <u>110</u>	x 4 = <u>440</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>145</u> (A)	<u>540</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u><i>Abies balsamea</i></u>	<u>5</u>	<u>Y</u>	<u>FAC</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
<u>5</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u><i>Mitchella repens</i></u>	<u>20</u>	<u>Y</u>	<u>FACU</u>															
2. <u><i>Equisetum pratense</i></u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
3. <u><i>Trientalis borealis</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
4. <u><i>Pteridium aquilinum</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
5. <u><i>Dendrolycopodium cf dendroideum</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
6. <u><i>Pyrola cf elliptica</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
7. <u><i>Equisetum scirpoides</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
8. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
<u>50</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The sample point is representative of the upland. Leaf litter covers almost half of the sample plot.				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>														

## SOIL

Sampling Point: wira1007\_u

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ✓

Remarks:

A silty loam soil with no observed redox features.





wira1007\_u\_E



wira1007\_u\_W



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-04  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1007f\_w  
 Investigator(s): AGG/OTG Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.492682 Long: -90.487365 Datum: WGS84  
 Soil Map Unit Name: Denomie silt loam, 30 to 60 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The feature is a hardwood swamp dominated by black ash. Most of the wetland has an herbaceous layer that is sparsely vegetated but in some areas, Carex crinita is present.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) ___ Water Marks (B1) ___ Sediment Deposits (B2) ___ Drift Deposits (B3) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> Aquatic Fauna (B13) ___ Marl Deposits (B15) ___ Hydrogen Sulfide Odor (C1) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Presence of Reduced Iron (C4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Thin Muck Surface (C7) ___ Other (Explain in Remarks)	___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: The wetland hydrology regime appears to be seasonally flooded based on the standing water and other hydrologic indicators.		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wird1007f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Fraxinus nigra</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Abies balsamea</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Betula alleghaniensis</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
4. <u>Thuja occidentalis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>50</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>60</u> (A)</td> <td><u>150</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.5</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>60</u> (A)	<u>150</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>30</u>	x 2 = <u>60</u>																	
FAC species <u>30</u>	x 3 = <u>90</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>60</u> (A)	<u>150</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Abies balsamea</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>5</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Athyrium angustum</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>5</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The feature is a hardwood swamp dominated by black ash and balsam fir.																		

## SOIL

Sampling Point: wird1007f\_w

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

[illegible]<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/>	Histosol (A1)	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Histic Epipedon (A2)	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Black Histic (A3)	<input type="checkbox"/>
<input type="checkbox"/>	Hydrogen Sulfide (A4)	<input type="checkbox"/>
<input type="checkbox"/>	Stratified Layers (A5)	<input type="checkbox"/>
<input type="checkbox"/>	Depleted Below Dark Surface (A11)	<input type="checkbox"/>
<input type="checkbox"/>	Thick Dark Surface (A12)	<input type="checkbox"/>
<input type="checkbox"/>	Sandy Mucky Mineral (S1)	<input type="checkbox"/>
<input type="checkbox"/>	Sandy Gleyed Matrix (S4)	<input type="checkbox"/>
<input type="checkbox"/>	Sandy Redox (S5)	<input type="checkbox"/>
<input type="checkbox"/>	Stripped Matrix (S6)	<input type="checkbox"/>
<input type="checkbox"/>	Dark Surface (S7) (LRR R, MLRA 149B)	<input type="checkbox"/>

- \_\_\_ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- \_\_\_ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- \_\_\_ Loamy Mucky Mineral (F1) (**LRR K, L**)
- \_\_\_ Loamy Gleyed Matrix (F2)
- \_\_\_ Depleted Matrix (F3)
- \_\_\_ Redox Dark Surface (F6)
- \_\_\_ Depleted Dark Surface (F7)
- \_\_\_ Redox Depressions (F8)

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☒ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ☐

Remarks:

There is an 8-inch muck layer present at the surface.



wird1007f\_w\_N



wird1007f\_w\_NW

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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project		Evaluator(s): AGG/OTG	
File #: wird1007		Date of visit(s): 2020-06-04	
Location: PLSS: <u>sec 03 T046N R001W</u>		Ecological Landscape: Superior Coastal Plain	
Lat: <u>46.492717</u> Long: <u>-90.487359</u>		Watershed: LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Denomie silt loam, 30 to 60 percent slopes		WWI Class: N/A	
Field Verified: The soils were not verified.		Wetland Type(s): PFO hardwood swamp	
		Wetland Size: 0.4715	Wetland Area Impacted 0.4715
Hydrology: The wetland hydrologic regime is seasonally flooded based on the assumed standing water throughout the growing season.		Vegetation: Plant Community Description(s): The feature is a hardwood swamp dominated by black ash and balsam fir with a sparse herbaceous layer.	

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	Y	Y	Used for recreation (hunting, birding, hiking, etc.). List: hunting birding
2	N	N	Used for educational or scientific purposes
3	N	N	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Y	Y	In or adjacent to RED FLAG areas List: Vaughn Creek
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			<b>Wildlife Habitat</b>
1	Y	Y	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	Y	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.)
7	N	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	Y	Y	Part of a large habitat block that supports area sensitive species
9	N	Y	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			<b>Fish and Aquatic Life Habitat</b>
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	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	N	N	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			<b>Water Quality Protection</b>
1	Y	Y	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	N	N	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			<b>Groundwater Processes</b>
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

HU-4: There was no degradation or pollution observed.

WH-9: It appears that the feature remains ponded for the majority of the growing season.

WH - /: The wetland is located within a large forest system and has three strata to provide habitat for wildlife.

ST-5: T/he feature may be fed from surface water runoff and the floodwater from nearby Vaughn Creek.

WQ-2: The feature is a depressional basin.

**List:** direct observation, tracks, scat, other sign; **type of habitat:** nesting, migratory, winter, etc.

[illegible]

## List: direct observation, other sign; type of habitat: nesting, spawning, nursery areas, etc.

[illegible]

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

## WDNR WRAM v.2 data form - 4

### 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
	X		L	C	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
X	X		H	C	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
					Removal of tree or shrub strata – logging, unprescribed fire
					Human trails – unpaved
	X		L	C	Human trails – paved
					Removal of large woody debris
					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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The feature is altered due to earthworms but otherwise intact.

## 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		✓			
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The wetland is dominated by native species, but generally has low diversity. No invasive species are present.
Human Use Values	The wetland and surrounding area may provide hunting opportunities.
Wildlife Habitat	The wetland is within a large forest system and has three strata to provide habitat for wildlife.
Fish and Aquatic Life Habitat	
Shoreline Protection	Vaughn Creek flows south of the wetland, but is not directly adjacent.
Flood and Stormwater Storage	The floodwaters of nearby Vaughn creek may reach this area.
Water Quality Protection	The feature allows water to infiltrate.
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.	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 City/County: Iron Sampling Date: 2020-06-04  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wird1007\_u  
 Investigator(s): AGG/OTG Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): Convex Slope (%): 3-7%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.492628 Long: -90.487298 Datum: WGS84  
 Soil Map Unit Name: Denomie silt loam, 30 to 60 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located within a mesic coniferous forest dominated by eastern hemlock.	

## HYDROLOGY

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

**VEGETATION** – Use scientific names of plants.

Sampling Point: wird1007\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Tsuga canadensis</i></u>	<u>75</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. <u><i>Picea glauca</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>80</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>85</u></td> <td>x 4 = <u>340</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>385</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.85</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>85</u>	x 4 = <u>340</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>385</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>15</u>	x 3 = <u>45</u>																	
FACU species <u>85</u>	x 4 = <u>340</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>100</u> (A)	<u>385</u> (B)																	
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u><i>Carex pedunculata</i></u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u><i>Carex gracillima</i></u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
3. <u><i>Clintonia borealis</i></u>	<u>5</u>	<u>Y</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>20</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) The sample plot is located within a mesic coniferous forest dominated by eastern hemlock.																		

## SOIL

Sampling Point: wird1007\_u

[illegible]



wird1007\_u\_N



wird1007\_u\_S



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira1006f\_w  
 Investigator(s): SBR/DGL Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.492974 Long: -90.486298 Datum: WGS84  
 Soil Map Unit Name: Denomie silt loam, 30 to 60 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The wetland is a sparsely vegetated concave surface on the side of a steep slope. Balsam fir populates the overstory of this hardwood swamp.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wira1006f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status																																																																																																																																			
1. <u><i>Abies balsamea</i></u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																																																																																																																																		
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FACW species	<u>5</u>	x 2 =	<u>10</u>																																																																																																																																			
FAC species	<u>85</u>	x 3 =	<u>255</u>																																																																																																																																			
FACU species	<u>0</u>	x 4 =	<u>0</u>																																																																																																																																			
UPL species	<u>0</u>	x 5 =	<u>0</u>																																																																																																																																			
Column Totals:	<u>90</u>	(A)	<u>265</u>	(B)																																																																																																																																		
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## SOIL

Sampling Point: wira1006f\_w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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       

Remarks:

A silty loam soil with redox observed in the upper profile.



wira1006f\_w\_E



wira1006f\_w\_W



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

<b>WETLAND IDENTIFICATION</b>			
Project name: Line 5 Relocation Project		Evaluator(s): SBR/DGL	
File #: wira1006		Date of visit(s): 2020-06-16	
Location: PLSS: <u>sec 03 T046N R001W</u>		Ecological Landscape: Superior Coastal Plain	
Lat: <u>46.492963</u> Long: <u>-90.486310</u>		Watershed: LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
<b>SITE DESCRIPTION</b>			
Soils: Mapped Type(s): Denomie silt loam, 30 to 60 percent slopes		WWI Class: N/A	
Field Verified: The soils were not field verified.		Wetland Type(s): PFO - Hardwood swamp	
		Wetland Size: 0.0165	Wetland Area Impacted 0.0165
Hydrology: The hydrologic regime is saturated and surface water is the main source of hydrology. The sparsely vegetated concave surface with water stained leaves are major indicators of hydrology.		Vegetation: Plant Community Description(s): The wetland is a hardwood swamp that is a sparsely vegetated concave surface. Balsam fir is the dominant canopy species. Only a few common lady ferns are scattered throughout the herbaceous layer.	

**SITE MAP**

**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	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
5	Y	Y	In or adjacent to RED FLAG areas List: Vaughn Creek
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			<b>Wildlife Habitat</b>
1	N	Y	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	N	N	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	Y	Y	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			<b>Fish and Aquatic Life Habitat</b>
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	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
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	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	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			<b>Water Quality Protection</b>
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	N	N	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			<b>Groundwater Processes</b>
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

### Section 1 Comments (Refer to Section 1 numbers)

HU-5: The wetland is just north of Vaughn Creek, a designated trout stream  
WH-2/8: The wetland is located within a large block of forest that likely provides habitat for sensitive species.  
ST-1/2, WQ-2/3: The wetland is a small depression without channels.

### 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	Y	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

**Plant Community Integrity (circle)\***

\*Note: separate plant communities are described independently

[illegible]

The floristic integrity is low based on the sparse vegetation and 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
					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
					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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The wetland is small and isolated and relatively undisturbed.

## 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	✓				
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The floristic integrity is low due to the lack of dense vegetation and low species diversity.
Human Use Values	The wetland is isolated.
Wildlife Habitat	Sparse vegetation limits cover and food options.
Fish and Aquatic Life Habitat	The wetland does not appear to be able to provide aquatic habitats.
Shoreline Protection	
Flood and Stormwater Storage	The wetland is small and can only hold small amounts of water before overflow.
Water Quality Protection	There is little vegetation to filter water.
Groundwater Processes	The wetland may serve as groundwater recharge.

## Section 4: Project Impact Assessment

### Brief Project Description

The project is a pipeline relocation that will result in temporary wetland impacts.

### Expected Project Impacts

IMPACT: describe ( + or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	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: Iron Sampling Date: 2020-06-16  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira1006\_u  
 Investigator(s): SBR/DGL Section, Township, Range: sec 03 T046N R001W  
 Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): None Slope (%): 3-7%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.492909 Long: -90.486268 Datum: WGS84  
 Soil Map Unit Name: Denomie silt loam, 30 to 60 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland is dominated by sugar maple and located on a small rise beside the wetland feature. The herbaceous layer is sparse overall with leaf litter present.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wira1006\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer saccharum</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>43</u> (A/B)														
2. <u>Acer rubrum</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Abies balsamea</u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>80</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>85</u></td> <td>x 4 = <u>340</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>130</u> (A)</td> <td><u>470</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.6153846153846154</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>85</u>	x 4 = <u>340</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>130</u> (A)	<u>470</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>5</u>	x 2 = <u>10</u>																	
FAC species <u>40</u>	x 3 = <u>120</u>																	
FACU species <u>85</u>	x 4 = <u>340</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>130</u> (A)	<u>470</u> (B)																	
<u>15</u> = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u>Corylus cornuta</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u>Quercus rubra</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>15</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Mitchella repens</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. <u>Acer saccharum</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
3. <u>Rubus parviflorus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
4. <u>Trientalis borealis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
5. <u>Equisetum pratense</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>															
6. <u>Equisetum scirpoides</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>35</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)  
**The sample point represents the upland area.**

## SOIL

Sampling Point: wira1006\_u

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)  
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)  
☐ Dark Surface (S7) (**LRR K, L**)  
☐ Polyvalue Below Surface (S8) (**LRR K, L**)  
☐ Thin Dark Surface (S9) (**LRR K, L**)  
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)  
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)  
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>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 ✓

Remarks:

No observed redox features.





wira1006\_u\_E



wira1006\_u\_W



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-10  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira1005s\_w  
 Investigator(s): SBR/DGL Section, Township, Range: sec 35 T047N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.507982 Long: -90.450621 Datum: WGS84  
 Soil Map Unit Name: Gichigami-Oronto complex, 0 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The wetland is a shrub-carr dominated by pussy willow in the shrub layer and sensitive fern and woodland horsetail in the herbaceous layer.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wira1005s\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Populus tremuloides</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Fraxinus nigra</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>15</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>125</u></td> <td>x 2 = <u>250</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>9</u></td> <td>x 4 = <u>36</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>154</u> (A)</td> <td><u>336</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.1818181818181817</u>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>125</u>	x 2 = <u>250</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>9</u>	x 4 = <u>36</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>154</u> (A)	<u>336</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>5</u>	x 1 = <u>5</u>																	
FACW species <u>125</u>	x 2 = <u>250</u>																	
FAC species <u>15</u>	x 3 = <u>45</u>																	
FACU species <u>9</u>	x 4 = <u>36</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>154</u> (A)	<u>336</u> (B)																	
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u>Salix discolor</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>															
2. <u>Populus tremuloides</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
3. <u>Cornus alba</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
4. <u>Fraxinus nigra</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
5. <u>Fraxinus americana</u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>42</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Onoclea sensibilis</u>	<u>45</u>	<u>Y</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u>Equisetum sylvaticum</u>	<u>35</u>	<u>Y</u>	<u>FACW</u>															
3. <u>Solidago gigantea</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
4. <u>Carex crinita</u>	<u>5</u>	<u>N</u>	<u>OBL</u>															
5. <u>Carex gracillima</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
6. <u>Tilia americana</u>	<u>2</u>	<u>N</u>	<u>FACU</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>97</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.) The sample point is fairly representative of the wetland feature.																		

## SOIL

Sampling Point: wira1005s\_w

[illegible]



wira1005s\_w\_E



wira1005s\_w\_W



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Iron Sampling Date: 2020-06-10  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira1005e\_w  
 Investigator(s): SBR/DGL Section, Township, Range: sec 35 T047N R001W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.508054 Long: -90.450617 Datum: WGS84  
 Soil Map Unit Name: Gichigami-Oronto complex, 0 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) The wetland is a wet meadow found in a roadside ditch. The feature is dominated by reed canary grass, sensitive fern, and woodland horsetail.	

## HYDROLOGY

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



**VEGETATION – Use scientific names of plants.**

 Sampling Point: wira1005e\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>87</u></td> <td>x 2 = <u>174</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>13</u></td> <td>x 4 = <u>52</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>120</u> (A)</td> <td><u>256</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.13</u>	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>87</u>	x 2 = <u>174</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>13</u>	x 4 = <u>52</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>120</u> (A)	<u>256</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>15</u>	x 1 = <u>15</u>																	
FACW species <u>87</u>	x 2 = <u>174</u>																	
FAC species <u>5</u>	x 3 = <u>15</u>																	
FACU species <u>13</u>	x 4 = <u>52</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>120</u> (A)	<u>256</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Salix discolor</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>															
2. <u>Populus tremuloides</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>20</u> = Total Cover																
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Phalaris arundinacea</u>	<u>35</u>	<u>Y</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Onoclea sensibilis</u>	<u>15</u>	<u>N</u>	<u>FACW</u>															
3. <u>Carex crinita</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>															
4. <u>Equisetum sylvaticum</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>															
5. <u>Solidago gigantea</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
6. <u>Carex gracillima</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
7. <u>Poa pratensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
8. <u>Fragaria virginiana</u>	<u>3</u>	<u>N</u>	<u>FACU</u>															
9. <u>Equisetum pratense</u>	<u>2</u>	<u>N</u>	<u>FACW</u>															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>100</u> = Total Cover																
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Remarks: (Include photo numbers here or on a separate sheet.) The sample point is fairly representative of the wetland feature, which connects to a shrub-dominated community.																		

## SOIL

Sampling Point: wira1005e\_w

[illegible]



wira1005e\_w\_N



wira1005e\_w\_S

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

<b>WETLAND IDENTIFICATION</b>		
Project name: Line 5 Relocation Project	Evaluator(s): SBR/DGL	
File #: wira1005	Date of visit(s): 2020-06-10	
Location: PLSS: <u>sec 35 T047N R001W</u>	Ecological Landscape: North Central Forest	
Lat: <u>46.508054</u> Long: <u>-90.450612</u>	Watershed: LS15, Montreal River	
County: <u>Iron</u> Town/City/Village: <u>Saxon town</u>		
<b>SITE DESCRIPTION</b>		
Soils: Mapped Type(s): Gichigami-Oronto complex, 0 to 6 percent slopes  Field Verified: The soils were not field verified.	WWI Class: N/A	
	Wetland Type(s): PEM - Wet meadow/PSS - Shrub carr	
	Wetland Size: 0.0875	Wetland Area Impacted 0.0875
Hydrology: The hydrologic regime is saturated and surface water is the main source of hydrology.	Vegetation: Plant Community Description(s): The wetland is a wet meadow/shrub Carr complex located within a roadside ditch. It is dominated by reed canary grass, woodland horsetail, sensitive fern in the herbaceous layer and red osier dogwood and pussy willow in the shrub layer.	

**SITE MAP**



**SECTION 1: Functional Value Assessment**

HU	Y/N	Potential	<b>Human Use Values: recreation, culture, education, science, natural scenic beauty</b>
1	N	N	Used for recreation (hunting, birding, hiking, etc.). List:
2	N	N	Used for educational or scientific purposes
3	Y	Y	Visually or physically accessible to public
4	N	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas 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			<b>Wildlife Habitat</b>
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.)
7	N	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	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			<b>Fish and Aquatic Life Habitat</b>
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	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	N	Vegetation is inundated in spring
SP			<b>Shoreline Protection</b>
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			<b>Storm and Floodwater Storage</b>
1	Y	Y	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	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			<b>Water Quality Protection</b>
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	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			<b>Groundwater Processes</b>
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

**Section 1 Comments (Refer to Section 1 numbers)**

ST-1/WQ-2: The wetland is in a roadside ditch and holds runoff from the adjacent road.  
ST-3/WQ-5: The wetland has dense persistent vegetation.

**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
	Y	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



## SECTION 2: Floristic Integrity

### Plant Community Integrity (circle)\*

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

\*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	Patchy
Equisetum sylvaticum*			PEM/PSS	Rare
Salix discolor*			PEM/PSS	Rare
Carex cf projecta*			PEM	Rare
Carex crinita			PEM/PSS	Rare
Carex gracillima			PEM/PSS	Rare
Onoclea sensibilis			PEM/PSS	Rare
Salix petiolaris*			PEM	Rare
Cornus alba			PSS	Rare
Fraxinus americana			PSS	Rare
Fraxinus nigra			PSS	Rare
Poa pratensis			PEM	Rare
Populus tremuloides			PEM/PSS	Rare
Solidago gigantea			PEM/PSS	Rare
Anthoxanthum odoratum			PEM	Barren
Juncus effusus			PEM	Barren
Barbarea vulgaris			PEM	Barren
Equisetum pratense			PEM	Barren
Fragaria virginiana			PEM	Barren
Plantago lanceolata			PEM	Barren
Ranunculus acris			PEM	Barren

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

The floristic integrity is low due to the high presence of invasive species and missing strata, and the overall low diversity of 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	X		M	C	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
X	X		H	C	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
X	X		L	UC	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
X	X		M	C	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

\*\*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 CONDITION ASSESSMENT (Include general description and comments)

The wetland is in a roadside ditch that could potentially be mowed.

## 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	✓				
Groundwater Processes	✓				

FUNCTION	RATIONALE
Floristic Integrity	The floristic integrity is low based on invasive species presence, the missing strata, the density of the existing vegetation, and overall species diversity.
Human Use Values	The wetland is within a ditch.
Wildlife Habitat	The wetland has limited strata for cover options and limited species diversity.
Fish and Aquatic Life Habitat	The wetland does not appear to hold water long enough to provide aquatic habitats.
Shoreline Protection	
Flood and Stormwater Storage	The wetland is a small linear depression and overflow is likely with large amounts of water.
Water Quality Protection	The wetland is densely vegetated but shallow and overflow seems likely after moderate amounts of water.
Groundwater Processes	The wetland likely serves as groundwater recharge.

## Section 4: Project Impact Assessment

### Brief Project Description

The project is a pipeline relocation that will result in temporary wetland impacts.

### Expected Project Impacts

IMPACT: describe ( + or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	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: Iron Sampling Date: 2020-06-10  
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wira1005\_u  
 Investigator(s): SBR/DGL Section, Township, Range: sec 35 T047N R001W  
 Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%): 0-2%  
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.508139 Long: -90.450780 Datum: WGS84  
 Soil Map Unit Name: Gichigami-Oronto complex, 0 to 6 percent slopes NWI classification: \_\_\_\_\_

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 \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland is an open meadow dominated by English plantain, tall buttercup, red clover, and field horsetail.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: wira1005\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>65</u></td> <td>x 4 = <u>260</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>365</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.65</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>35</u>	x 3 = <u>105</u>	FACU species <u>65</u>	x 4 = <u>260</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>365</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>35</u>	x 3 = <u>105</u>																	
FACU species <u>65</u>	x 4 = <u>260</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>100</u> (A)	<u>365</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Equisetum arvense</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Trifolium pratense</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Poa pratensis</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>															
4. <u>Plantago lanceolata</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
5. <u>Lotus corniculatus</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
6. <u>Ranunculus acris</u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
7. <u>Taraxacum officinale</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>100</u> = Total Cover																
Woody Vine Stratum (Plot size: <u>30</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Definitions of Vegetation Strata:  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																		
Hydrophytic Vegetation Present?      Yes _____ No <u>✓</u>																		
Remarks: (Include photo numbers here or on a separate sheet.) The sample point is representative of the upland.																		



## SOIL

Sampling Point: wira1005\_u

[illegible]



wira1005\_u\_N



wira1005\_u\_S