## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron Sampling Date: 2020-05-29
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wirc1019f_w</u>
Investigator(s): EJO/JSW	Section, Township, Range: <u>sec 28 T046N R001W</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.43325</u> Soil Map Unit Name: <u>Tula-Gogebic complex</u> , 0 to 6 per Are climatic / hydrologic conditions on the site typical for this time of y Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally per SUMMARY OF FINDINGS – Attach site map showing Hydrophytic Vegetation Present? Yes No	g sampling point locations, transects, important features, etc.
Hydric Soil Present?     Yes _      No       Wetland Hydrology Present?     Yes _      No	within a Wetland? Yes <u>v</u> No
Remarks: (Explain alternative procedures here or in a separate rep The wetland is a saturated hardwood swamp maple.	dominated by black ash, eastern hemlock, and red
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	) Surface Soil Cracks (B6)

Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	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 Sc	ils (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)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes <u>v</u> No Depth (inches): 0	
Saturation Present? Yes <u>v</u> No Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>v</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks:	
The feature appears to be seasonally saturated. The wetland	nd has standing water present at the time
of survey, but not at the sample point.	· · · · · · · · · · · · · · · · · · ·
or our voy, our not at the oumple point.	

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

Sampling Point: wirc1019f\_w

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		<u>Species?</u>		Number of Dominant Species
1. <u>Tsuga canadensis</u>			<u>FACU</u>	That Are OBL, FACW, or FAC:5_ (A)
2. <u>Fraxinus nigra</u>			FACW	Total Number of Dominant
3. <u>Acer rubrum</u>				Species Across All Strata: <u>8</u> (B)
4. <u>Betula alleghaniensis</u>	10	N	FAC	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>63</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co		OBL species <u>10</u> x 1 = <u>10</u>
Sapling/Shrub Stratum (Plot size:15)				FACW species <u>26</u> x 2 = <u>52</u>
1. <u>Tsuga canadensis</u>	5	Y	FACU	FAC species <u>36</u> x 3 = <u>108</u>
2. <u>Abies balsamea</u>				FACU species <u>35</u> x 4 = <u>140</u>
3				UPL species x 5 =
				Column Totals: <u>107</u> (A) <u>310</u> (B)
4				Prevalence Index = B/A = 2.897196261682243
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				$\sim$ 2 - Dominance Test is >50%
_		= Total Co	ver	$\sim$ 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Carex crinita</u>		<u> </u>	OBL	data in Remarks or on a separate sheet)
2. <u>Dryopteris intermedia</u>		Y	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Maianthemum canadense</u>	5	Y	<u>FACU</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Osmunda claytoniana</u>	2	N	FAC	be present, unless disturbed or problematic.
5. <u>Acer rubrum</u>	2	N	FAC	Definitions of Vegetation Strata:
6. <u>Coptis trifolia</u>	1	N	FACW	
7				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	25	= Total Co	ver	height.
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2.				
3.				Understand
				Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate		= Total Co	ver	
The feature is a hardwood swamp dom		w black	ach aa	stern hemlock, and red maple in the

The feature is a hardwood swamp dominated by black ash, eastern hemlock, and red maple in the canopy. The shrub layer has sparse coverage of eastern hemlock and balsam fir. Fringed sedge and Canada mayflower are dominant in the ground layer. In the interior of the wetland, goldthread and interrupted fern have higher coverage than at the sample point.

SOIL
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Depth (inches)         Matrix Color (moist)         Redox Features Color (moist)         Type <sup>1</sup> Loc <sup>2</sup> Texture         Remarks           0-2         10YR 2/2         100         0         MMI         Ioam           2-7         7.5YR 2.5/1         100         0         SL
0-2         10YR         2/2         100         0         MMI         loam           2-7         7.5YR         2.5/1         100         0         SL
2-7 7.5YR 2.5/1 100 0 SL
7-20       5YR       3/3       85       5YR       4/3       15       C       M       SL
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<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: Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)       Polyvalue Below Surface (S8) (LRR R,       2 cm Muck (A10) (LRR K, L, MLRA 149B)         Histic Epipedon (A2)       MLRA 149B)       Coast Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L)
Stratified Layers (A5)      Loamy Gleyed Matrix (F2)      Polyvalue Below Surface (S8) (LRR K, L)        Depleted Below Dark Surface (A11)      Depleted Matrix (F3)      Thin Dark Surface (S9) (LRR K, L)
Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Sandy Redox (S5)       Red Parent Material (F21)
Sandy Redox (S5)       Red Parent Material (F21)         Stripped Matrix (S6)       Very Shallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 149B)
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if observed):
Туре:
Depth (inches): No
Remarks:
Soils observed to be loamy mucky mineral over sandy loam.



wirc1019f\_w\_NW



wirc1019f\_w\_SE

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	EJO/JSW (		
File #:	Date of visit(s):		
wirc1019	2020-05-29		
Location:	Ecological Landsca	ape:	
PLSS: sec 28 T046N R001W	Superior Mineral Ranges		
		5	
Lat: <u>46.433388</u> Long: <u>-90.504660</u>	Watershed:		
0	LS11, Potato River		
County: Iron Town/City/Village: Gurney town			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	ТЗК		
Tula-Gogebic complex, 0 to 6 percent slopes, stony. Pence-Gogebic	Wetland Type(s):		
complex, 6 to 18 percent slopes, stony.	PFO - hardwood swamp		
Field Verified:			
Series were not verified. Soils were observed to	Wetland Size:	Wetland Area Impacted	
be loamy mucky mineral over sandy loam.	1.5988	1.5988	
	Vegetation:		
	Plant Community Description(s):		
Hydrology:	The feature is a hardwood swamp dominated by black ash, Eastern		
The feature appears to be saturated. The wetland	hemlock, and red maple in the canopy. The shrub layer has sparse coverage of eastern hemlock and balsam fir. Fringed sedge and		
has standing water present at the time of survey,	Canada mayflower are dominant in the ground layer. In the interior of		
but not at the sample point.	wetland, goldthread and interrupted fern have higher coverage than		
	at sample point.		

## SITE MAP

### **SECTION 1: Functional Value Assessment**

HU         YN         Potential         Human Use values: recreation, culture, education, science, natural scenic beauty           1         N         Y         Used for recreation (hunning, binding, hking, etc.). List binding, hunning           2         N         N         Used for educational or scientific purposes           3         N         Y         Ysually or physically accessible to public           4         Y         Y         Aesthetically or physically accessible to public           5         N         N         N         List:           6         N         Y         Sugment to archaeological or cultural resource site           7         N         N         In or adjacent to archaeological or cultural resource site           7         N         N         Within or adjacent to habitat corridor or estabilished wildlife habitat area           4         Y         Y         Oromer strata present (>10% cover)           3         N         N         Within or adjacent to habitat corridor or estabilished wildlife habitat area           4         Y         Y         Y         Y           7         N         Y         Plane           8         Y         Y         Plane           9         N         Supports or provides ha		-		Functional Value Assessment			
2         N         N         Used for educational or scientific purposes           3         N         Y         Yestify accessible to public           4         Y         Y         Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation           6         N         N         N         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         Within or adjacent to habitat corrisor or established wildlife habitat area           1         Y         Y         Wetland and contiguous habitat >10 acres           2         Y         Y         3 or more strata present/ township           6         N         N         Within or adjacent to habitat structure (hemin-marsh, shrub/emergent, wetland/upland complex,etc.)           7         N         Y         Enterspersion of habitat structure (hemin-marsh, shrub/emergent, wetland/upland complex,etc.)           7         N         Y         Part of a large habitat block that supports area sensitive species           9         N         N         Ephemeral pond with water prevides habitat for amphibians and aquatic invertebrates           11         N <td>HU</td> <td>Y/N</td> <td>Potential</td> <td>Human Use Values: recreation, culture, education, science, natural scenic beauty</td>	HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty			
3         N         Y         Visually or physically accessible to public           4         Y         A setherically pleasing due to diversity of habitat types, lack of pollution or degradation           6         N         N         List:           7         N         N         Ist:           8         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         Witatife Habitat           1         Y         Y         Wetland and contiguous habitat >10 acres           2         Y         Y         Witatife Habitat           3         N         N         Within or adjacent to habitat corridor resolbished wildlife habitat area           4         Y         Y         Oto more strata present (>10% cover)           3         N         N         Occurs in a Joint Venture priority township           6         Y         V         Interspersion of habitat structure (hemi-marsh.shrub/emergent, wetland/upland complex.etc.)           7         N         Supports or provides habitat for amphibans and aquatic invertebrates           11         N         V Standing water provides habitat for amphibibans and aquatic invertebrates <t< td=""><td>1</td><td>Ν</td><td>Y</td><td></td></t<>	1	Ν	Y				
4         Y         Y         Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation           5         N         N         List:           6         N         Y         Supports or provides habitat for endangered, threatened or special concern species           7         N         N         In or adjacent it carchaeological or cultural resource site           WH         Wildlife Habitat         Wildlife Habitat           1         Y         Wettend and contiguous habitat >10 acres           2         Y         Y         3 or more strata present (>10% cover)           3         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         Interspection of habitat structure (hemi-mash, shrub/emergent, wetland/upland complex.etc.)           7         N         Y         Part of a large habitat block that supports are asenstive species           9         N         N         Espeneral pont with water provides habitat for amphibians and aquatic invertebrates           11         N         N         Seaconally exposed muditats prese	2	Ν	N	Used for educational or scientific purposes			
S         N         List:           6         N         Y         Supports or provides habitat for endangered, threatened or special concern species           7         N         N         N         nor adjacent to achaeological or cultural resource site           WH         Wildlife Habitat         Wildlife Habitat         Y         Y           2         Y         Y         Wetland and contiguous habitat >10 acres         Y           3         N         N         Wildlife Habitat         Y         Y           3         N         N         Within or adjacent to habitat corridor or established wildlife habitat area           4         Y         Y         Toto motifer - 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 (nemi-marsh,shrub/emergent, wetland/upland complex,etc.)           7         N         Y         Plans         Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other           8         Y         Y         Plans         Supports or provides habitat for amphibians and aquatic invertebrates           11         N         N         Estanday getenet Life Habitat	3	Ν	Y	Visually or physically accessible to public			
S         N         List:           6         N         Y         Supports or provides habitat for endangered, threatened or special concern species           7         N         N         N         nor adjacent to achaeological or cultural resource site           WH         Wildlife Habitat         Wildlife Habitat         Y         Y           2         Y         Y         Wetland and contiguous habitat >10 acres         Y           3         N         N         Wildlife Habitat         Y         Y           3         N         N         Within or adjacent to habitat corridor or established wildlife habitat area           4         Y         Y         Toto motifer - 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 (nemi-marsh,shrub/emergent, wetland/upland complex,etc.)           7         N         Y         Plans         Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other           8         Y         Y         Plans         Supports or provides habitat for amphibians and aquatic invertebrates           11         N         N         Estanday getenet Life Habitat	4			Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation			
N         N         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           1         Y         Y         Wetland and contiguous habitat >10 acres           2         Y         Y         Wetland and contiguous habitat >0 acres           3         N         N         Within or adjacent to habitat structure (service) controls (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         Patr of a large habitat block that supports area sensitive species           9         N         N         Ephemeral pond with water present ≥45 days           10         N         Y         Patr of a large habitat loc amphibians and aquatic invertebrates           11         N         N         Seasonally exposed mudflats present           12         N         N         Pervides habitat cor amplitable           13         N         N         Petriading water provides habitat for ampriousin and aquatic invertebrates <td>F</td> <td></td> <td></td> <td>In or adjacent to RED FLAG areas</td>	F			In or adjacent to RED FLAG areas			
7       N       In or adjacent to archaeological or cultural resource site         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/mergent, wetland/upland complex.etc.)         7       N       Y       Part of a large habitat block that supports area sensitive species         9       N       Ephemeral pond with water present ≥45 days         10       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Resonally exposed mudflats present         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)         7A       Fish and Aquatic Life Habitat       In any aduit is present         12       N       N       Natural Heritage Inventory (NH) listed aquatic species within aquatic system         14       N       Y       Vegetatio	5	N	N				
7       N       In or adjacent to archaeological or cultural resource site         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/mergent, wetland/upland complex.etc.)         7       N       Y       Part of a large habitat block that supports area sensitive species         9       N       Ephemeral pond with water present ≥45 days         10       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Resonally exposed mudflats present         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)         7A       Fish and Aquatic Life Habitat       In any aduit is present         12       N       N       Natural Heritage Inventory (NH) listed aquatic species within aquatic system         14       N       Y       Vegetatio	6	N	Y	Supports or provides habitat for endangered, threatened or special concern species			
WH         Wildlife Habitat           1         Y         Y           2         Y         Y           3         N         N           3         N         Within or adjacent to habitat corridor or established wildlife habitat area           4         Y         Y         On 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         Plants           8         Y         Y         Plant 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         Seasonally exposed habitat for amphibians and aquatic invertebrates           12         N         Y         Standing water provides habitat for amphibians and aquatic invertebrates           3         N         N         Natural Heritage hrentory(HI) listed aquatic species within aquatic system           4         N         Y							
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       Plans       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 present         11       N       N       Standing water provides habitat present         12       N       N       Provides habitat scarce in the area (urban, agricultral, etc.)         7A <b>Fish an Aquatic Life Habitat</b> Teshand Aquatic invertebrates         11       N       N       Wetland is connected or contiguous with perennial stream or lake         2       N       Y       Vegetation is inundated	WH			j v			
2       Y       Y       3 or more strata present (>10% cover)         3       N       N       Within or adjacent to habitat corridor or estabilished wildlife habitat area         4       Y       Y       100 m buffer – natural land cover ≥50%(south) 75% (north) intact         5       N       N       Occurs na Joint Venture priority township         6       Y       Y       Interspersion of habitat structure (hemi-marsh.shrub/emergent, wetland/upland complex,etc.)         7       N       Y       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       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       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Natural Heritage Inventory (NHI) listed aquatic species within aquatic system	-	Y	Y				
3         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         Upports or provides habitat for SGCN or brids 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 corridor.           11         N         N         Seasonally exposed mudflats present           12         N         Provides habitat bit of amphibitans and aquatic invertebrates           13         N         N         Natural Heritage Inventory (NHI) listed aquatic species within aquatic system           2         N         Y         Vegetation is inundated in spring           3         N         N         Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable           2							
4       Y       Y       100 m buffer – natural land cover ≥60%(south) 75% (north) intact         5       N       N       Occurs in a Joint Venture priority township         6       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         8       Y       Y       Part of a large habitat block that supports area sensitive species         9       N       N       Ephemeral poon with water prevent ≥45 days         10       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Seasonally exposed mudifats present         12       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Nettend 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 nundated in spring         5P       Shoreline 7 otection       1 <td< td=""><td></td><td></td><td></td><td></td></td<>							
5       N       Occurs in a Joint Venture priority township         6       Y       Y       Interspersion of habitat structure (hemi-mash,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       Ephemeral pond with water present ≥ 45 days         10       N       Seasonally exposed muditats present         11       N       Seasonally exposed muditats present         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         1       N       Wetland is connected or contiguous with perennial stream or lake         2       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Natural Heritage Inventory (NHI) listed aquatic species within aquatic system         4       N       Y       Vegetation is inundated in spring         SP       Shoreline P rotoction       Densely r							
6         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         Beasonally exposed muditats present           12         N         Provides habitat scarce in the area (urban, agricultural, etc.)           FA         Fish and Aquatic Life Habitat           1         N         Wetland is connected or condiguous with perennial stream or lake           2         N         Y         Standing water provides habitat for amphibians and aquatic invertebrates           3         N         N         Natural Heritage Inventory (NHI) listed aquatic species within aquatic system           4         N         Y         Vegetation is inundated in spring           5         Shoreline Protection         1         N           1         N         Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicabl							
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7       N       N       Within a watershed with <10% wetland							
8       N       Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event         WQ       Water Quality Protection         1       N       N       Provides substantial storage of storm and floodwater based on previous section         2       N       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       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%							
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9       N       N       Natural land cover in 100m buffer area < 50%         GW       Groundwater Processes         1       N       N       Springs, seeps or indicators of groundwater present         2       N       N       Location near a groundwater divide or a headwater wetland         3       N       N       Wetland remains saturated for an extended time period with no additional water inputs         4       N       Y       Wetland soils are organic	-						
GW       Groundwater Processes         1       N       N       Springs, seeps or indicators of groundwater present         2       N       N       Location near a groundwater divide or a headwater wetland         3       N       N       Wetland remains saturated for an extended time period with no additional water inputs         4       N       Y       Wetland soils are organic							
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3         N         N         Wetland remains saturated for an extended time period with no additional water inputs           4         N         Y         Wetland soils are organic							
4 N Y Wetland soils are organic							
5 N N Wetland is within a wellhead protection area			-				
	5	Ν	N	Wetland is within a wellhead protection area			

FA-2: The wetland had standing water at the time of survey, with potential to host aquatic invertebrates. WH-6: The wetland has variable microtopography, with both hydrophytic and upland-associated species present. WH-7: The wetland is part of a larger habitat block with potential to host SGCN species.

> 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	Vireos heard nearby wetland
	Y	Mammals, herpetofauna, 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
-		

#### **SECTION 2: Floristic Integrity**

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

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Fraxinus nigra*			PFO	Patchy
Tsuga canadensis*			PFO	Patchy
Acer rubrum*			PFO	Rare
Betula alleghaniensis			PFO	Rare
Carex crinita*			PFO	Rare
Dryopteris intermedia*			PFO	Rare
Maianthemum canadense*			PFO	Rare
Tsuga canadensis*			PFO	Rare
Abies balsamea*			PFO	Barren
Acer rubrum			PFO	Barren
Carex bromoides			PFO	Barren
Carex brunnescens			PFO	Barren
Carex intumescens			PFO	Barren
Onoclea sensibilis			PFO	Barren
Osmunda cinnamomea			PFO	Barren
Osmunda claytoniana			PFO	Barren
Carex leptalea			PFO	Barren
Coptis trifolia			PFO	Barren
Lycopus uniflorus			PFO	Barren
Osmunda regalis			PFO	Barren

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

The wetland community is relatively intact, with no exotic species observed.

#### 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
	х		М	С	Removal of herbaceous stratum – mowing,
	^		IVI	C	grading, earthworms, etc.
Х	x		М	С	Removal of tree or shrub strata – logging,
^			IVI	C	unprescribed fire
	Х		L	С	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 contains earthworms that have the potential to impact the wetland's herbaceous layer. Logging has occurred in the wetland and surrounding forest with slash present in the wetland. A gravel road is present to the north, but slightly outside of the buffer area.

## SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE							
	Low	Medium	High	Exceptional	NA			
Floristic Integrity			<b>v</b>					
Human Use Values		<ul> <li>✓</li> </ul>						
Wildlife Habitat			<b>v</b>					
Fish and Aquatic Life Habitat		<ul> <li>✓</li> </ul>						
Shoreline Protection					<b>v</b>			
Flood and Stormwater Storage		<ul> <li>✓</li> </ul>						
Water Quality Protection			~					
Groundwater Processes	~							

FUNCTION	RATIONALE
Floristic Integrity	Th wetland is Intact, with good species richness and no exotic species observed. Logging has occurred in the area, but has not been significant enough to destabilize the plant community.
Human Use Values	The wetland is part of a larger forest that offers multiple recreational opportunities.
Wildlife Habitat	The wetland has multiple strata present and is part of a larger forest that supports a diversity of wildlife.
Fish and Aquatic Life Habitat	The wetland had standing water at the time of survey with the potential to host aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely receives and stores stormwater from the surrounding forest, but does not obtain increased runoff.
Water Quality Protection	The wetland vegetation is intact, with the ability to capture and filter stormwater.
Groundwater Processes	The wetland appears to exhibit 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 Proje	Ct City/County: Iron	Sampling Date: <u>2020-05-29</u>				
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Sampling Point: <u>wirc1019_u</u>				
Investigator(s): <u>JSW/EJO</u>	Section, Township, Range: <u>S</u>	ec 28 T046N R001W				
Landform (hillslope, terrace, etc.): <u>Talf</u>	Local relief (concave, convex, no	one): <u>None</u> Slope (%): <u>0-2%</u>				
Subregion (LRR or MLRA):	<sup>;ts</sup> Lat: <u>46.433400</u> Long: <u>-9(</u>	0.504873 Datum: WGS84				
Soil Map Unit Name: <u>Tula-Gogebic con</u>	nplex, 0 to 6 percent slopes, stony	NWI classification:				
Are climatic / hydrologic conditions on the site ty	pical for this time of year? Yes 🖌 No	(If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrolog	gy significantly disturbed? Are "Norma	al Circumstances" present? Yes 🖌 No				
Are Vegetation, Soil, or Hydrolog	gy 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						
Hydric Soil Present? Yes	No <u>v</u> within a Wetland?	Yes No				
Wetland Hydrology Present? Yes	No / If yes, optional Wetlan	d Site ID:				
	e or in a separate report.) ated in an upland transitional comm	unity dominated by sugar maple				
and balsam fir.						

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)		
Surface Water (A1) Water-Stained 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 Sc	ils (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)		
Field Observations:			
Surface Water Present? Yes No 🖌 Depth (inches):			
Water Table Present? Yes No <u>v</u> Depth (inches):			
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No		
(includes capillary fringe)			
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:		
	tions), if available:		

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

Sampling Point: wirc1019\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. <u>Acer saccharum</u>			FACU	Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
2. Abies balsamea			FAC	
3. <u>Tsuga canadensis</u>			FACU	Total Number of Dominant Species Across All Strata:5(B)
4. <u>Acer rubrum</u>				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>40</u> (A/B)
6				
7				Prevalence Index worksheet:
		= Total Cov		Total % Cover of:         Multiply by:           OBL species          x 1 =
Sapling/Shrub Stratum (Plot size: 15 )		- 10(a) CO		FACW species $0$ $x^2 = 0$
1. <u>Abies balsamea</u>	20	V	EAC	FAC species $50 \times 3 = 150$
				FACU species 70 x 4 = 280
2				UPL species x 5 =
3				Column Totals: <u>120</u> (A) <u>430</u> (B)
4				Prevalence Index = B/A = 3.583333333333333333
5				
6				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
_	20	= Total Cov	/er	$3$ - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: <u>5</u> )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Maianthemum canadense</u>			FACU	data in Remarks or on a separate sheet)
2. <u>Acer rubrum</u>			FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Trientalis borealis</u>	5	<u>    N     </u>	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Aralia nudicaulis</u>			<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Dendrolycopodium dendroideum</u>	5	N	<u>FACU</u>	Definitions of Vegetation Strata:
6. <u>Gymnocarpium dryopteris</u>	5	Y	<u>FACU</u>	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
	45	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: <u>30</u> )				
1	<u> </u>			
2				
3				Hydrophytic
4				Vegetation
	0	= Total Cov	/er	Present? Yes No
Remarks: (Include photo numbers here or on a separate				
The sample plot is located in an upland	l transiti	onal cor	nmunity	/ between a wet forest and a mesic
hardwood forest.				
L				

SOIL
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	cription: ([		to the dep	th needed				or confirm	the absence	e of indicators.)	
Depth (inches)	Color (	Matrix moist)	%	Color (I		<u>x Feature</u> %	s _Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-3	10YR		100	<u> </u>		0			I		
<u> </u>	7.5YR		100			0		· ·	SIL		
					4/0			·		Distinguish	
8-20	<u>5YR</u>	3/4	98	5YR	4/6		<u> </u>	M	SIL	Distinct redox	
			·			·	·	·			
			·			·		· ·			
			·			·	·	·			
			·				·	·			
			·					·			
<sup>1</sup> Type: C=C Hydric Soil			letion, RM:	Reduced	Matrix, MS	S=Masked	d Sand Gra	ains.		n: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils <sup>3</sup> :	
Histoso				Polyva	alue Belov	v Surface	(S8) ( <b>LRF</b>	RR,		Muck (A10) ( <b>LRR K, L, MLRA 149B</b> )	
Histic E	pipedon (A2	2)		ML	RA 149B)	)			Coast	Prairie Redox (A16) (LRR K, L, R)	
	istic (A3) en Sulfide ( <i>I</i>	14)					<b>_RR R, MI</b> 1) ( <b>LRR K</b>	LRA 149B)	) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L)		
	d Layers (A				y Gleyed I			, _/	Polyvalue Below Surface (S8) (LRR K, L)		
	d Below Da		e (A11)		ted Matrix				Thin Dark Surface (S9) (LRR K, L)		
	ark Surface Mucky Mine				د Dark Sur ted Dark ۱					Manganese Masses (F12) (LRR K, L, R) nont Floodplain Soils (F19) (MLRA 149B)	
-	Gleyed Matr				Depress		.,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
-	Redox (S5)								Red Parent Material (F21)		
	d Matrix (S6 ırface (S7) (		ILRA 149E	3)					<ul> <li>Very Shallow Dark Surface (TF12)</li> <li>Other (Explain in Remarks)</li> </ul>		
<sup>3</sup> Indicators c Restrictive		-		etland hydro	ology mus	t be prese	ent, unless	s disturbed o	or problemati	с.	
Type:	Layer (II OL	iseiveu).									
	ches):								Hydric Soi	l Present? Yes No 🔽	
Remarks:	ienes)										
No indica	ators of	hydric	soil we	ere obse	erved.						





wirc1019\_u\_W

#### WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling Date: 2020-05-29				
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Sampling Point: <u>wirc1020f_w</u>				
C C	Section, Township, Range					
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex,	none): <u>Concave</u> Slope (%): <u>0-2%</u>				
		-90.505913 Datum: WGS84				
		NWI classification:				
Are climatic / hydrologic conditions on the site typica						
		mal Circumstances" present? Yes No				
Are Vegetation, Soil, or Hydrology _		ed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site	map showing sampling point loca	ations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes	No Is the Sampled Ard					
	No within a Wetland?	Yes 🥢 No				
Wetland Hydrology Present? Yes Remarks: (Explain alternative procedures here or	No If yes, optional Wet	and Site ID:				
wetland.						
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; ch	eck all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)				
	Aquatic Fauna (B13)	Moss Trim Lines (B16)				
	Marl Deposits (B15)	Dry-Season Water Table (C2)				
	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)				
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C	3) 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)				
	Other (Explain in Remarks)	Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)		_∠ FAC-Neutral Test (D5)				
Field Observations:						
Surface Water Present? Yes 🗸 No	Depth (inches): 0.5					

Saturation Present? Yes <u>v</u> No <u>Depth (inches): 0</u> (includes capillary fringe)

Water Table Present?

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

Yes <u>v</u> No Depth (inches): <u>0</u>

Remarks:

The wetland appears to be seasonally saturated. Standing water is present in the wetland at the time of survey.

Wetland Hydrology Present? Yes \_\_\_\_

No

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

Sampling Point: wirc1020f\_w

	Absolute	Dominant	Indicator	<b>_</b> . <b>_</b>		
Tree Stratum (Plot size: <u>30</u> )		Species?		Dominance Test worksheet:		
1. <u>Acer rubrum</u>	50	Y	FAC	Number of Dominant Species That Are OBL, FACW, or FAC:5(A)		
2. <u>Fraxinus nigra</u>	30	Y	FACW	Total Number of Dominant		
3. <u>Betula alleghaniensis</u>			FAC	Species Across All Strata: <u>7</u> (B)		
4			<u> </u>	Percent of Dominant Species		
5				That Are OBL, FACW, or FAC: <u>71</u> (A/B)		
6						
7				Prevalence Index worksheet:           Total % Cover of:         Multiply by:		
		= Total Co		Total % Cover of:        Multiply by:           OBL species        15 x 1 =15		
Sapling/Shrub Stratum (Plot size: 15 )			VCI	FACW species $45 \times 2 = 90$		
	F	V		FAC species $67 \times 3 = 201$		
1. <u>Acer saccharum</u>				FACU species $17$ x 4 = $68$		
2. <u>Corylus cornuta</u>				UPL species x 5 =		
3. <u>Amelanchier sp.</u>	2	<u>     N                               </u>	·	Column Totals: <u>144</u> (A) <u>374</u> (B)		
4			·			
5			·	Prevalence Index = B/A = <u>2.59722222222222222222222222222222222222</u>		
6				Hydrophytic Vegetation Indicators:		
7				1 - Rapid Test for Hydrophytic Vegetation		
		= Total Co		2 - Dominance Test is >50%		
Herb Stratum (Plot size: <u>5</u> )				$\sim$ 3 - Prevalence Index is $\leq 3.0^1$		
1. <u>Glyceria striata</u>	10	Y	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)		
2. <u>Carex brunnescens</u>		Ý	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)		
3. Acer saccharum		N	FACU			
4. <u>Carex crinita</u>		-	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must		
5. Dryopteris intermedia			FAC	be present, unless disturbed or problematic.		
				Definitions of Vegetation Strata:		
6. <u>Onoclea sensibilis</u>			FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter		
7. <u>Maianthemum canadense</u>			FACU	at breast height (DBH), regardless of height.		
8. <u>Carex intumescens</u>			FACW	Sapling/shrub – Woody plants less than 3 in. DBH		
9. <u>Athyrium angustum</u>	2	<u>N</u>	FAC	and greater than or equal to 3.28 ft (1 m) tall.		
10			·	Herb – All herbaceous (non-woody) plants, regardless		
11				of size, and woody plants less than 3.28 ft tall.		
12			·	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.		
	44	= Total Co	ver	neight.		
Woody Vine Stratum (Plot size: <u>30</u> )						
1						
2						
3				Hydrophytic		
4.			- <u> </u>	Vegetation		
		= Total Co		Present? Yes <u>v</u> No		
Remarks: (Include photo numbers here or on a separate			vei			
The feature is a hardwood swamp dominated by red maple and black ash in the canopy. Sugar						
maple and beaked hazel are dominant in the shrub layer, with multiple sedges dominant in the						
ground layer.						

SOIL
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	cription: (D	escribe	to the dep	oth needed				or confirm	the absence	e of indicators.)	
Depth (inches)	Color (r	Matrix noist)	%	Color (n		<u>x Features</u> %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-2	10YR		100	<u> </u>	10.00	0			MMI		
<u> </u>	10YR	3/2	100			0					
					E /0						
4-9	<u>7.5R</u>	5/2	85	<u>7.5YR</u>	5/3	15	<u> </u>		<u>SL</u>		
9-20	<u>5YR</u>	4/3	80	5YR	5/4	20	<u>C</u>	_M_	SL	Prominent redox	
						·			<u> </u>		
			. <u> </u>								
			·			·					
			·			·					
						·			<u> </u>		
			·			·					
	oncentration	n, D=Dep	letion, RM	=Reduced N	Aatrix, MS	S=Masked	Sand Gra	ains.		n: PL=Pore Lining, M=Matrix.	
Hydric Soil				Pohaz	luo Rolov	v Surfaco /		Ъ		for Problematic Hydric Soils <sup>3</sup> :	
Histoso Histic E	pipedon (A2	)			RA 149B)	v Surface	(30) ( <b>L</b> KF	К,		Muck (A10) ( <b>LRR K, L, MLRA 149B</b> ) Prairie Redox (A16) ( <b>LRR K, L, R</b> )	
Black H	listic (A3)			Thin D	ark Surfa	ce (S9) (L		<b>RA 149B</b> )	5 cm M	Mucky Peat or Peat (S3) (LRR K, L, R)	
	en Sulfide (A				-	/lineral (F1 Matrix (F2)		, L)		Surface (S7) ( <b>LRR K, L</b> ) alue Below Surface (S8) ( <b>LRR K, L</b> )	
	d Layers (As d Below Dar		e (A11)		ed Matrix				-	Dark Surface (S9) (LRR K, L)	
Thick D	ark Surface	(A12)	· · ·	Redox	Dark Su	face (F6)			Iron-Manganese Masses (F12) (LRR K, L, R)		
	Mucky Miner					Surface (F	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
	Gleyed Matri Redox (S5)	x (54)			Depress				Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21)		
-	d Matrix (S6)	)							Very Shallow Dark Surface (TF12)		
Dark Su	urface (S7) (I	LRR R, N	ILRA 149	<b>B</b> )					Other	(Explain in Remarks)	
<sup>3</sup> Indicators o	of hydrophyti	c vegetat	tion and w	etland hydro	logy mus	t be prese	nt, unless	disturbed	or problemation	с.	
Restrictive		-		2	0,						
Туре:											
Depth (in	iches):								Hydric Soil	I Present? Yes <u>✓</u> No	
Remarks:	14				1						
Soils ob	served to		bamy n	писку т	neral	over loa	am ov	er sand	y ioam.		



wirc1020f\_w\_NE



wirc1020f\_w\_SW

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

WETLAND IDENTIFICATION		
Project name:	Evaluator(s):	
Line 5 Relocation Project	EJO/JSW	
File #:	Date of visit(s):	
wirc1020	2020-05-29	
Location:	Ecological Landsca	ape:
PLSS: sec 28 T046N R001W	Superior Mineral Range	s
	Cuponer minoral range	<b>.</b>
Lat: <u>46.432760</u> Long: <u>-90.505680</u>	Watershed:	
	LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>		
Soils:	WWI Class:	
Mapped Type(s):	N/A	
Tula-Gogebic complex, 0 to 6 percent slopes, stony	Wetland Type(s):	
	PFO - hardwood swamp	
Field Verified:		
Series were not verified. Soils were observed to	Wetland Size:	Wetland Area Impacted
be loamy mucky mineral over loam over sandy	0.0771	0.0771
loam.	Vegetation:	
	Plant Community D	Description(s):
Hydrology:	The feature is a ha	ardwood swamp dominated by a
The wetland appears to be saturated. Standing		le and black ash. Sugar maple
water is present in the wetland at the time of		nut are dominant in the shrub layer,
survey.		es dominant in the ground layer.
		<u> </u>

## SITE MAP

### **SECTION 1: Functional Value Assessment**

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

WQ-2, ST-5: The wetland is located in a closed depression and likely receives stormwater from the surrounding upland forest. WH-7: The wetland is part of a larger forest with potential to support SGCN species. FA-2: The wetland had standing water at the time survey, with potential to host aquatic life. GW-4: The top two inches of the soil profile were a dark loamy mucky mineral.

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Acer rubrum*			PFO	Interrupted
Fraxinus nigra*			PFO	Patchy
Betula alleghaniensis			PFO	Rare
Carex brunnescens*			PFO	Rare
Glyceria striata*			PFO	Rare
Acer saccharum*			PFO	Rare
Acer saccharum			PFO	Rare
Carex crinita			PFO	Rare
Corylus cornuta*			PFO	Rare
Dryopteris intermedia*			PFO	Rare
Onoclea sensibilis			PFO	Barren
Amelanchier sp.			PFO	Barren
Athyrium filix-femina			PFO	Barren
Carex intumescens			PFO	Barren
Maianthemum canadense			PFO	Barren
Rubus pubescens			PFO	Barren
Anemone quinquefolia			PFO	Barren
Trientalis borealis			PFO	Barren

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

The wetland is intact, with no exotic species observed and a good 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
					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
	х		М	С	Removal of herbaceous stratum – mowing,
	^		IVI	C	grading, earthworms, etc.
Х	x		М	С	Removal of tree or shrub strata – logging,
^			IVI		unprescribed fire
	Х		L	С	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)

Earthworms are present in the surrounding forest and may impact the wetland's herbaceous layer. Logging has occurred in and around the wetland, with stumps and slash present in the wetland. Forest trails are near the wetland.

## SUMMARY OF FUNCTIONAL VALUES

FUNCTION			SIGNIFICANC	E	
	Low	Medium	High	Exceptional	NA
Floristic Integrity			~		
Human Use Values		<ul> <li>✓</li> </ul>			
Wildlife Habitat			~		
Fish and Aquatic Life Habitat			<b>~</b>		
Shoreline Protection					<b>v</b>
Flood and Stormwater Storage		<ul> <li>✓</li> </ul>			
Water Quality Protection			~		
Groundwater Processes	~				

FUNCTION	RATIONALE
Floristic Integrity	The wetland has a good diversity of native species with minimal presence of exotic species.
Human Use Values	The wetland is part of a larger forest that offers recreational opportunities.
Wildlife Habitat	The wetland has well-developed strata and is part of a large, intact forest.
Fish and Aquatic Life Habitat	The wetland had standing water at the time of survey, with potential to support aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is a depression that receives stormwater from the surrounding upland.
Water Quality Protection	The wetland has a good coverage of vegetation with the potential to capture and filter stormwater.
Groundwater Processes	The wetland appears to exhibit 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/C	County: Iron	Samp	ling Date: <u>2020-05-29</u>
Applicant/Owner: Enbridge				State: <u>Wisconsin</u> Sar	npling Point: <u>wirc1020_u</u>
Investigator(s): <u>JSW/EJO</u>		Secti	on, Township, Range: <u>SeC</u>	28 T046N R00	)1W
Landform (hillslope, terrace, etc.): Sic	le Slope	_ Local rel	ief (concave, convex, none)	None	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcent	ral Forests Lat: 46.432	2631	Long: <u>-90.5</u>	05853	Datum: <u>WGS84</u>
Soil Map Unit Name: Tula-Gogeb	bic complex, 0 to 6	percen	t slopes, stony	NWI classification:	
Are climatic / hydrologic conditions on t	he site typical for this time	e of year? Y	′es No (If r	no, explain in Remarks	3.)
Are Vegetation, Soil, or	Hydrology signific	cantly distu	bed? Are "Normal Ci	rcumstances" present	? Yes 🖌 No
Are Vegetation, Soil, or	Hydrology natura	lly problem	atic? (If needed, exp	lain any answers in Re	emarks.)
SUMMARY OF FINDINGS - A	Attach site map show	wing san	npling point locations	s, transects, imp	ortant features, etc.
Hydrophytic Vegetation Present?	Yes No	~	Is the Sampled Area		
Hydric Soil Present?			within a Wetland?	Yes <u>No</u>	×
Wetland Hydrology Present?	Yes No	v	If yes, optional Wetland Si	te ID:	
Remarks: (Explain alternative proced The upland sample point	lures here or in a separate is located in a me	e report.) esic harc	dwood forest domir	nated by sugar	maple.

#### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 Sc	pils (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)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes <u>Ves</u> Depth (inches):	
Saturation Present? Yes No 🖌 Depth (inches):	Wetland Hydrology Present? Yes No _
(includes capillary fringe)	
(includes capillary fringe)	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe)	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	
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(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	

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

Sampling Point: wirc1020\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. <u>Acer saccharum</u>				Number of Dominant Species
				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across All Strata: <b>7</b> (B)
3				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>29</u> (A/B)
5		·	·	That Are OBL, FACW, or FAC: <u>29</u> (A/B)
6		·		Prevalence Index worksheet:
7			·	Total % Cover of: Multiply by:
	50	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 )				FACW species x 2 =0
1. <u>Corylus cornuta</u>	25	Y	<u>FACU</u>	FAC species x 3 =81
2. Acer saccharum				FACU species <u>110</u> x 4 = <u>440</u>
3				UPL species x 5 =
				Column Totals: <u>137</u> (A) <u>521</u> (B)
4				Prevalence Index = B/A = 3.802919708029197
5				
6				Hydrophytic Vegetation Indicators:
7			·	<ul> <li> 1 - Rapid Test for Hydrophytic Vegetation</li> <li> 2 - Dominance Test is &gt;50%</li> </ul>
	35	= Total Co	ver	$3 - Prevalence Index is < 3.0^{1}$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Maianthemum canadense</u>	10	Y	<u>FACU</u>	data in Remarks or on a separate sheet)
2. Oryzopsis asperifolia	10	Y		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Dryopteris intermedia</u>		Y	FAC	4
4. <u>Carex pedunculata</u>			FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Acer saccharum</u>		N	FACU	
6. <u>Aralia nudicaulis</u>		N	FACU	Definitions of Vegetation Strata:
			FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Acer rubrum</u>				at breast height (DBH), regardless of height.
8. <u>Polygonatum pubescens</u>				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH
9. <u>Trientalis borealis</u>	2	<u>      N</u>	FAC	and greater than or equal to 3.28 ft (1 m) tall.
10			·	Herb – All herbaceous (non-woody) plants, regardless
11		·	·	of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	62	= Total Co	ver	height.
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3				Hydronbytic
4				Hydrophytic Vegetation
· ·		= Total Co		Present? Yes No 🗸
Remarks: (Include photo numbers here or on a separate			vei	
The vegetation is consistent with that o	f a mes	ic hardv	vood for	rest.

SOIL
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Profile Des	cription: (D	Describe	to the dep	th needed	to docun	nent the	indicator of	or confirm	the absence	e of indicators.)
Depth	Color (	Matrix	0/	Calar (	Redo	x Feature	S Turn a <sup>1</sup>	1 2	Tautura	Demonto
(inches) 0-3	<u>Color (</u> 10YR		<u>%</u> 100	Color (r	<u>noist)</u>	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
							·			
<u> </u>	<u>7.5YR</u>		100						SIL	<u> </u>
<u>8-20</u>	<u>5YR</u>	3/4	_98_	5YR	4/6	2	<u> </u>	M	SIL	Distinct redox
							·			
			·				·			
			·							
			·							
							·			
							·			
			·							
1			·				·			
<sup>1</sup> Type: C=C Hydric Soil			letion, RM:	Reduced I	Matrix, MS	S=Masked	d Sand Gra	ains.		n: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils <sup>3</sup> :
Histoso				Polyv	alue Belov	v Surface	(S8) ( <b>LRF</b>	R.		Muck (A10) (LRR K, L, MLRA 149B)
	pipedon (A2	2)			RA 149B)		(00) (EI	,	Coast Prairie Redox (A16) (LRR K, L, MERA 1496)	
	istic (A3)						LRR R, ML			Mucky Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A						1) ( <b>LRR K</b> ,	, L)		Surface (S7) (LRR K, L)
	d Layers (A d Below Da		e (A11)		y Gleyed I ted Matrix		2)			alue Below Surface (S8) ( <b>LRR K, L</b> ) Dark Surface (S9) ( <b>LRR K, L</b> )
-	ark Surface		5 (/ ( I I )		k Dark Su		1			Aanganese Masses (F12) (LRR K, L, R)
-	Mucky Miner			Deple	ted Dark S	Surface (F	7)			nont Floodplain Soils (F19) (MLRA 149B)
	Gleyed Matr	ix (S4)		Redox	Contraction Depress	ions (F8)				Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Redox (S5) d Matrix (S6	)								Parent Material (F21) Shallow Dark Surface (TF12)
	Inface (S7) (		ILRA 149E	3)						(Explain in Remarks)
3				· 						
Restrictive		-		etland hydro	ology mus	t be pres	ent, unless	disturbed	or problemati	С.
Type:		serveu).								
	ichoc):								Hvdric Soi	l Present? Yes No
Remarks:	iches):								,	
No indica	ators of	hvdric	soil we	ere obse	erved.					



wirc1020\_u\_E



wirc1020\_u\_N

#### WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/C	County: Iron Sampling Date: 2020-05-30
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wirc1023f_w</u>
Investigator(s): EJO/JSW Section	on, Township, Range: <u>sec 28 T046N R001W</u>
Landform (hillslope, terrace, etc.): Depression Local rel	ief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.433965	Long: <u>-90.505041</u> Datum: <u>WGS84</u>
	t slopes, stony NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Y	es No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes 🗸 No
Are Vegetation, Soil, or Hydrology naturally problema	
SUMMARY OF FINDINGS – Attach site map showing sam	ipling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes _ 🖌 No	Is the Sampled Area
Hydric Soil Present? Yes <u>✓</u> No	within a Wetland? Yes 🖌 No
Wetland Hydrology Present? Yes 🖌 No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
The wetland is a saturated black ash swamp. The	
logging disturbance, with slash and ruts present in	the wetland at the time of survey. The ruts may
be influencing hydrology to some extent.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leave	s (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 Od	or (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosphere	es on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced	d Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction	n in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C	C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rer	narks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes <u>v</u> No Depth (inches): <u>0</u>	
Saturation Present? Yes <u>v</u> No Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <u>v</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	

#### Remarks:

The feature appears to be seasonally saturated. Ruts from heavy equipment intersect the wetland, likely influencing the wetland's hydrology. Standing water is present in parts of the wetland at the time of survey, but not at the sample point.

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

Sampling Point: wirc1023f\_w

Trop Stratum (Dist size) 20	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1. <u>Fraxinus nigra</u>				That Are OBL, FACW, or FAC: (A)
23				Total Number of Dominant Species Across All Strata: 6 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	/er	OBL species         6         x 1 =         6           FACW species         45         x 2 =         90
Sapling/Shrub Stratum (Plot size: 15 )	4.0	Ň		FAC species $45$ x 2 = $90$ FAC species $11$ x 3 = $33$
1. <u>Fraxinus nigra</u>				FACU species x 4 = 44
2. <u>Acer saccharum</u>	5	<u>    Y     </u>	<u>FACU</u>	UPL species $0 \times 5 = 0$
3				Column Totals: <u>73</u> (A) <u>173</u> (B)
4				
5				Prevalence Index = B/A = <u>2.3698630136986303</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	15	= Total Cov	/er	$\checkmark$ 2 - Dominance Test is >50% $\checkmark$ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Athyrium angustum</u>	10	Y	FAC	data in Remarks or on a separate sheet)
2. <u>Acer saccharum</u>	5	Y	<u>FACU</u>	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Carex brunnescens</u>	5	Y	FACW	1
4. <u>Carex crinita</u>			OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Glyceria striata</u>	•	N	OBL	Definitions of Vegetation Strata:
6. <u>Scutellaria lateriflora</u>		Ν	OBL	
7. <u>Ribes cynosbati</u>			FACU	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8. <u>Arisaema triphyllum</u>				
9				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
	28	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3				Unders la d'a
				Hydrophytic Vegetation
4		= Total Cov		Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate				
The feature is a small hardwood swam		lack asł	n domina	ant in the canopy and shrub layer.
Sugar maple, brownish sedge, and lad				
sample plot appears representative of	he wetla	and.		-

SOIL
------

	cription: (Describ	e to the dep	oth needed				or confirm	n the absence	e of indicators.)
Depth (inches)	<u>Matrix</u> Color (moist)	%	Color (I		<u>x Features</u> %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-2	10YR 2/2	100			0				loam
2-8	7.5YR 4/3	100			0			 I	
	<u>5YR</u> 4/3		EVD	E/C	15	C	M	VFSL	
8-20	<u> 31K 4/3</u>	00	5YR	5/0				VFSL	
					·				
					·				
					·				
					. <u> </u>				
					·				
					·				
1 <del></del>						0	- !	21 +!	DL Dara Linizar M. Matrix
Hydric Soil	oncentration, D=De Indicators:	pletion, Rivi	=Reduced	iviatrix, ivis	5=Masked	Sand Gr	ains.		n: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils <sup>3</sup> :
Histosol			Polyva	alue Belov	w Surface	(S8) ( <b>LRI</b>	RR,		Muck (A10) ( <b>LRR K, L, MLRA 149B</b> )
	pipedon (A2)			RA 149B)					Prairie Redox (A16) (LRR K, L, R)
	istic (A3) en Sulfide (A4)				ice (S9) (L /lineral (F1		LRA 149B		Mucky Peat or Peat (S3) ( <b>LRR K, L, R</b> ) Surface (S7) ( <b>LRR K, L</b> )
	d Layers (A5)				Matrix (F2)		, _/		alue Below Surface (S8) (LRR K, L)
-	d Below Dark Surfa	ce (A11)		ted Matrix					Dark Surface (S9) (LRR K, L)
	ark Surface (A12) Mucky Mineral (S1)				rface (F6) Surface (F	7)			<pre>1anganese Masses (F12) (LRR K, L, R) nont Floodplain Soils (F19) (MLRA 149B)</pre>
Sandy C	Gleyed Matrix (S4)			x Depress		,		Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)
-	Redox (S5)								Parent Material (F21)
	d Matrix (S6) Irface (S7) ( <b>LRR R,</b>	MLRA 149	3)						Shallow Dark Surface (TF12) (Explain in Remarks)
	of hydrophytic veget Layer (if observed		etland hydro	ology mus	t be prese	nt, unles	s disturbed	l or problemati	с.
Type:	Layer (II Observed	)-							
Depth (in	ches).							Hydric Soi	I Present? Yes <u>ィ</u> No
Remarks:	<u> </u>								
	served to be	loamy m	lucky m	ineral	over loa	am ov	er very	fine sand	ly loam.



wirc1023f\_w\_W

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	EJO/JSW			
File #:	Date of visit(s):			
wirc1023	2020-05-30			
Location:	Ecological Landsca	ape:		
PLSS: sec 28 T046N R001W	Superior Mineral Ranges	3		
Lat: <u>46.433965</u> Long: <u>-90.505041</u>	Watershed: LS11, Potato River			
Country Iron Town (City) (Villago, GURDOV town	,			
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Tula-Gogebic complex, 0 to 6 percent slopes, stony	Wetland Type(s):			
	PFO - hardwood swamp			
Field Verified:		omanip		
Series were not verified. Soils were observed to	Wetland Size:	Wetland Area Impacted		
be loamy mucky mineral over loam over very fine	0.0214	0.0214		
sandy loam.	Vegetation:			
	Plant Community D	Description(s):		
Hydrology:	The feature is a sma	all hardwood swamp with black ash		
The feature appears to be saturated. Ruts from heavy	dominant in the canopy and shrub layer. Sugar maple,			
equipment intersect the wetland, likely influencing the	brownish sedge, and lady fern are among the dominant			
wetland's hydrology. Standing water is present in parts of the wetland a the time of survey, but not at the sample point.	herbaceous species. The sample plot appears			
we dand a the time of survey, but not at the sample point.	representative of the	e wetiana.		

## SITE MAP

### **SECTION 1: Functional Value Assessment**

HU         YN         Potential         Human Use values: recreation, culture, education, science, natural scenic beauty           1         N         Y         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         N         Aesthetically accessible to public           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           7         N         N         In or adjacent to habitat corridor or estabilished widiffe habitat area           4         Y         Y         Wetland and contiguous habitat for Goff(south) 76(north) intact           5         N         N         Occurs in a Joint Venture prointy township           6         Y         Intersperison of habitat stordure (hem-im-marsh shrub/emergent, wetland/upland complex etc.)           7         N         Y         plans           8         N         Y         Plans           9         N         N         Supports or provides habi		-		Functional Value Assessment
2         N         N         Used for educational or scientific purposes           3         N         Y         Visually or physically accessible to public           4         N         A sethetically pleasing due to diversity of habitat types, lack of pollution or degradation           6         N         Y         Sugports or provides habitat for endangered, threatened or special concern species           7         N         N         In or adjacent to archaeological or cultural resource site           WH         Wildlife Habitat         Y         Y           2         N         Y         Sor more strata present (10% corder)           3         N         Willin or adjacent to habitat corder or established wildlife habitat area           4         Y         Y         ToO 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         Sarports or provides habitat 10 cargon blans and aquatic invertebrates           8         N         Y         Part of a large habitat block that supports area sensitive species           9         N         N         Ephe	HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
3         N         Y         Visually or physically accessible to public           4         N         N         N         N         N         N           4         N         Within or adjacent to habitat corridor or established wildlife habitat area         4         Y         Y         N         N         Cocurs in a Joint Venture priority township         N         N         Cocurs in a Joint Venture priority township         N         N         Plans         N         Plans         N         N         Plans         N         N         Plans         N         N         Plans         N         N         Seponally expooed multifue traperent         1         N         N         N	1	Ν	Y	Used for recreation (hunting, birding, hiking, etc.). List: birding, hunting
4         N         Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation           5         N         N         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         Witeline Habitat         N         N           1         Y         Wetland and contiguous habitat >10 acres         2           2         N         Y         3 or more strata present (>10% cover)           3         N         Within or adjacent to habitat corridor or established wildlife habitat area           4         Y         Y         100 m buffer - natural land cover 250% (south) 75% (north) intact           5         N         N         Occurs in a Joint Venture priority township           6         Y         Y         Interspection of habitat structure (hemin-marsh, shrub/emergent, wetland/upland complex.etc.)           7         N         Y         Estimate         Stading water provides habitat for amphibians and aquatic invertebrates           8         N         Y         Part of a large habitat block that supports and aquatic invertebrates           11         N         N         Stading wa	2	Ν	N	Used for educational or scientific purposes
S         N         List:           6         N         Y         Supports or provides habitat for endangered, threatened or special concern species           7         N         N         N         N           1         Y         Wildlife Habitat           2         N         Y         Weltand and contiguous habitat >10 acres           2         N         Y         Y         Weltand and contiguous habitat >10 acres           3         N         N         Wiltim or adjacent to habitat corridor or established wildlife habitat area           4         Y         Y         Toto motifer - 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 (nemi-marsh,shrub/emergent, wetland/upland complex,etc.)           7         N         Y         Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other           8         N         Y         Plans         Sanding water provides habitat for amphibians and aquatic invertebrates           11         N         N         Standing water provides habitat for amphibians and aquatic invertebrates           12         N         N         N         Natural	3	Ν	Y	Visually or physically accessible to public
6         N         List:           6         N         Y         Supports or provides habitat for endangered, threatened or special concern species           7         N         N         N or adjacent to achaeological or cultural resource site           WH         Wildlife Habitat         Y         Wetland and contiguous habitat >10 acres           2         N         Y         Sorm core strata present (>10% cover)           3         N         W         Within or adjacent to habitat corridor or spositive (south) 75% (north) intact           5         N         N         Occurs in a Joint Venture priority township           6         Y         Y         Interspersion of habitat structure (nemi-marsh,shrub/emergent, wetland/upland complex,etc.)           7         N         Y         Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans           8         N         Y         Plans         Seconally exposed mudditas present           10         N         Y         Standing water provides habitat for amphibians and aquatic invertebrates           11         N         N         Seconally exposed mudditas present         4.5 days           12         N         N         Near advert provides habitat for amphibians and aquatic invertebrates           3	4	Ν	Ν	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
N         N         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           1         Y         Y         Wetland and contiguous habitat >10 acres           2         N         Y         Wetland and contiguous habitat >0 acres           3         N         N         Within or adjacent to habitat structure (hemi-marsh.shrub/emergent, wetland/upland complex.etc.)           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         papers         provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other           7         N         Y         path of a large habitat block that supports area sensitive species           9         N         N         Ephemeral pond with water present <45 days	F			In or adjacent to RED FLAG areas
7       N       In or adjacent to archaeological or cultural resource site         1       Y       Y       Wetland and contiguous habitat >10 acres         2       N       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       Norcurs in a Joint Venture priority township         6       Y       Y       Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)         7       N       Y       Part of a large habitat block that supports area sensitive species         9       N       Ephemeral pond with water present >45 days         10       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Ephemeral pond with water present >45 days         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)         7A       Fish and Aquatic Life Habitat       To any babitat scarce in the area (urban, agricultural, etc.)         7A       Y       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N	5	N	N	
7       N       In or adjacent to archaeological or cultural resource site         1       Y       Y       Wetland and contiguous habitat >10 acres         2       N       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       Norcurs in a Joint Venture priority township         6       Y       Y       Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)         7       N       Y       Part of a large habitat block that supports area sensitive species         9       N       Ephemeral pond with water present >45 days         10       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Ephemeral pond with water present >45 days         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)         7A       Fish and Aquatic Life Habitat       To any babitat scarce in the area (urban, agricultural, etc.)         7A       Y       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N	6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
WH         Wildlife Habitat           1         Y         Y           2         N         Y         Welland and contiguous habitat>10 acres           3         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         plans           8         N         Y         Plans           9         N         N         Ephemeral pond with water present > 45 days           10         N         Y         Standing water provides habitat for amphibians and aquatic invertebrates           11         N         Seasonally exposed habitat for amphibians and aquatic invertebrates           12         N         Y         Standing water provides habitat for amphibians and aquatic invertebrates           3         N         N         Ratural Heritage hrentory (HI) listed aquatic species within aquatic system           4         N         N         Vegetation is inundated in spring           5P<				
1       Y       Y       Wetland and contiguous habitat >10 acres         2       N       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       N Cocurs in a Joint Venture priority township         6       Y       Y       Interspersion of habitat structure (hemi-marsh, shrub/zemergent, wetland/upland complex,etc.)         7       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 present         11       N       N       Standing water provides habitat present         12       N       N       Provides habitat scarce in the area (urban, agricultural, etc.)         7A <b>Fish and Aquatic Life Habitat</b> Tesh and Aquatic Life habitat         1       N       N       Wetland is connected or contiguous with perennial stream or lake         2       N       N       Natural Heritage Inventory (NH) listed aquatic species within aquatic system         4       N <td>WH</td> <td></td> <td></td> <td>Wildlife Habitat</td>	WH			Wildlife Habitat
2       N       Y       3 or more strata present (>10% cover)         3       N       N       Within or adjacent to habitat corridor or estabilished 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       Dians         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       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       Storeline Protection       1       N         1       N       Along shoreline of a stream, lake, pond	-	Y	Y	Wetland and contiguous habitat >10 acres
3         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 and aquatic invertebrates           11         N         N         Seasonally exposed mudflats present           12         N         Provides habitat bit of amphibitans and aquatic invertebrates           13         N         N         Wetland is connected or contiguous with perennial stream or lake           2         N         Y         Standing water provides habitat for amphibitans and aquatic invertebrates           3         N         N         Natural Heritage Inventory (NHI) listed aquatic species within aquatic invertebrates				
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         8       N       Y       Part of a large habitat block that supports area sensitive species         9       N       N       Pethemeral poon with water prevent ≥45 days         10       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Seasonally exposed mudifats present         12       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Vedetation is inundated in spring         5P       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Vegetation is inundated in spring         5P       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Vegetation is inundated in spring         5P       Standing water provides mabitata t				
5       N       Occurs in a Joint Venture priority township         6       Y       Y       Interspersion of habitat structure (hemi-mash,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       Seasonally exposed mudflats present       145 days         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)       FFA         FA       FFish and Aquatic Life Habitat       Feabratic       Fish and Aquatic Life Habitat         1       N       Wetland is connected or contiguous with perennial stream or lake       Pointal stream or lake         2       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Netural Heritage Inventory (NH) listed aquatic species within aquatic system         4       N       V Standing water provides subtater aquatic species       Standing water levels or high flows = fino, not applicable				
6         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         Beasonally exposed muditats present           12         N         Provides habitat scarce in the area (urban, agricultural, etc.)           FA         Fish and Aquatic Life Habitat           1         N         N         Wetland is connected or condiguous with perennial stream or lake           2         N         Y         Standing water provides habitat for amphibians and aquatic invertebrates           3         N         N         Nettral Heritage Inventory (NHI) listed aquatic species within aquatic system           4         N         N         Vegetation is inundated in spring           5         Shoreline Protection         1         N           1         N         Along shoreline of a stream, lake, pond or open water area (>1 acre) -				
7     N     Y       8     N     Y       9     N     N       9     N     N       10     N     Part of a large habitat block that supports area sensitive species       9     N     N       10     N     Y       2     Standing water provides habitat for amphibians and aquatic invertebrates       11     N     N       2     N     Provides habitat scarce in the area (urban, agricultural, etc.)       FA     Fish and Aquatic Life Habitat       11     N     N       2     N     Y       2     N     N       4     N     N       4     N     N       5     Shoreline of a stream, lake, pond or open water area (21 acre) - if no, not applicable       3     N     N       6     N     N       7     N     Potential for crosion 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       3     N     N     Densely rooted emergent or woody vegetation       3     N     N     Dense, persistent vegetation       4     N     N     Evidemode flashy hydrology				
Image: Provides a large habitat block that supports area sensitive species         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 mudifiest present         12       N       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat       Implementation of the analytic invertebrates         1       N       N       Wetland is connected or contiguous with preennial 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       Shoreline Protection       Implementation or open water area (≥1 acre) - if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage       Storm and Floodwater Storage         1       Y       Basin wetland, co			1	
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       Fish and Aquatic Life Habitat         1       N       N       Wetland is connected or contiguous with perennial stream or lake         2       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Netural Heritage Inventory (NHI) listed aquatic species within aquatic system         4       N       N       Vegetation is inundated in spring         SP       Shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         1       N       N       Along shoreline of a stream of heck, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable         2       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage       1         1       Y       Basin wetl	7	Ν	Y	
9       N       N       Ephemeral pond with water present ≥45 days.         10       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Seasonally exposed mudflats present         12       N       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         1       N       N       Wetland is connected or contiguous with perennial stream or lake         2       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Nutural Heritage Inventory (NHI) listed aquatic species within aquatic system         4       N       N       Vegetation is inundated in spring         SP       Shoreline Protection       1       N         1       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Water levels or high flows - if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage       1       Y         3       N       N       Dense, persistent vegetation         4 </td <td>8</td> <td>N</td> <td>V</td> <td></td>	8	N	V	
10       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Seasonally exposed mudflats present         12       N       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         1       N       W 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       Shoreline Protection          1       N       A       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage          1       Y       Basin wetland, constricted outlet, has through-flow gr is adjacent to a stream         2       N       N       Denese, persistent vegetation				
11       N       N       Seasonally exposed mudflats present         12       N       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         1       N       N       Wetland is connected or contiguous with perennial stream or lake         2       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Natural Heritage Inventory (NHI) listed aquatic species within aquatic system         4       N       N       Vegetation is inundated in spring         SP       Shoreline Protection         1       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       W       water levels or high flows - if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage       Storm and Floodwater Storage         1       Y       Basin wetland, constricted outlet, has through-flow or is adjacent to a stream         2       N       N       Dense, persistent vegetation         4       N       N       Evidence of flashy hydrology         5       N       Y       Poin				
12       N       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         1       N       N       Wetland is connected or contiguous with perennial stream or lake         2       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Natural Heritage Inventory (NHI) listed aquatic species within aquatic system         4       N       N       Vegetation is inundated in spring         SP       Shoreline Protection         1       N       Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable         2       N       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage       Import the storage         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       N       Dense, persistent vegetation         4       N       N       Evidence of flashy hydrology <td></td> <td></td> <td></td> <td></td>				
FA       Fish and Aquatic Life Habitat         1       N       N         2       N       Y         3       N       N         4       N       N         5       N       N         6       N       N         7       N       N         8       N       N         9       Shoreline Protection         1       N       N         8       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       Shoreline Protection         1       N       N         9       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable         3       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       Y       Basin welland, constricted outlet, has through-flow or is adjacent to a stream         2       N       N         4       N       Dense, persistent vegetation         4       N       N       Evidence of flash flydrology         5       N       Y       Point or non-point source inflow				
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       Shoreline Protection         1       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage       1         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       N       Dense, persistent vegetation         4       N       N       Evidence of flashy hydrology         5       N       Y       Point or non-point source inflow         6       N       Impervious sufface cover >10% of fland surface within the				
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       Shoreline Protection         1       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       Y       Y       Basin wetland, constricted outlet, has through-flow or is adjacent to a stream         2       N       N       Water flow through wetland is NOT channelized         3       N       N       Dense, persistent vegetation         4       N       N       Evidence of flashy hydrology         5       N       Y       Point or non-point source inflow         6       N       N       Impervious surfaces cover > 10% of land surface within the waters	-	N	N	
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4       N       V Vegetation is inundated in spring         SP       Shoreline Protection         1       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage       1         1       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       N       Dense, persistent vegetation       4         4       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       Within a watershed with <10% wetland				
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1       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       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       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       Water Quality Protection         8       N       N       Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event         WQ       Water flow through wetland is NOT channelized       Impervious suctade substantial storage of storm and floodwater based on previous section         2       Y       Y       Basin wetland ge constricted outlet         3		IN	IN	
2         N         N         Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable           3         N         N         Densely rooted emergent or woody vegetation           ST         Storm and Floodwater Storage           1         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         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		NI	N	
2       N       N       water levels or high flows – if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       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       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				
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ST       Storm and Floodwater Storage         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       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	3	N	N	
1       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       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				
2       N       N       Water flow through wetland is NOT channelized         3       N       N       Dense, persistent vegetation         4       N       N       Evidence of flashy hydrology         5       N       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	-	V	V	
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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				
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				
6       N       N       Impervious surfaces cover >10% of land surface within the watershed         7       N       N       Within a watershed with <10% wetland				
7       N       N       Within a watershed with <10% wetland				
8         N         Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event           WQ         Water Quality Protection           1         N         N         Provides substantial storage of storm and floodwater based on previous section           2         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         N         N         Dense, persistent vegetation           6         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%				
WQWater Quality Protection1NN2YYBasin wetland or constricted outlet3NN4NWater flow through wetland is NOT channelized4NN5NN6NN7NSigns of excess nutrients, such as algae blooms, heavy macrophyte growth7NN8NDischarge to surface water from agricultural land is major hydrology source8NN9NNNatural land cover in 100m buffer area < 50%				
1       N       N       Provides substantial storage of storm and floodwater based on previous section         2       Y       Y       Basin wetland or constricted outlet         3       N       N       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%				
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       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%		N	N	
3       N       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%				
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%				
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%				5
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%				
7       N       N       Stormwater or surface water from agricultural land is major hydrology source         8       N       N       Discharge to surface water         9       N       N       Natural land cover in 100m buffer area < 50%				
8       N       N       Discharge to surface water         9       N       N       Natural land cover in 100m buffer area < 50%				
9       N       N       Natural land cover in 100m buffer area < 50%         GW       Groundwater Processes         1       N       N       Springs, seeps or indicators of groundwater present         2       N       N       Location near a groundwater divide or a headwater wetland         3       N       N       Wetland remains saturated for an extended time period with no additional water inputs         4       N       N       Wetland soils are organic				
GW       Groundwater Processes         1       N       N       Springs, seeps or indicators of groundwater present         2       N       N       Location near a groundwater divide or a headwater wetland         3       N       N       Wetland remains saturated for an extended time period with no additional water inputs         4       N       N       Wetland soils are organic				
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2         N         N         Location near a groundwater divide or a headwater wetland           3         N         N         Wetland remains saturated for an extended time period with no additional water inputs           4         N         N         Wetland soils are organic				
3         N         N         Wetland remains saturated for an extended time period with no additional water inputs           4         N         N         Wetland soils are organic				
4 N N Wetland soils are organic	-			
	-			
5 N N Wetland is within a wellhead protection area				
	5	Ν	N	Wetland is within a wellhead protection area

WH-7: The wetland is part of a larger forest that may support SGCN species. FA-2: The wetland had areas of standing water at the time of survey, with potential to host aquatic life. WQ-2: The wetland is a closed depression and likely receives surface water from the surrounding upland.

> 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	Hermint thrush and ovenbird were heard in the vicinity 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
-		

### **SECTION 2: Floristic Integrity**

### Plant Community Integrity (circle)\*

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Fraxinus nigra*			PFO	Patchy
Athyrium filix-femina*			PFO	Rare
Acer saccharum			PFO	Rare
Carex brunnescens			PFO	Rare
Carex crinita			PFO	Barren
Glyceria striata			PFO	Barren
Scutellaria lateriflora			PFO	Barren
Arisaema triphyllum			PFO	Barren
Ribes cynosbati			PFO	Barren

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

The wetland is relatively small and has a lower species richness, but is entirely comprised 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
Х	х		М	С	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
Х	х		М	С	Removal of herbaceous stratum – mowing,
^		IVI	C	grading, earthworms, etc.	
Х	x		М	С	Removal of tree or shrub strata – logging, unprescribed fire
	Х		М	С	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)

Rutting in the wetland has caused bare ground in areas. Earthworms are present in the surrounding forest, with potential to impact the wetland's herbaceous layer. Logging slash is present in the wetland. A gravel road is in the wetland buffer.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE						
	Low	Medium	High	Exceptional	NA		
Floristic Integrity		<b>~</b>					
Human Use Values	~						
Wildlife Habitat		<ul> <li>✓</li> </ul>					
Fish and Aquatic Life Habitat	~						
Shoreline Protection					~		
Flood and Stormwater Storage	<b>/</b>						
Water Quality Protection	~						
Groundwater Processes	~						

FUNCTION	RATIONALE
Floristic Integrity	The wetland's species richness is relatively low, but the wetland is entirely comprised of native species.
Human Use Values	The wetland is relatively small but part of a larger forest that supports recreational opportunities.
Wildlife Habitat	The wetland is relatively small but is part of a larger forest that supports a diversity of wildlife.
Fish and Aquatic Life Habitat	Areas of standing water that may support aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely receives and holds some stormwater from the surrounding uplands, but is small and contains tire ruts.
Water Quality Protection	The wetland is relatively small and has sparse herbaceous vegetation. Slash is common in/around the feature.
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	Sampli	ng Date: <u>2020-05-30</u>
Applicant/Owner: Enbridge		State: Wisconsin Sam	pling Point: <u>wirc1023_u</u>
Investigator(s): <u>JSW/EJO</u>	Section, Township, Range:	sec 28 T046N R00	1W
Landform (hillslope, terrace, etc.): Side Slope			
Subregion (LRR or MLRA): Northcentral Forests Lat: _4	.6.433972 Long: -	90.504938	Datum: WGS84
Soil Map Unit Name: Tula-Gogebic complex,	0 to 6 percent slopes, stony	NWI classification:	
Are climatic / hydrologic conditions on the site typical for t	his time of year? Yes <u> ✓</u> No	_ (If no, explain in Remarks.	)
Are Vegetation, Soil, or Hydrology	_significantly disturbed? Are "Norr	mal Circumstances" present?	Yes 🖌 No
Are Vegetation, Soil, or Hydrology	_naturally problematic? (If needed	d, explain any answers in Rer	marks.)
SUMMARY OF FINDINGS – Attach site map	o showing sampling point loca	tions, transects, impo	rtant features, etc.
Hydrophytic Vegetation Present? Yes	No Is the Sampled Are		X

Hydric Soil Present?	Yes	No 🖌	within a Wetland? Yes No 🗸
Wetland Hydrology Present?	Yes	No 🖌	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proce The upland sample point			ope in a recently harvested mesic hardwood forest

## HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; chec	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 Ro	oots (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	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)
Field Observations:		
Surface Water Present? Yes No _	Depth (inches):	
Water Table Present? Yes No _	Depth (inches):	
Saturation Present? Yes No (includes capillary fringe)	_ Depth (inches): V	Vetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring v	well, aerial photos, previous inspectio	ns), if available:
Remarks: No indicators of wetland hydrology v	were observed.	
, ,		

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

Sampling Point: wirc1023\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. <u>Acer saccharum</u>			FACU	Number of Dominant Species
2. <u>Tilia americana</u>			FACU	That Are OBL, FACW, or FAC: (A)
<ol> <li><u>Fraxinus americana</u></li> </ol>				Total Number of Dominant Species Across All Strata: 8 (B)
				( )
4				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25</u> (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	25	= Total Cov	/er	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 )				FACW species x 2 =0
1. <u>Acer saccharum</u>	25	Y	<u>FACU</u>	FAC species $42$ x 3 = $126$
2. Fraxinus americana	10	<u>    Y     </u>	<u>FACU</u>	FACU species <u>86</u> x 4 = <u>344</u>
з. <u>Prunus serotina</u>	10	Y	<u>FACU</u>	UPL species         0 $x 5 = 0$ Column Totals:         128         (A)         470         (B)
4				$\frac{120}{120}$ (A) $\frac{470}{470}$ (B)
5				Prevalence Index = B/A = <u>3.671875</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
··		= Total Cov		2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)		- 10101 00		$\_$ 3 - Prevalence Index is $\leq 3.0^1$
1. <u>Osmunda claytoniana</u>	25	V	EAC	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
			FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Athyrium angustum</u>				
3. <u>Cornus alternifolia</u>			FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Acer saccharum</u>			FACU	be present, unless disturbed or problematic.
5. <u>Carex pedunculata</u>			FAC	Definitions of Vegetation Strata:
6. Arisaema triphyllum			FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Maianthemum canadense</u>	1	<u>    N     </u>	<u>FACU</u>	at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	58	= Total Co	/er	height.
Woody Vine Stratum (Plot size: 30)				
1				
2				
3				Hydrophytic
4			. <u> </u>	Vegetation
	_	= Total Cov	/er	Present? Yes No v
Remarks: (Include photo numbers here or on a separate				1
The vegetation is consistent with that c		ic hardv	ood for	est.

## SOIL

Profile Desc	ription: (D	Describe t	o the dep	th needed	to docun	nent the i	indicator	or confirm	the absence	of indicato	rs.)	
Depth		Matrix				x Feature						
(inches)	Color (	moist)	%	Color (r	noist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	6
0-20	5YR	3/3	95	5YR	3/4	5	С	Μ	SIL			
						·	·					
							·		·			
<sup>1</sup> T. max. C=C		- D-Dard			Antrine MAG				21		ining M-N	letris (
<sup>1</sup> Type: C=Co Hydric Soil			etion, Rivi	Reduced I	viatrix, ivis	5=IVIasked	a Sand Gr	ains.		: PL=Pore L for Problem		
-				Dehavi	alua Dalai						-	
<u> </u>						w Surface	(58) ( <b>L</b> RI	к κ,				MLRA 149B)
	oipedon (A2 stic (A3)	(			RA 149B)			LRA 149B)		Prairie Redo		(LRR K, L, R)
	en Sulfide (A	4)				/lineral (F				urface (S7)		(LKK K, L, K)
	d Layers (A				-	Matrix (F2		<b>, ∟</b> /				(LRR K, L)
	d Below Da		(A11)		ted Matrix		.)			ark Surface		
	ark Surface		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			rface (F6)						(LRR K, L, R)
	lucky Miner					Surface (F				-		9) ( <b>MLRA 149B</b> )
-	Bleyed Matr				Depress		.,					44A, 145, 149B)
	Redox (S5)	( )			•	( )				arent Materia		, , ,
	Matrix (S6	)								hallow Dark		F12)
	rface (S7) (		ILRA 149E	B)						Explain in F		,
	. , .			,							,	
<sup>3</sup> Indicators of	f hydrophyti	ic vegetati	ion and we	tland hydro	ology mus	t be prese	ent, unles	s disturbed	or problematic			
Restrictive I	Layer (if ob	served):										
Туре:												
	aboa):								Hydric Soil	Present?	Yes	No <u>~</u>
	ches):											
Remarks:		le contrat a	!!									
No indica	ators of	nyaric	SOII WE	ere obse	ervea.							





wirc1023\_u\_N

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/	County: Iron Sampling Date: 2020-05-29
•	State: Wisconsin Sampling Point: wirc1018f_w
Investigator(s): EJO/JSW Sec	
	elief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
	Long: <u>-90.504082</u> Datum: <u>WGS84</u>
	nt slopes, stony NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation, Soil, or Hydrology significantly distu	urbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally problem	natic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes       No         Hydric Soil Present?       Yes _       No         Wetland Hydrology Present?       Yes _       No         Remarks:       (Explain alternative procedures here or in a separate report.)       Image: Comparison of the second se	Is the Sampled Area         within a Wetland?       Yes No         If yes, optional Wetland Site ID:
The feature is a seasonally flooded black ash swa	imp with standing water present at the time of
survey. Vegetation in the ground layer is sparse w	
	•
within a harvested forest with slash present in the	wetiand.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leav	
High Water Table (A2)	
_ Saturation (A3) Marl Deposits (B15)	
Water Marks (B1) Hydrogen Sulfide O	dor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosphe	res on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduce	
Algal Mat or Crust (B4) Recent Iron Reduction	
Iron Deposits (B5) Thin Muck Surface	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Re	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No</u> Depth (inches):	
Water Table Present? Yes <u>v</u> No Depth (inches): <u>0</u>	
Saturation Present? Yes <u>v</u> No Depth (inches): 0	Wetland Hydrology Present? Yes <u>v</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	evious inspections) if available:
Bescher Recorded Bata (circain gadge, monitoring weil, denai photos, ph	
Remarks:	
The feature appears to be seasonally flooded. Sta	anding water is present in feature at the time of
survey, but not at the sample point.	

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

Sampling Point: wirc1018f\_w

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1. <u>Fraxinus nigra</u>			FACW	That Are OBL, FACW, or FAC: (A)
<ol> <li>Acer saccharum</li> <li></li> </ol>				Total Number of Dominant Species Across All Strata:1(B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6			. <u> </u>	Prevalence Index worksheet:
7			. <u> </u>	Total % Cover of:Multiply by:
	60	= Total Cov	/er	OBL species x 1 =0
Sapling/Shrub Stratum (Plot size:15)				FACW species <u>52</u> x 2 = <u>104</u>
1. <u>Fraxinus americana</u>	2	Ν	FACU	FAC species x 3 =6
2				FACU species <u>12</u> x 4 = <u>48</u>
				UPL species x 5 =
3				Column Totals: <u>66</u> (A) <u>158</u> (B)
4 5				Prevalence Index = B/A = <u>2.39393939393939394</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
/·		= Total Cov		2 - Dominance Test is >50%
	<u> </u>		/er	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: 5)	_			4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Athyrium angustum</u>			FAC	data in Remarks or on a separate sheet)
2. <u>Carex bromoides</u>	2	<u>    N     </u>	<u>FACW</u>	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3			. <u> </u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6 7				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	4	= Total Cov	/er	neight.
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
				Heater shade
3			·	Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate		= Total Cov	/er	
The feature is a hardwood swamp dom	inated h	ov black	ash in t	the canopy. In the herbaceous laver
vegetation is sparse at the time of the s				

appears to be representative of the feature.

SOIL
------

Profile Desc	cription: (D	Describe t	to the dep	oth needed	to docur	nent the i	ndicator	or confirm	the absence	e of indicators.)		
Depth (inches)	Color (	Matrix	%	Color (		<u>x Features</u> %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
<u>(incries)</u> 0-2	10YR		100		moist)		<u>    rype     </u>		MMI	loam		
2-5	7.5YR		90	5YR	5/4	10	C	Μ	<u> </u>	Prominent redox		
<u> </u>	5YR			5YR	<u></u>	15	<u> </u>	M		Prominent redox		
<sup>1</sup> Type: C=C			etion, RM	=Reduced	Matrix, MS	S=Masked	Sand Gra	ains.		n: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators: 				ML Thin I Loam Loam Deple Redo: Deple Redo: B)	Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)					<ul> <li>2 cm Muck (A10) (LRR K, L, MLRA 149B)</li> <li>Coast Prairie Redox (A16) (LRR K, L, R)</li> <li>5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</li> <li>Dark Surface (S7) (LRR K, L)</li> <li>Polyvalue Below Surface (S8) (LRR K, L)</li> <li>Thin Dark Surface (S9) (LRR K, L)</li> <li>Iron-Manganese Masses (F12) (LRR K, L, R)</li> <li>Piedmont Floodplain Soils (F19) (MLRA 149B)</li> <li>Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</li> <li>Red Parent Material (F21)</li> <li>Very Shallow Dark Surface (TF12)</li> <li>Other (Explain in Remarks)</li> </ul>		
Remarks: Soils obs	served t	o be lo	amy m	nucky m	ineral	over lo	am ov	er very t	fine sand	ly loam.		



wirc1018f\_w\_NW



wirc1018f\_w\_SE

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

WETLAND IDENTIFICATION					
Project name:	Evaluator(s):				
Line 5 Relocation Project	EJO/JSW				
File #:	Date of visit(s):				
wirc1018	2020-05-29				
Location:	Ecological Landsca	ape:			
PLSS: sec 28 T046N R001W	Superior Mineral Ranges				
	Superior Milleral Manges	5			
Lat: <u>46.434068</u> Long: <u>-90.503992</u>	Watershed:				
	LS11, Potato River				
County: <u>Iron</u> Town/City/Village: Gurney town					
SITE DESCRIPTION	•				
Soils:	WWI Class:				
Mapped Type(s):	N/A				
Pence-Gogebic complex, 6 to 18 percent slopes, stony	Wetland Type(s):				
	PFO - hardwood swamp				
Field Verified:		·			
Series were not verified. Soils were observed to	Wetland Size:	Wetland Area Impacted			
be loamy mucky mineral over loam over very fine	0.0439	0.0439			
sandy loam.	Vegetation:				
	Plant Community Description(s):				
Hydrology:	The feature is a hardwood swamp dominated by				
The feature appears to be seasonally flooded.	black ash in the canopy. Vegetation is sparse at				
Standing water is present in feature at the time of	the time of the survey in the herbaceous layer,				
survey but not at the sample point.		with brome-like sedge dominant.			

# SITE MAP

## **SECTION 1: Functional Value Assessment**

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

WQ-2: The wetland is a closed depression.
WH-8: The wetland is within a larger, relatively intact forest.
FA-2: The wetland had standing water at the time of the survey.
ST-3: Herbaceous vegetation is sparse in the feature.

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

Observed	Potential	Species/Habitat/Comments
	Y	Mammals, herpetofauna, avian
	Y	Vireo heard nearby 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%	20-50%	10-20%	<10%
Strata	Missing stratum(a) or bare due to invasive species	All strata present but reduced native species	All strata present and good assemblage of native species	All strata present, Conservative species represented
NHI plant community ranking	S4	S3	S2	S1-S2 (S2 high quality)
Relative frequency of plant community in watershed	Abundant 🗌	Common	Uncommon	Rare
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Fraxinus nigra*			PFO	Interrupted
Acer saccharum			PFO	Rare
Arisaema triphyllum			PFO	Barren
Athyrium filix-femina			PFO	Barren
Carex bromoides			PFO	Barren
Dryopteris intermedia			PFO	Barren
Fraxinus nigra			PFO	Barren
Maianthemum canadense			PFO	Barren
Claytonia caroliniana			PFO	Barren
Ranunculus abortivus			PFO	Barren
Trientalis borealis			PFO	Barren

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

The wetland is relatively intact, with no observed exotic species. The wetland has a relatively low species richness.

### 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
	х		М	С	Removal of herbaceous stratum – mowing,
	^		IVI	C	grading, earthworms, etc.
Х	x		М	С	Removal of tree or shrub strata – logging,
^			IVI	C	unprescribed fire
	Х		L	С	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 and around the wetland, with slash present in the wetland. Earthworms are present in the surrounding forest, with potent to impact the wetland's herbaceous layer. A gravel road is near the wetland, but is just barely outside of the buffer area.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE								
	Low	Medium	High	Exceptional	NA				
Floristic Integrity		<b>~</b>							
Human Use Values	<b>/</b>								
Wildlife Habitat		<ul> <li>✓</li> </ul>							
Fish and Aquatic Life Habitat		<ul> <li>✓</li> </ul>							
Shoreline Protection					~				
Flood and Stormwater Storage	<b>~</b>								
Water Quality Protection		<ul> <li>✓</li> </ul>							
Groundwater Processes	~				_				

FUNCTION	RATIONALE
Floristic Integrity	Although the wetland has a relatively low species richness, it has a good coverage of native species with no exotic species observed.
Human Use Values	The wetland is relatively small but part of a larger forest that offers recreational opportunities.
Wildlife Habitat	The wetland is relatively small but part of a larger forest that supports a diversity of wildlife.
Fish and Aquatic Life Habitat	The wetland had standing water at the time of survey, with the potential to support aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is a relatively small depressional feature.
Water Quality Protection	The wetland is relatively small but likely plays a role in filtering stormwater and rainwater.
Groundwater Processes	The wetland appears to exhibit 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: <u>Iron</u> Sampling Date: <u>2020-05-29</u>
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wirc1018_u</u>
Investigator(s): <u>JSW/EJO</u>	Section, Township, Range: <u>sec 28 T046N R001W</u>
Landform (hillslope, terrace, etc.): Side Slope	ocal relief (concave, convex, none): <u>None</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.43373	31 Long: <u>-90.504177</u> Datum: <u>WGS84</u>
	ercent slopes, stony NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes No         Hydric Soil Present?       Yes No         Wetland Hydrology Present?       Yes No	within a Wetland? Yes <u>No</u>
Remarks: (Explain alternative procedures here or in a separate report The upland sample point is located in a mesic	ort.)
HYDROLOGY	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 Sc	oils (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)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No 🖌 Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No 🖌 Depth (inches): (includes capillary fringe)	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)	
Saturation Present? Yes No 🖌 Depth (inches): (includes capillary fringe)	ctions), if available:
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	ctions), if available:
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	ctions), if available:
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	ctions), if available:
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	ctions), if available:
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	ctions), if available:
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	ctions), if available:
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	ctions), if available:
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	ctions), if available:

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

Sampling Point: wirc1018\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. <u>Acer saccharum</u>				Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2. Acer rubrum				That Are OBL, FACW, or FAC: (A)
				Total Number of Dominant Species Across All Strata: 7 (B)
3				
4				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>29</u> (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	5	= Total Co	ver	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $0 x^2 = 0$
1. <u>Ostrya virginiana</u>			<u>FACU</u>	FAC species $30 \times 3 = 90$
2. <u>Fraxinus americana</u>	10	Y	<u>FACU</u>	FACU species         92         x 4 =         368           UPL species         0         x 5 =         0
3. <u>Abies balsamea</u>	5	<u> </u>	FAC	Column Totals: <u>122</u> (A) <u>458</u> (B)
4				
5				Prevalence Index = B/A = <u>3.7540983606557377</u>
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
		= Total Co		2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u> )	_20	- 10(a) 00		3 - Prevalence Index is $≤3.0^1$
	40	V		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Maianthemum racemosum</u>			FACU	data in Remarks or on a separate sheet)
2. <u>Athyrium angustum</u>		<u> </u>	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Dryopteris intermedia</u>			FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Trientalis borealis</u>			FAC	be present, unless disturbed or problematic.
5. <u>Allium tricoccum</u>	5	N	<u>FACU</u>	Definitions of Vegetation Strata:
6. <u>Acer saccharum</u>	5	Y	<u>FACU</u>	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Gymnocarpium dryopteris</u>	2	N	<u>FACU</u>	at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
	42	= Total Co		height.
Woody Vine Stratum (Plot size: 30)		- 10181 00		
1				
2				
3				Hydrophytic Vegetation
4			<u> </u>	Present? Yes No 🗸
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate The vegetation is consistent with that o		ic hardv	upod for	est
	n a mes			001.

## SOIL

Profile Desc	ription: (Describe	to the dep	oth needed to docum	nent the	indicator	or confirm	the absence of ind	icators.)	
Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remark	S
0-8	<u>7.5R 2.5/2</u>	98	<u>7.5YR 4/6</u>	2	C	Μ	SIL		
8-20	5YR 3/3	100		0			SIL		
							·		
					<u> </u>				
							·		
		·					·		
					·				
		<u> </u>					·		
					<u> </u>				
							·		
1									
Type: C=Co		letion, RM	=Reduced Matrix, MS	=Masked	d Sand Gra	ains.	Location: PL=I Indicators for Pr	Pore Lining, M=N	
-				Curfooo				-	
Histosol	oipedon (A2)		Polyvalue Below MLRA 149B)		(58) ( <b>LR</b>	КΚ,		10) ( <b>LRR K, L,</b>   Redox (A16) ( <b>L</b> l	
Black Hi			Thin Dark Surface		LRR R. MI	LRA 149B)		Peat or Peat (S3	
	n Sulfide (A4)		Loamy Mucky M					(S7) (LRR K, L)	
	d Layers (A5)		Loamy Gleyed N		2)			low Surface (S8)	
	d Below Dark Surfac	e (A11)	Depleted Matrix					rface (S9) (LRR	
	ark Surface (A12)		Redox Dark Sur				-		2) (LRR K, L, R)
-	lucky Mineral (S1)		Depleted Dark S						19) ( <b>MLRA 149B</b> )
	Bleyed Matrix (S4) Redox (S5)		Redox Depressi				Red Parent N		44A, 145, 149B)
	Matrix (S6)							Dark Surface (T	F12)
	rface (S7) (LRR R, M	MLRA 149	B)					n in Remarks)	,
			etland hydrology must	t be pres	ent, unless	s disturbed	or problematic.		
Restrictive I	Layer (if observed):	:							
Туре:									
Depth (ind	ches):						Hydric Soil Prese	nt? Yes	No 🖌
Remarks:									
No indica	ators of hydric	soil we	ere observed.						



wirc1018\_u\_W

### WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: <u>Iron</u> Sampling Date: <u>2020-05-23</u>
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wirc014f_xw</u>
Investigator(s): <u>EJO/JSW</u>	Section, Township, Range: <u>Sec 28 T046N R001W</u>
	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.43</u>	34817 Long: <u>-90.503164</u> Datum: <u>WGS84</u>
	mplex, 0 to 6 percent slopes, stony NWI classification: PFO1C
Are climatic / hydrologic conditions on the site typical for this tim	ne of year? Yes 🔽 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signif	ficantly disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology natur	rally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sho	owing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes No         Hydric Soil Present?       Yes No	within a Watland Q Vaa vi Na
Wetland Hydrology Present? Yes <u>v</u> No	
among the dominant species in the shrub	te report.) dominated by black ash. Yellow birch and skunk currant are layer and ground layer, respectively. The feature is ns into the wetland. The wetland is also adjacent to a

## HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	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 Roc	ots (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) <u>v</u> 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)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present?         Yes _          No Depth (inches): 1	
Saturation Present? Yes <u>v</u> No <u>Depth</u> (inches): <u>0</u> W (includes capillary fringe)	/etland Hydrology Present? Yes <u>v</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	ns), if available:
Remarks:	

The feature is seasonally saturated with recharge hydrology. The wetland is adjacent to a gravel road; the wetland likely receives stormwater from the road. The wetland has standing water present at the time of survey but not at the sample point.

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

Sampling Point: wirc014f\_xw

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1. <u>Fraxinus nigra</u>				That Are OBL, FACW, or FAC:5(A)
2. <u>Tsuga canadensis</u>			<u>FACU</u>	Total Number of Dominant
3. <u>Abies balsamea</u>			FAC	Species Across All Strata:6_ (B)
4. <u>Ulmus americana</u>	2	N	FACW	Percent of Dominant Species
5				That Are OBL, FACW, or FAC:83 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	72	= Total Co	ver	OBL species <u>13</u> x 1 = <u>13</u>
Sapling/Shrub Stratum (Plot size:15)				FACW species <u>87</u> x 2 = <u>174</u>
1. <u>Betula alleghaniensis</u>	7	Y	FAC	FAC species <u>17</u> x 3 = <u>51</u>
2. <u>Acer saccharum</u>			FACU	FACU species <u>13</u> x 4 = <u>52</u>
3. Lonicera canadensis				UPL species x 5 =
				Column Totals: <u>130</u> (A) <u>290</u> (B)
4 5				Prevalence Index = B/A = 2.230769230769231
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				$\sim$ 2 - Dominance Test is >50%
_	10	= Total Co	ver	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Ribes glandulosum</u>		<u> </u>	<u>FACW</u>	data in Remarks or on a separate sheet)
2. <u>Rubus pubescens</u>	15	Y	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Glyceria striata</u>	10	Y	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Carex crinita</u>	3	N	OBL	be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				-
7				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in height.
	48	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: 30)				
1	<u> </u>			
2				
3				Hydrophytic
4				Vegetation
		= Total Co	/er	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate		10(0) 00		
The feature is a hardwood swamp dom	inated b			
manle in the abruh lower, and elwink ou				

maple in the shrub layer, and skunk currant, fowl mannagrass, and dwarf raspberry in the ground layer. Sample plot appears mostly representative of the wetland, with marsh marigold present outside of sample plot.

SOIL
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Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth (inches)	Color (	Matrix moist)	%	Color (n	Redo: noist)	x Features %	s Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-4	7.5YR	2.5/1	100			0			MMI	loam	
4-8	7.5YR	4/2	95	7.5YR	3/4	5			CL	Prominent redox	
8-20	5YR			5YR		10	С	М	VESI	Prominent redox	
						·					
						·					
						·					
<sup>1</sup> Type: C=C Hydric Soil			etion, RM	=Reduced N	Aatrix, MS	S=Masked	I Sand Gra	ains.		n: PL=Pore Lining, M=Matrix.	
Histosol				Polyva	lue Belov	v Surface	(S8) ( <b>LRF</b>	RR,		Muck (A10) ( <b>LRR K, L, MLRA 149B</b> )	
	pipedon (A2	2)			RA 149B)					Prairie Redox (A16) (LRR K, L, R)	
	istic (A3) en Sulfide ( <i>A</i>	<del>\</del> 4)					LRR R, ML 1) (LRR K	_RA 149B) , L)	5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L)		
Stratifie	d Layers (A	5)		Loamy	Gleyed	Matrix (F2		. ,	Polyvalue Below Surface (S8) (LRR K, L)		
-	d Below Da ark Surface		(A11)		Depleted Matrix (F3) Redox Dark Surface (F6)				Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R)		
	Aucky Mine	. ,		Depleted Dark Surface (F7)					Piedmont Floodplain Soils (F19) (MLRA 149B)		
	Gleyed Matr Redox (S5)	ix (S4)		Redox Depressions (F8)					Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> ) <u>·</u> Red Parent Material (F21)		
-	d Matrix (S6	)							Very Shallow Dark Surface (TF12)		
Dark Su	ırface (S7) (	LRR R, M	LRA 149	<b>B</b> )					Other	(Explain in Remarks)	
<sup>3</sup> Indicators o	of hydrophyt	ic vegetati	on and w	etland hydro	ology mus	t be prese	ent, unless	disturbed	or problemation	с.	
Restrictive	Layer (if ob	served):									
Туре:											
Depth (in	ches):								Hydric Soil	Present? Yes <u>v</u> No	
Remarks: Soils we	re obse	rved to	be loa	mv muo	ckv mir	neral o	ver cla	v loam	over verv	/ fine sandy loam.	
								.,			



wirc014f\_xw\_E



wirc014f\_xw\_W

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	EJO/JSW É		
File #:	Date of visit(s):		
wirc014_x	2020-05-23		
Location:	Ecological Landsca	ipe:	
PLSS: sec 28 T046N R001W	Superior Mineral Ranges		
	· · · ·	-	
Lat: <u>46.434747</u> Long: <u>-90.503172</u>	Watershed:		
	LS11, Potato River		
County: Iron Town/City/Village: Gurney town			
Soils:	WWI Class:		
Mapped Type(s):	ТЗК		
Chabeneau-Channing-Gogebic complex, 0 to 6 percent slopes, stony	Wetland Type(s):		
	PFO - hardwood swamp		
Field Verified:		-	
Series were not verified. Soils were observed to	Wetland Size:	Wetland Area Impacted	
be loamy mucky mineral over clay loam over very			
fine sandy loam.	Vegetation:		
	Plant Community Description(s):		
Hydrology:	The feature is a hardwood swamp dominated by black		
The hydrologic regime is saturated, with recharge hydrology.	ash in the canopy, yellow birch and sugar maple in the		
The wetland is adjacent to a gravel road; the wetland likely	shrub layer, and skunk currant, fowl manna grass, and		
receives stormwater runoff from this road. The wetland has	dwarf raspberry in th	e ground layer.	
standing water present at the time of survey.			

# SITE MAP

## **SECTION 1: Functional Value Assessment**

			Functional Value Assessment
HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	N	Y	Used for recreation (hunting, birding, hiking, etc.). List: birding, hunting
2	N	N	Used for educational or scientific purposes
3	Y	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
	IN	IN	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			Wildlife Habitat
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 <u>&gt;</u> 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		X	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
	N	Y	plans
8	Y	Y	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present <u>&gt;</u> 45 days
10	Ν	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	Ν	Ν	Wetland is connected or contiguous with perennial stream or lake
2	Ν	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	Ν	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	Y	Vegetation is inundated in spring
SP			Shoreline Protection
1	N	N	Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable
2			Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
۷	Ν	N	water levels or high flows – if no, not applicable
3	Ν	Ν	Densely rooted emergent or woody vegetation
ST			Storm and Floodwater Storage
1	Y	Y	Basin wetland, constricted outlet, has through-flow <u>or</u> is adjacent to a stream
2	N	Y	Water flow through wetland is NOT channelized
3	Y	Ý	Dense, persistent vegetation
4	Ň	N	Evidence of flashy hydrology
5	Y	Y	Point or non-point source inflow
6	Ň	N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <10% wetland
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	N	Y	Provides substantial storage of storm and floodwater based on previous section
2	Y	Ý	Basin wetland <u>or</u> constricted outlet
3	Ň	Ý	Water flow through wetland is NOT channelized
4	N	N	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	N	Stormwater or surface water from agricultural land is major hydrology source
8	N	N	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	N	N	Springs, seeps or indicators of groundwater present
2			Location near a groundwater divide or a headwater wetland
	N	N	
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 wetland is visible from a public gravel road. WH-6: The wetland has variable microtopography supporting both hydrophytic and upland-associated flora. WH-7: The wetland is a part of a larger forest with potential to support SGCN species.

> 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, ovenbird, hermit thrush heard in or near wetland
	Y	Mammals, herpetofauna, other avian species
	1	

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Fraxinus nigra*			PFO	Interrupted
Ribes glandulosum*			PFO	Rare
Rubus pubescens*			PFO	Rare
Abies balsamea			PFO	Rare
Glyceria striata			PFO	Rare
Tsuga canadensis			PFO	Rare
Betula alleghaniensis			PFO	Rare
Carex crinita			PFO	Barren
Acer saccharum			PFO	Barren
Athyrium filix-femina			PFO	Barren
Caltha palustris			PFO	Barren
Dryopteris intermedia			PFO	Barren
Iris versicolor			PFO	Barren
Maianthemum canadense			PFO	Barren
Osmunda cinnamomea			PFO	Barren
Ulmus americana			PFO	Barren
Epilobium cf. coloratum			PFO	Barren
Lonicera canadensis			PFO	Barren
Onoclea sensibilis			PFO	Barren
Oxalis montana			PFO	Barren
Ranunculus cf. recurvatus			PFO	Barren

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

The wetland is a relatively intact community as a whole, with multiple strata present, and no exotic species observed.

### 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
	Х		М	С	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
	х		5.4	0	Removal of herbaceous stratum – mowing,
	~		М	C	grading, earthworms, etc.
Х	Х		М	С	Removal of tree or shrub strata – logging, unprescribed fire
	Х		М	С	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 adjacent to a gravel road, which likely contributes runoff to the wetland. The surrounding forest has recently been harvested with slash present in the wetland. Earthworms are present in the surrounding forest with the potential to impact the wetland's herbaceous layer.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION			SIGNIFICANC	E	
	Low	Medium	High	Exceptional	NA
Floristic Integrity		$\checkmark$			
Human Use Values		$\checkmark$			
Wildlife Habitat		$\checkmark$			
Fish and Aquatic Life Habitat		$\checkmark$			
Shoreline Protection					$\checkmark$
Flood and Stormwater Storage		$\checkmark$			
Water Quality Protection			$\checkmark$		
Groundwater Processes	$\checkmark$				

FUNCTION	RATIONALE
Floristic Integrity	The wetland is relatively intact, with moderate species richness and minimal presence of exotic species.
Human Use Values	The wetland is part of a larger forest that supports multiple recreational opportunities.
Wildlife Habitat	The wetland 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 stormwater from the adjacent gravel road and surrounding upland forest.
Water Quality Protection	The wetland has good vegetation coverage with potential to intercept precipitation and filter runoff and nutrients.
Groundwater Processes	The wetland primarily exhibits recharge hydrology. The wetland is a part of a larger forest which likely plays an important role in protection of the area's groundwater.

# 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: <u>2020-05-23</u>
Applicant/Owner: Enbridge		State: Wisconsin Samplir	ng Point: <u>wirc014f_xu</u>
Investigator(s): <u>JSW/EJO</u>	Section, Township, Range:	sec 28 T046N R001V	V
Landform (hillslope, terrace, etc.): Side Slope	ocal relief (concave, convex, n	one): <u>None</u>	Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.4347</u>	37 Long: <u>-9</u>	0.503310	Datum: <u>WGS84</u>
Soil Map Unit Name: Chabeneau-Channing-Gogebic comple	ex, 0 to 6 percent slopes, s	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 significant	ly disturbed? Are "Norm	al Circumstances" present? Y	′es 🔽 No
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed,	explain any answers in Rema	rks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes 🖌	No	Is the Sampled Area within a Wetland? Yes No	
Wetland Hydrology Present?	Yes	No 🖌	If yes, optional Wetland Site ID:	
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located in a recently harvested mesic hardwood forest near a gravel forest road.				

## HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1) Water-Stained 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	6) 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)				
Field Observations:					
Surface Water Present? Yes No 🖌 Depth (inches):					
Water Table Present? Yes No 🖌 Depth (inches):					
Saturation Present? Yes No 🖌 Depth (inches): Wetla	Wetland Hydrology Present? Yes No				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					
The sample point is located on a moderately well drained slope. No indicators of wetland hydrology					
were observed.					

Sampling Point: wirc014f\_xu

Tree Statut       (Pol size:	Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
2       Betula alleghaniansis       10       Y       FAC         3       Acer rubrum       5       N       FAC         4       Acer saccharum       5       N       FAC         5       S       N       FAC         6       S       N       FAC         7       Sacina Stratum       60       (AB)         7       Sacina Stratum       70       N         1       Acer saccharum       5       Y       FACU         2       Abies balsamea       5       Y       FACU         2       Abies balsamea       5       Y       FACU       Secore of         2       Abies balsamea       5       Y       FACU       FACU species       0       x1 =       10         2       Abies balsamea       5       Y       FACU       FACU       FACU species       10       2       2       0       10       2       10       - </td <td>, ·</td> <td></td> <td></td> <td></td> <td></td>	, ·				
3. Acer rubrum       5       N       FAC         4. Acer saccharum       5       N       FAC         5.       N       FAC       Percent of Dominant Species         6.       —       —       That Are OBL, FACW, or FAC:       GO         7.					That are OBL, FACW, of FAC: <u>3</u> (A)
4. Acet saccharum       5       N       FACU       Percent of Dominant Species         5.       S.       FACU       Percent of Dominant Species       60       (AVB)         6.					
5					、
6.					
7.					
30       = Total Cover         Sapling/Shub Stratum       (Plot size:15_)         1. Acer saccharum      5         2. Abies balsamea      5         3.      6         3.      6         4.      6         5.       Y       FACU         7.      6         6.      6         7.      6         1. Osmunda claytoniana       20       Y       FACU         1. Osmunda claytoniana       20       Y       FACU         2. Provinces ross      6      6         2. Provinces ross      6      6         3. Maianthemum racemosum      6       N       FACU         1. Osmunda claytoniana      0       Y       FACU         2. Provincera canadensis      6      6      7         2. Orgenia alternifolia      6      6      6         3. Maianthemum racemosum      6       N       FACU       Problematic Hydrophytic Vegetation fictors:         3. Consus alternifola      0       N       FACU       Problematic Hydrophytic Vegetatis and         6. Ca					Prevalence Index worksheet:
Sapting/Shrub Stratum (Plot size:15)       1. Acer saccharum5 Y_FACU       FAC species40_ x3 =120_         2. Abies balsamea5 Y_FAC       FACU species30_ x4 =156_       UPL species30_ x4 =156_         36      6      6       Column Totals:70_ (A)276_ (B)         46      6      6      6         76      6      6      6         76      6      6      6         76      6      6      6         10. = Total Cover      6      6      6         11. Osmunda claytoniana       20       Y_FAC      6         2. Prunus virginiana       5       N_FACU      6         3. Maianthemum racemosum       5       N_FACU      6         4. Lonicera canadensis       5       N_FACU      6         6. Cardamine concatenata       1       N_FACU      6         7. Taraxacum officinale       1       N_FACU      6      6         9	7				
1 Acer saccharum       5       Y       FAC       species       40       x 3 =       120         2 Abies balsamea       5       Y       FAC       species       39       x 4 =       156         3.		30	= Total Cov	/er	
Abies balsamea       5       Y       FAC         Addies balsamea       5       Y       FAC         Balance       5       Y       FAC         Provement       Column Totals:       79       (A)       276       (B)         Prevalence Index = B/A = 3/99779800758493       Prevalence Index = B/A = 3/99779800758493       Prevalence Index = B/A = 3/99779800758493         Provement       10       = Total Cover       11					
2       Alles Dalsatified       3	1. <u>Acer saccharum</u>	5	<u> </u>	<u>FACU</u>	
3.	2. <u>Abies balsamea</u>	5	Y	FAC	
4.	3				
5.       Prevalence Index = B/A = 3/436770880759433         6.	4				$\frac{1}{210}$
6.					Prevalence Index = B/A = <u>3.4936708860759493</u>
7.					Hydrophytic Vegetation Indicators:
10= Total Cover					
Herb Stratum       (Plot size:5_)         1. Osmunda claytoniana       20       Y       FAC         2. Prunus virginiana       5       N       FACU         3. Maianthemum racemosum       5       N       FACU         4. Lonicera canadensis       5       N       FACU         5. Cornus alternifolia       2       N       FACU         6. Cardamine concatenata       1       N       FACU         7. Taraxacum officinale       1       N       FACU         8.	· ·				∠ 2 - Dominance Test is >50%
1. Osmunda claytoniana       20       Y       FAC         2. Prunus virginiana       5       N       FACU         3. Maianthemum racemosum       5       N       FACU         4. Lonicera canadensis       5       N       FACU         5. Ornus alternifolia       2       N       FACU         6. Cardamine concatenata       1       N       FACU         7. Taraxacum officinale       1       N       FACU         8.	Horb Stratum (Plat size) 5		- 10(a) CO		$\_$ 3 - Prevalence Index is $\leq 3.0^1$
2. Prunus virginiana      5       N       FACU      Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)         3. Maianthemum racemosum      5       N       FACU      Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.         4. Lonicera canadensis      5       N       FACU      Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.         5. Cornus alternifolia       2       N       FACU       Definitions of Vegetation Strata:         6. Cardamine concatenata       1       N       FACU       Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.         8		20	V		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
3. Maianthemum racemosum       5       N       FACU         4. Lonicera canadensis       5       N       FACU         5. Cornus alternifolia       2       N       FACU         6. Cardamine concatenata       1       N       FACU         7. Taraxacurn officinale       1       N       FACU         8.       1       N       FACU         9.       1       N       FACU         9.       1       N       FACU         10.       1       N       FACU         8.       9.       1       N         9.       1       N       FACU         10.       1       N       FACU         11.       10.       39       = Total Cover         Woody Vine Stratum (Plot size:       30       )       1         12.       30       = Total Cover       Hydrophytic         4.					
4. Lonicera canadensis       5       N       FACU       'Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.         5. Cornus alternifolia       2       N       FACU       Definitions of Vegetation Strata:         6. Cardamine concatenata       1       N       FACU       Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.         8.					
4. Lonicera canadensis       5       N       FACU       be present, unless disturbed or problematic.         5. Cornus alternifolia       2       N       FACU       Definitions of Vegetation Strata:         6. Cardamine concatenata       1       N       FACU       Definitions of Vegetation Strata:         7. Taraxacum officinale       1       N       FACU       Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.         8.					<sup>1</sup> Indicators of hydric soil and wetland hydrology must
6. Cardamine concatenata       1       N       FACU         7. Taraxacum officinale       1       N       FACU         8.				<u>FACU</u>	
7. <u>Taraxacum officinale</u> 1       N       FACU       Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.         8.	5. <u>Cornus alternifolia</u>	2	<u>N</u>	<u>FACU</u>	Definitions of Vegetation Strata:
7. Taraxacum officinale       1       N       FACU         8.	6. <u>Cardamine concatenata</u>	1	N	<u>FACU</u>	Tree Woody plants 2 in (7.6 cm) or more in diameter
9.	7. <u>Taraxacum officinale</u>	1	N	<u>FACU</u>	
9.	8				Sanling/shrub – Woody plants less than 3 in DBH
10.					and greater than or equal to 3.28 ft (1 m) tall.
11.					Herb – All herbaceous (non-woody) plants, regardless
12.					
39     = Total Cover       Woody Vine Stratum (Plot size: 30)				·	Woody vines – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:30)       1	12.	30	- Total Ca		
1.	Weather the Obstance (Distained 20			/ei	
2					
3.				·	
4					
4.	3				
Remarks: (Include photo numbers here or on a separate sheet.)	4			·	
			= Total Cov	/er	
The lorest was recently harvested and the ground layer is sparse.			ind love	r ie eno	reo
		ine grou	ind laye	a 15 spa	

Profile Desc	cription: (Describe t	o the depth	needed to docun	nent the	indicator	or confirm	the absence of indicato	vrs.)	
Depth	Matrix		Redox	x Feature	es				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-6	<u>7.5YR 2.5/2</u>	100		0					
6-20	5YR 3/3	100		0			SIL		
									_
				·					-
	·			·			· · · · · · · · · · · · · · · · · · ·		_
									_
				·		·	·		_
				·			·		_
				·			·		_
						. <u> </u>	·		_
	oncentration, D=Depl	otion DM-E	Poducod Matrix MS	-Masko	d Sand Gr	aine	<sup>2</sup> Location: PL=Pore	Lipipa M-Matrix	_
Hydric Soil					u Sanu Gia	an 15.	Indicators for Proble		
Histosol			_ Polyvalue Belov	v Surface	e (S8) (L <b>R</b> F	R.		(LRR K, L, MLRA 149B)	
	pipedon (A2)	-	MLRA 149B)		(00) (	,		ox (A16) ( <b>LRR K, L, R</b> )	
	istic (A3)	_	_ Thin Dark Surfa	ce (S9) (	LRR R, MI	RA 149B)		or Peat (S3) (LRR K, L, R)	
	en Sulfide (A4)	_	_ Loamy Mucky M			, L)	Dark Surface (S7)		
	d Layers (A5)		_ Loamy Gleyed N		2)		-	Surface (S8) (LRR K, L)	
	d Below Dark Surface ark Surface (A12)	(A11) _	Depleted Matrix Redox Dark Sur		<b>`</b>		Thin Dark Surface	e (S9) (LRR K, L) Masses (F12) (LRR K, L, R)	`
	Aucky Mineral (S1)	—	_ Depleted Dark Su				-	ain Soils (F19) ( <b>MLRA 149B</b>	
-	Gleyed Matrix (S4)	—	Redox Depressi					6) (MLRA 144A, 145, 149B)	
	Redox (S5)			,			Red Parent Mater		,
	l Matrix (S6)						Very Shallow Dark		
Dark Su	rface (S7) (LRR R, M	LRA 149B)					Other (Explain in F	Remarks)	
3 malia atawa a	f hudun a hudin un antati	المربية مربع				مائمة، بعام ما	an muchlana stic		
	f hydrophytic vegetati Layer (if observed):	on and well	and hydrology mus	t be pres	ent, unless	aisturbed			
	Layer (il Observeu).								
Туре:							Undria Sail Dresent?	Yes No 🗸	
	ches):						Hydric Soll Present?		-
Remarks:									
	ators of hydric	son wer	e observed.						





wirc014f\_xu\_W

Project/Site: Line 5 Relocation Proj	ect (	City/County: <u>Iron</u>	Sampling	) Date: <u>2020-05-23</u>
Applicant/Owner: Enbridge			State: Wisconsin Sampli	ing Point: <u>wira017f_xw</u>
Investigator(s): <u>EJO/JSW</u>		Section, Township, Range: <u>Sec</u>	28 T046N R001	W
Landform (hillslope, terrace, etc.): Depress	sion Loc	al relief (concave, convex, none	): <u>Concave</u>	Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral For	<sup>ests</sup> Lat: <u>46.435544</u>	Long: <u>-90.</u>	502631	Datum: WGS84
Soil Map Unit Name: Chabeneau-Channir	ng-Gogebic complex,	0 to 6 percent slopes, stor	<u>1y</u> NWI classification:	
Are climatic / hydrologic conditions on the site	typical for this time of yea	ar? Yes 🖌 No (If	no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrol	ogy significantly of	disturbed? Are "Normal C	ircumstances" present?	Yes 🖌 No
Are Vegetation, Soil, or Hydrol	ogy naturally prol	plematic? (If needed, exp	plain any answers in Rema	arks.)
SUMMARY OF FINDINGS – Attach	site map showing	sampling point location	s, transects, import	ant features, etc.
Hydrophytic Vegetation Present? Ye	s No	Is the Sampled Area		
Hydric Soil Present? Ye	s 🖌 No	within a Wetland?	Yes 🖌 No _	
Wetland Hydrology Present? Ye	s 🖌 No	If yes, optional Wetland S	ite ID:	

Remarks: (Explain alternative procedures here or in a separate report.)
Feature is a saturated hardwood swamp dominated by black ash, northern white cedar, and eastern
hemlock in the canopy.

### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 So	pils (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)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes <u>v</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions) if available.
Describe recorded bata (silearin gadge, monitoring weil, achai photos, previous inspec	
Remarks: Hydrologic regime appears to be seasonally saturated with standing water were observed in the wetland at time of sur	

Sampling Point: wira017f\_xw

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. <u>Thuia occidentalis</u>			FACW	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)
2. <u>Tsuga canadensis</u>			FACU	( )
3. <u>Fraxinus nigra</u>			FACW	Total Number of Dominant Species Across All Strata: 8 (B)
4. Acer rubrum		N	FAC	
5. <u>Betula papyrifera</u>				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>63</u> (A/B)
6				
7				Prevalence Index worksheet:
··		= Total Co		Total % Cover of:        Multiply by:           OBL species         x 1 =1
Sapling/Shrub Stratum (Plot size: 15 )			VEI	FACW species $47$ x 2 = $94$
1. <u>Abies balsamea</u>	10	V	EAC	FAC species $18 \times 3 = 54$
				FACU species <u>39</u> x 4 = <u>156</u>
2. <u>Acer saccharum</u>				UPL species x 5 =
3				Column Totals: <u>105</u> (A) <u>305</u> (B)
4				Prevalence Index = B/A = 2.9047619047619047
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7		= Total Cov		2 - Dominance Test is >50%
Had Obstation (Distained E	_20_		ver	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: 5)	F	V		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Ribes glandulosum</u>		<u> </u>	FACW	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Rubus pubescens</u>			FACW	
3. <u>Acer saccharum</u>			FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Dryopteris intermedia</u>			FAC	be present, unless disturbed or problematic.
5. <u>Trientalis borealis</u>			<u>FAC</u>	Definitions of Vegetation Strata:
6. <u>Maianthemum canadense</u>			FACU	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Glyceria striata</u>		<u>    N     </u>	OBL	at breast height (DBH), regardless of height.
8. <u>Carex pedunculata</u>			FAC	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Thuja occidentalis</u>	1	<u>    N     </u>	<u>FACW</u>	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Oxalis montana</u>	1	<u>    N     </u>	<u>FACU</u>	Herb – All herbaceous (non-woody) plants, regardless
11. <u>Equisetum sylvaticum</u>	1	<u>    N     </u>	<u>FACW</u>	of size, and woody plants less than 3.28 ft tall.
12		·		<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	20	= Total Cov	ver	neight.
Woody Vine Stratum (Plot size: 30)				
1				
2	<u> </u>			
3	<u> </u>			Hydrophytic
4				Vegetation Present? Yes <u>v</u> No
		= Total Cov	ver	NU
Remarks: (Include photo numbers here or on a separate s				
Feature is a black ash swamp with eas				
canopy. Sugar maple and balsam fir all				
currant, and dwarf raspberry are domin	ant in tr	ie grour	iu iayer.	. Sample plot appears representative
of the overall wetland.				

Profile Des	cription: (De	escribe t	o the dep	th needed	to docun	nent the i	indicator	or confirm	the absence	of indicators.)
Depth		/latrix				x Feature				
(inches)	Color (m	oist)	%	Color (r	noist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-10	<u>10YR</u>	2/1	100			0		<u> </u>	MMI	loam
10-15	<u>7.5YR</u>	3/1	95	<u>7.5R</u>	4/3	5	C	M	SL	
15-20	<u>7.5YR</u>	3/3	100			0			SL	
							·			
							·	·		
	·					·	·			
							·	·	<u> </u>	
	·						·			
							·			
	·						·	·		
	·						·			
1 <b>T</b>		D. D		Deduced	A-tria DAG				21	DL Dave Lizier M. Matrix
Hydric Soil	Concentration, Indicators:	D=Depie	etion, Rivi	=Reduced I	viatrix, ivis	S=IVIasked	a Sand Gra	ains.		n: PL=Pore Lining, M=Matrix.
Histoso				Polyva	alue Belov	v Surface	(S8) ( <b>LRF</b>	R.		Muck (A10) ( <b>LRR K, L, MLRA 149B</b> )
Histic E	pipedon (A2)			-	RA 149B)			-		Prairie Redox (A16) (LRR K, L, R)
	listic (A3)							RA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A4 d Layers (A5)				/ Mucky N / Gleyed I		1) ( <b>LRR K</b>	, L)		Surface (S7) ( <b>LRR K, L</b> ) alue Below Surface (S8) ( <b>LRR K, L</b> )
	d Below Dark		(A11)		ted Matrix		-)			Dark Surface (S9) (LRR K, L)
	ark Surface (A		()		Dark Su					langanese Masses (F12) (LRR K, L, R)
Sandy I	Mucky Minera	I (S1)		Deplet	ted Dark S	Surface (F	7)		Piedm	nont Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	Gleyed Matrix	(S4)		Redox	Depress	ions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
	Redox (S5)									Parent Material (F21)
	d Matrix (S6) urface (S7) (Ll	RR R. M	LRA 149	3)						Shallow Dark Surface (TF12) (Explain in Remarks)
	of hydrophytic	-	on and we	etland hydro	ology mus	t be prese	ent, unless	disturbed	or problemati	С.
	Layer (if obs	erved):								
Type:									Hydric Soil	I Present? Yes No
Remarks:	nches):									
	served to	be lo	amv m	uckv m	ineral	over sa	andv lo	am.		
			j							
1										



wira017f\_xw\_NE



wira017f\_xw\_SW

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	EJO/JSW			
File #:	Date of visit(s):			
wira017_x	2020-05-23			
Location:	Ecological Landsca	ape:		
PLSS: sec 28 T046N R001W	Superior Mineral Range			
	Superior Milleral Range	5		
Lat: <u>46.435546</u> Long: <u>-90.502639</u>	Watershed:			
• •	LS11, Potato River			
County: Iron Town/City/Village: Gurney town				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	T3/8K, T5/S3K			
Chabeneau-Channing-Gogebic complex, 0 to 6 percent slopes, stony.	Wetland Type(s):			
Lupton-Pleine-Cathro complex, 0 to 1 percent slopes.	PFO - hardwood swamp			
Field Verified:		, on amp		
Series not verified. Soils were observed to be	Wetland Size:	Wetland Area Impacted		
loamy mucky mineral over sandy loam.	0.2209	0.2209		
		0.2200		
	Vegetation:	$\Delta$		
Hydrology:	Plant Community			
		ck ash hardwood swamp, with		
The wetland's Hydrologic regime appears	eastern hemlock and northern white cedar also dominant			
saturated with recharge hydrology.	in canopy. Sugar maple and balsam fir are dominant in			
	the shrub layer, with sugar maple, skunk currant, and dwarf raspberry dominant in the herbaceous layer.			
	dwarr raspberry don	ninant in the herbaceous layer.		

# SITE MAP

### **SECTION 1: Functional Value Assessment**

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

GW-4: The top layer of the wetland's soils contained muck. WQ-2, ST-5: The wetland is located in a depression and likely receives stormwater from the surrounding uplands and from the adjacent road. WH-4: The feature is part of a large forest, but is adjacent to a gravel road. This road is likely not a significant habitat barrier to animals. WH-7: The wetland is a part of a larger forest with potential to support SGCN species.

> 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	osbeak heard in wetland. Black-throated green warbler, ovenbird and other songbirds heard
	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

### **SECTION 2: Floristic Integrity**

### Plant Community Integrity (circle)\*

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Thuja occidentalis			PFO	Rare
Tsuga canadensis*			PFO	Rare
Fraxinus nigra*			PFO	Rare
Abies balsamea*			PFO	Rare
Acer saccharum			PFO	Rare
Acer rubrum			PFO	Rare
Betula papyrifera			PFO	Rare
Ribes glandulosum			PFO	Rare
Rubus pubescens			PFO	Rare
Acer saccharum			PFO	Barren
Athyrium filix-femina			PFO	Barren
Cornus alternifolia			PFO	Barren
Lonicera canadensis			PFO	Barren
Ribes triste			PFO	Barren
Carex pedunculata			PFO	Barren
Dryopteris intermedia			PFO	Barren
Equisetum sylvaticum			PFO	Barren
Glyceria striata			PFO	Barren
Maianthemum canadense			PFO	Barren
Oxalis montana			PFO	Barren
Thuja occidentalis			PFO	Barren
Trientalis borealis			PFO	Barren
Trillium cernuum			PFO	Barren

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

The wetland has a good diversity of native species, well-developed strata, and no observed 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
	х		М	С	Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
	Х		L	С	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		М	С	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
	Х		L	С	Sediment input
х	х		М	С	Removal of herbaceous stratum – mowing,
^	^		IVI	C	grading, earthworms, etc.
	х		М	С	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 adjacent to a gravel road. Logging has occurred in the surrounding upland forest. The surrounding forest contains earthworms with potential to impact the wetland's herbaceous layer.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION			SIGNIFICANC	E	
	Low	Medium	High	Exceptional	NA
Floristic Integrity			<b>v</b>		
Human Use Values		<b>/</b>			
Wildlife Habitat			~		
Fish and Aquatic Life Habitat		<ul> <li>✓</li> </ul>			
Shoreline Protection					~
Flood and Stormwater Storage			<b>v</b>		
Water Quality Protection			~		
Groundwater Processes	~				

FUNCTION	RATIONALE					
Floristic Integrity	The wetland is an intact community, with multiple well-developed strata, and good native species richness.					
Human Use Values	The wetland is part of a larger forest that offers recreational 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 wetland had areas of standing water at the time of survey, which have potential to support aquatic life.					
Shoreline Protection	N/A					
Flood and Stormwater Storage	The wetland is a depression which likely receives and holds stormwater from the surrounding upland forest.					
Water Quality Protection	The wetland has diverse and intact vegetation with the ability to intercept precipitation and filter and absorb stormwater.					
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

Project/Site: Line 5 Relocation Project	_ City/County:	_ Sampling Date: <u>2020-05-23</u>
Applicant/Owner: Enbridge	State: Wiscons	sin Sampling Point: <u>wira017f_xu</u>
Investigator(s): <u>JSW/EJO</u>	_ Section, Township, Range: <u>sec 28 T0461</u>	NR001W
Landform (hillslope, terrace, etc.): Side Slope		
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.4355</u>	Long: <u>-90.502463</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Chabeneau-Channing-Gogebic comple	ex, 0 to 6 percent slopes, stony NWI classific	cation:
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🔽 No (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology significan	tly disturbed? Are "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answe	ers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes <u> </u>	~	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes No _	V	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed The upland is located in a fern.			dominated by hemlock and intermediate wood

# HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 F	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 So	ils (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)
Field Observations:	
Surface Water Present? Yes <u>No</u> Depth (inches):	
Water Table Present? Yes <u>No</u> Depth (inches):	
Saturation Present? Yes <u>No</u> Depth (inches): <u>Unchased</u>	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	, , ,
(includes capillary fringe)	, , ,
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	, , ,
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	, , ,
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	, , ,
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	, , ,
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	, , ,
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	, , ,
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	, , ,
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(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	, , ,
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	, , ,
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	, , ,
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	, , ,

Sampling Point: wira017f\_xu

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. <u>Tsuga canadensis</u>			FACU	Number of Dominant Species That Are OBL, FACW, or FAC:4 (A)
2. <u>Acer rubrum</u>			FAC	
3. <u>Acer saccharum</u>			FACU	Total Number of Dominant Species Across All Strata:7(B)
4. <u>Betula alleghaniensis</u>				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				
7				Prevalence Index worksheet:
<u></u>		= Total Cov		Total % Cover of:        Multiply by:           OBL species         x 1 =0
Sopling/Shrub Stratum (Blot size: 15)				FACW species $0$ $x^2 = 0$
Sapling/Shrub Stratum (Plot size: 15)	20	V		FAC species $62 \times 3 = 186$
1. <u>Acer saccharum</u>				FACU species x 4 =300
2. <u>Betula alleghaniensis</u>				UPL species x 5 =
3				Column Totals: <u>137</u> (A) <u>486</u> (B)
4				Prevalence Index = B/A = 3.5474452554744524
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				$\sim$ 2 - Dominance Test is >50%
		= Total Cov	/er	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: 5)	45	V		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Dryopteris intermedia</u>				data in Remarks or on a separate sheet)
2. <u>Trientalis borealis</u>		<u>    Y     </u>	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Maianthemum canadense</u>			FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Tsuga canadensis</u>		<u>     N                               </u>	<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Caulophyllum thalictroides</u>				Definitions of Vegetation Strata:
6. <i>Maianthemum racemosum</i>			<u>FACU</u>	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Acer saccharum</u>			<u>FACU</u>	at breast height (DBH), regardless of height.
8. <u>Athyrium angustum</u>	2	<u>    N     </u>	FAC	Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	57	= Total Cov	/er	
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes ✔ No
	0	= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate s				
The plant community is an upland trans	sition fro	om a nar	awood	swamp to a mesic nardwood forest.

Profile Desc	ription: (D	escribe t	o the dep	th needed to docun	nent the	indicator	or confirm	n the absence of indica	tors.)	
Depth		Matrix		Redox	x Feature	S 1	2			
(inches)	Color (r		%	Color (moist)		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-2	<u>10YR</u>	2/2	100		0			<b>L</b>		
2-5	<u>7.5YR</u>	3/2	100		0			SIL		
5-20	5YR	3/4	100		0			SIL		
										<u> </u>
<sup>1</sup> Type: C=C	oncentration	, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masker	d Sand Gra	ains.	<sup>2</sup> Location: PL=Por	e Lining, M=Matrix.	
Hydric Soil				·					lematic Hydric Soils <sup>3</sup> :	
Histosol		<b>`</b>		Polyvalue Belov		e (S8) ( <b>LRF</b>	RR,		) (LRR K, L, MLRA 149	
	bipedon (A2 stic (A3)	)		MLRA 149B) Thin Dark Surfa			RA 1498		edox (A16) ( <b>LRR K, L, R</b> at or Peat (S3) ( <b>LRR K,</b> I	
	en Sulfide (A	4)		Loamy Mucky M				Dark Surface (S		_, ,
	d Layers (A5			Loamy Gleyed I		2)		-	v Surface (S8) (LRR K, I	L)
	d Below Dar ark Surface		e (A11)	Depleted Matrix Redox Dark Sur					ce (S9) ( <b>LRR K, L</b> ) Masses (F12) ( <b>LRR K,</b>	I D)
	lucky Miner	. ,		Depleted Dark Su	, ,			_	plain Soils (F12) ( <b>MLRA</b>	
	Bleyed Matri			Redox Depressi		.,			A6) ( <b>MLRA 144A</b> , 145,	
Sandy F	Redox (S5)							Red Parent Mat		
	l Matrix (S6) rface (S7) (I			2)				Very Shallow Da Other (Explain in	ark Surface (TF12)	
Daik Su				•)					(Tremarks)	
		-	ion and we	tland hydrology mus	t be pres	ent, unless	disturbed	l or problematic.		
Restrictive	Layer (if ob	served):								
Type:								Hydric Soil Present	? Yes No	~
Depth (ind Remarks:	ches):							Tryune Son Tresents		<u> </u>
	ators of I	hvdric	soil we	ere observed.						
		.,								



wira017f\_xu\_S

Project/Site: Line 5 Relocation Project City/Coun	Ity: Iron Sampling Date: 2020-05-23
<b>.</b>	State: Wisconsin Sampling Point: wirc1016f_w
Investigator(s): <u>EJO/JSW</u> Section, 7	
Landform (hillslope, terrace, etc.): <u>Depression</u> Local relief (	
Landroim (misiope, terrace, etc.). <u>Depression</u> Locartener (	
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.436812	Long: <u>-90.500297</u> Datum: <u>VVG584</u>
Soil Map Unit Name: Lupton-Pleine-Cathro complex, 0 to 1 pe	•
Are climatic / hydrologic conditions on the site typical for this time of year? Yes $\underline{\ }$	✓ No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed	? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampli	ng point locations, transects, important features, etc.
Hydric Soil Present? Yes <u>v</u> No wi	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B	
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 (C	
	n Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iro	
Algal Mat or Crust (B4) Recent Iron Reduction in	
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
<ul> <li>Inundation Visible on Aerial Imagery (B7)</li> <li>Other (Explain in Remark</li> <li>Sparsely Vegetated Concave Surface (B8)</li> </ul>	
Field Observations:	FAC-Neutral Test (D5)
, , , , , , , , , , , , , , , , ,	
Water Table Present?       Yes        No       Depth (inches): 1         Saturation Present?       Yes        V       No       Depth (inches): 0	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previou	is inspections), if available:
Remarks:	
Feature appears to be seasonally saturated with surf	
water observed in wetland at time of survey, but not a	at sample point.

Sampling Point: wirc1016f\_w

	Absolute		Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species		
1. <u>Fraxinus nigra</u>	25	Y	<u>FACW</u>	That Are OBL, FACW, or FAC: (A)		
2. <u>Tsuga canadensis</u>	10	<u> </u>	<u>FACU</u>	Total Number of Dominant		
3. <u>Betula alleghaniensis</u>	5	N	FAC	Species Across All Strata: (B)		
4. <u>Acer rubrum</u>	5	N	FAC	Percent of Dominant Species		
5. <u>Abies balsamea</u>	5	N	FAC	That Are OBL, FACW, or FAC: (A/B)		
6				Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
	50	= Total Co	ver	OBL species x 1 =		
Sapling/Shrub Stratum (Plot size: 15 )				FACW species x 2 = 80		
1. <u>Abies balsamea</u>	5	Y	FAC	FAC species29 x 3 =87		
2. <u>Betula alleghaniensis</u>				FACU species <u>10</u> x 4 = <u>40</u>		
3				UPL species x 5 =		
4				Column Totals: <u>79</u> (A) <u>207</u> (B)		
5				Prevalence Index = $B/A = 2.62$		
6				Hydrophytic Vegetation Indicators:		
7				1 - Rapid Test for Hydrophytic Vegetation		
··		= Total Co		2 - Dominance Test is >50%		
Horb Stratum (Plataiza) 5			vei	$\_$ 3 - Prevalence Index is ≤3.0 <sup>1</sup>		
Herb Stratum (Plot size: 5)	10	V		4 - Morphological Adaptations <sup>1</sup> (Provide supporting		
1. <u>Osmunda cinnamomea</u>				data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)		
2. <u>Carex cf. intumescens</u>			FACW			
3. <u>Rubus pubescens</u>			FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must		
4. <u>Corallorhiza trifida</u>			FACW	be present, unless disturbed or problematic.		
5. <u>Dryopteris intermedia</u>			FAC	Definitions of Vegetation Strata:		
6. <u>Equisetum sylvaticum</u>				Tree – Woody plants 3 in. (7.6 cm) or more in diameter		
7. <u>Athyrium angustum</u>	2	N	FAC	at breast height (DBH), regardless of height.		
8	. <u> </u>			Sapling/shrub – Woody plants less than 3 in. DBH		
9				and greater than or equal to 3.28 ft (1 m) tall.		
10				Herb – All herbaceous (non-woody) plants, regardless		
11				of size, and woody plants less than 3.28 ft tall.		
12				Woody vines – All woody vines greater than 3.28 ft in height		
	29	= Total Co	ver	height.		
Woody Vine Stratum (Plot size: 30)						
1						
2						
3				Hydrophytic		
4				Vegetation		
	_	= Total Co	ver	Present? Yes <u>  V</u> No		
Remarks: (Include photo numbers here or on a separate s	sheet.)			1		

The feature is a hardwood swamp dominated by black ash and eastern hemlock in the canopy and dwarf raspberry, cinnamon fern, and greater bladder sedge in the ground layer. Sample plot appears representative of the wetland.

SOIL
------

Profile Des	cription: (Describe f	o the dep	th needed	to docun	nent the i	indicator	or confirm	the absence	e of indicators.)	
Depth	Matrix			Redo	x Feature	S1		_		
(inches)	Color (moist)	<u>%</u>	Color (r	noist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-4	<u>10YR 2/1</u>	100	7 50	0/0	0				loam	
4-15	<u>10YR 2/1</u>	98	7.5R	3/3	2	<u> </u>	M	C		
<u>15-20</u>	<u>7.5YR 4/1</u>	100			0	·		C		
					. <u></u>					
						·				
						·				
					·	·				
							<u> </u>			
					·	·				
	oncentration, D=Depl	etion, RM	Reduced N	Matrix, MS	S=Masked	d Sand Gra	ains.		n: PL=Pore Lining, M=Matrix.	
Hydric Soil			Dahara		0				s for Problematic Hydric Soils <sup>3</sup> :	
Histoso Histic E	pipedon (A2)			RA 149B)		(S8) ( <b>LRF</b>	К К,		Muck (A10) ( <b>LRR K, L, MLRA 149B</b> ) Prairie Redox (A16) ( <b>LRR K, L, R</b> )	
	istic (A3)		Thin D	ark Surfa	ice (S9) ( <b>I</b>		_RA 149B)	5 cm l	Mucky Peat or Peat (S3) (LRR K, L, R)	
	en Sulfide (A4)					1) ( <b>LRR K</b>	, L)		Surface (S7) (LRR K, L)	
	d Layers (A5) d Below Dark Surface	e (A11)		/ Gleyed I ted Matrix		-)			alue Below Surface (S8) (LRR K, L) Dark Surface (S9) (LRR K, L)	
Thick D	ark Surface (A12)		Redox	Dark Su	rface (F6)			Iron-N	langanese Masses (F12) (LRR K, L, R)	
-	Mucky Mineral (S1)			ted Dark S		-7)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
	Gleyed Matrix (S4) Redox (S5)		Redox	Depress	ions (F8)			Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> ) Red Parent Material (F21)		
	d Matrix (S6)							Very Shallow Dark Surface (TF12)		
Dark Su	Irface (S7) (LRR R, N	ILRA 1491	<b>3</b> )					Other	(Explain in Remarks)	
<sup>3</sup> Indicators o	of hydrophytic vegetat	ion and we	etland hydro	ology mus	t be prese	ent, unless	disturbed	or problemati	с.	
Restrictive	Layer (if observed):									
Туре:										
	ches):							Hydric Soi	I Present? Yes <u>✓</u> No	
Remarks:	served to be lo			inaral	ovor ol					
30115 003		any n	иску п	literar		ay.				



wirc1016f\_w\_NE



wirc1016f\_w\_SW

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	EJO/JSW		
File #:	Date of visit(s):		
wirc1016	2020-05-23		
Location:	Ecological Landsca	ape:	
PLSS: sec 28 T046N R001W	Superior Mineral Ranges	S	
		-	
Lat: <u>46.436726</u> Long: <u>-90.500238</u>	Watershed: LS11, Potato River		
	,		
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
SITE DESCRIPTION			
Soils:			
	WWI Class:		
Mapped Type(s): Lupton-Pleine-Cathro complex, 0 to 1 percent slopes. Gogebic, very stony-Pence, very stony-Cathro	T3/8K, T3K		
complex, 0 to 18 percent slopes. Chabeneau-Channing-Gogebic complex, 0 to 6 percent slopes, stony.	Wetland Type(s):		
Field Verified:	PFO - hardwood	swamp	
Series not verified. Soils were observed to be	Matland Circu	Matternal Area luceracted	
	Wetland Size:	Wetland Area Impacted	
loamy mucky mineral over clay.		1:4354	
	Vegetation:	$\mathbf{r}$	
Hydrology:	Plant Community	• • • •	
The feature appears saturated with surface water and	The Feature is a hardwood swamp dominated by		
atmospheric inputs. Standing water was observed in the	black ash and eastern hemlock in the canopy		
wetland at the time of survey, but not at the sample point.	and dwarf raspberry, cinnamon fern, and Greater		
wedand at the time of survey, but not at the sample point.	bladder sedge in the ground layer.		

# SITE MAP

### **SECTION 1: Functional Value Assessment**

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

WQ-2, ST-5: The wetland is a closed depression and likely receives stormwater from surrounding uplands. WH-7: The wetland is part of a larger habitat block with the potential to host SGCN species. FA-2: The wetland had standing water 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	Y	wood thrush, winter wren, black and white warbler, black throated green warbler heard in or
	Y	Mammals, herpetofauna, other avian species
-		
L		

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Fraxinus nigra*			PFO	Patchy
Osmunda cinnamomea*			PFO	Rare
Tsuga canadensis*			PFO	Rare
Abies balsamea			PFO	Rare
Abies balsamea			PFO	Rare
Acer rubrum			PFO	Rare
Betula alleghaniensis			PFO	Rare
Betula alleghaniensis			PFO	Rare
Carex cf. intumescens*			PFO	Rare
Rubus pubescens*			PFO	Rare
Ribes triste			PFO	Barren
Corallorhiza trifida			PFO	Barren
Athyrium filix-femina			PFO	Barren
Carex crinita			PFO	Barren
Dryopteris intermedia			PFO	Barren
Equisetum sylvaticum			PFO	Barren
Maianthemum canadense			PFO	Barren
Coptis trifolia			PFO	Barren
Onoclea sensibilis			PFO	Barren
Trientalis borealis			PFO	Barren

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

The wetland has high floristic integrity with high native species richness, well-developed strata, and no observed 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
					Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	х		М	С	Removal of herbaceous stratum – mowing,
	^			C	grading, earthworms, etc.
	x		м	С	Removal of tree or shrub strata – logging,
	^		IVI	C	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 within a forest that has been previously harvested. Earthworms are present in the surrounding upland forest with the potential to impact herbaceous vegetation.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION			SIGNIFICANC	E	
	Low	Medium	High	Exceptional	NA
Floristic Integrity			<b>v</b>		
Human Use Values		<ul> <li>✓</li> </ul>			
Wildlife Habitat			<b>v</b>		
Fish and Aquatic Life Habitat		<ul> <li>✓</li> </ul>			
Shoreline Protection					~
Flood and Stormwater Storage		<ul> <li>✓</li> </ul>			
Water Quality Protection			~		
Groundwater Processes	~				

FUNCTION	RATIONALE
Floristic Integrity	The wetland has a high species richness with a more conservative species (Corallorhiza trifida) represented.
Human Use Values	The wetland is a part of a larger forest that provide multiple recreational opportunities.
Wildlife Habitat	The wetland has multiple well-developed strata and is within a larger intact forest, both of which support a diversity of wildlife.
Fish and Aquatic Life Habitat	The wetland had pools of standing water present at the time of survey, which can support aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely receives and holds stormwater from the surrounding forest.
Water Quality Protection	The wetland has multiple strata present and good vegetation coverage which can intercept precipitation and filter stormwater.
Groundwater Processes	The wetland primarily exhibits recharge hydrology. The wetland is a part of a larger intact forest which plays an important role in groundwater protection.

# Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

# **Expected Project Impacts**

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

Project/Site: Line 5 Relocation Project	City/County:	Sampling	Date: <u>2020-05-23</u>
Applicant/Owner: Enbridge		State: Wisconsin Samplin	ig Point: <u>wirc1016_u</u>
Investigator(s): <u>JSW/EJO</u>	Section, Township, Ra	nge: <u>sec 28 T046N R001V</u>	V
Landform (hillslope, terrace, etc.): <u>Talf</u>			
Subregion (LRR or MLRA): Morthcentral Forests Lat: 46.4365	82 Lon	g: <u>-90.500308</u>	Datum: WGS84
Soil Map Unit Name: Chabeneau-Channing-Gogebic comple	<u>ex, 0 to 6 percent slop</u>	Des, 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 significan	Itly disturbed? Are "	'Normal Circumstances" present? Y	es 🔽 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If ne	eded, explain any answers in Remar	ks.)
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point le	ocations, transects, importa	int features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No <u>  No   No   No   No   No   No  No  No  N</u>	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced The upland sample point and various species of fer	is located in	a separate report.) n a transitiona	l community dominated by balsam fir, basswood,

### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 S	coils (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)
Field Observations:	
Surface Water Present? Yes No _	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes <u>No</u> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	ctions), if available:
Demositor	
Remarks: The land slopes gently upward to the south.	
The land slopes gently apward to the south.	

Tree Stratum (Plot size: <u>30</u> )	Absolute	Dominan Species?	t Indicator	Dominance Test worksheet:				
1. <u>Abies balsamea</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <b>3</b> (A)				
2. <u>Tilia americana</u>			FACU	That Are OBL, FACW, or FAC: (A)				
3. <u>Acer rubrum</u>				Total Number of Dominant Species Across All Strata: 9 (B)				
4. <u>Acer saccharum</u>								
				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)				
5				· · · · · · · · · · · · · · · · · · ·				
6				Prevalence Index worksheet:				
7				Total % Cover of: Multiply by:				
	00	= Total Co	over	OBL species         0         x 1 =         0           FACW species         2         x 2 =         4				
Sapling/Shrub Stratum (Plot size: <u>15</u> )	4.0	V		FAC species $x_2 =4$ FAC species65 $x_3 =195$				
1. <u>Abies balsamea</u>				FACU species $x = 204$				
2. <u>Picea glauca</u>				UPL species $0 \times 5 = 0$				
3. <u>Acer saccharum</u>				Column Totals: <u>118</u> (A) <u>403</u> (B)				
4. <u>Tsuga canadensis</u>	5	<u> </u>	<u>FACU</u>					
5		·		Prevalence Index = B/A = <u>3.4152542372881354</u>				
6		·		Hydrophytic Vegetation Indicators:				
7				1 - Rapid Test for Hydrophytic Vegetation				
	25	= Total Co	over	2 - Dominance Test is >50%				
Herb Stratum (Plot size: 5)				<ul> <li>3 - Prevalence Index is ≤3.0<sup>1</sup></li> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting</li> </ul>				
1. Dryopteris intermedia	10	Y	FAC	data in Remarks or on a separate sheet)				
2. <u>Acer saccharum</u>	5	Y	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
3. <u>Athyrium angustum</u>	5	N	FAC	1				
4. <u>Maianthemum canadense</u>			FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
5. <u>Osmunda claytoniana</u>		Ν	FAC	Definitions of Vegetation Strata:				
6. <u>Fraxinus nigra</u>			FACW					
7. <u>Taxus canadensis</u>				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.				
8								
9				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.				
10				Herb – All herbaceous (non-woody) plants, regardless				
11				of size, and woody plants less than 3.28 ft tall.				
12.				Woody vines – All woody vines greater than 3.28 ft in				
12		= Total Co	wor	height.				
Woody Vine Stratum (Plot size: <u>30</u> )			Jvei					
1								
2								
3		·		Hydrophytic Vegetation				
4	_			Present? Yes No 🗸				
	_	= Total Co	over					
Remarks: (Include photo numbers here or on a separate The plant community is transitional. Me		t boowb	forest is	present to the south.				

Profile Desc	ription: (I	Describe	to the dep	th needed	to docur	nent the i	indicator	or confirm	the absence	of indicators.)			
Depth		Matrix				x Feature		2	- ·				
(inches)			<u>%</u>	Color (	moist)		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
0-6	5YR		100						SICL				
6-12	5YR	3/4	95	5YR	4/6	5	C	M	SICL				
						<u> </u>							
							·						
							·						
							·						
							·						
							·						
							·						
							·						
1							<u> </u>		2				
<sup>1</sup> Type: C=Co Hydric Soil			letion, RM	=Reduced	Matrix, M	S=Masked	d Sand Gra	ains.		n: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils <sup>3</sup> :			
Histosol				Polyv	alue Belov	w Surface	(S8) ( <b>LRF</b>	RR,		Muck (A10) (LRR K, L, MLRA 149B)			
	pipedon (A2	2)			RA 149B)	,			Coast Prairie Redox (A16) (LRR K, L, R)				
Black Hi		A 4)						_RA 149B)					
	n Sulfide (/ Layers (A					Matrix (F2	1) ( <b>LRR K</b> 2)	, L)					
	d Below Da		e (A11)		ted Matrix		,						
	ark Surface					rface (F6)							
-	lucky Mine Gleyed Matr				ted Dark : x Depress	Surface (F	-7)						
	ledox (S5)	IX (0+)			Depicoo								
	Matrix (S6								Very Shallow Dark Surface (TF12)				
Dark Su	rface (S7)	(LRR R, N	ILRA 1491	3)					Other	(Explain in Remarks)			
<sup>3</sup> Indicators of	f hvdrophvt	ic vegetat	ion and we	etland hvdr	oloav mus	st be prese	ent. unless	disturbed	or problemation	C.			
Restrictive I		-			0,		,						
Туре: <u>Сс</u>	obble												
Depth (ind	ches): <u>12</u>	.0							Hydric Soil	Present? Yes No			
Remarks:													
		ast 12 i	nches	due to t	he pre	sence	of cobl	ble. No	indicators	s of hydric soil were			
observed	ł.												



wirc1016\_u\_E



wirc1016\_u\_S

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling Date: <u>2020-05-2</u>	<u>23</u>
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Sampling Point: <u>wirc1017f</u>	w
Investigator(s): EJO/JSW			
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, n	none): <u>Concave</u> Slope (%): <u>0-29</u>	6
Subregion (LRR or MLRA): Northcentral Forests La		90.501700 Datum: WGS84	
Soil Map Unit Name: Chabeneau-Channing-God			
Are climatic / hydrologic conditions on the site typical		•	
Are Vegetation, Soil, or Hydrology	-		
Are Vegetation, Soil, or Hydrology			—
SUMMARY OF FINDINGS – Attach site r	nap showing sampling point locat	tions, transects, important features, etc	•
Hydrophytic Vegetation Present? Yes <u>v</u> Hydric Soil Present? Yes <u>v</u> Wetland Hydrology Present? Yes <u>v</u> Remarks: (Explain alternative procedures here or in The feature is a saturated black ask eastern hemlock also dominant in the horsetail are dominant in the ground harvested with black ash slash prese influence the wetland's hydrology.	No No If yes, optional Wetland?       No If yes, optional Wetland?       If yes, optional Wetland?       If yes, optional Wetland       a separate report.)       h-dominated hardwood swamp       he canopy. Dwarf raspberry, swamp       d layer. Part of the wetland car	Yes _ < No and Site ID: o, with sugar maple, red maple, and wamp red currant, and woodland nopy has been selectively	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; cher		Surface Soil Cracks (B6)	
	_ Water-Stained Leaves (B9)	Drainage Patterns (B10)	
	_ Aquatic Fauna (B13)	Moss Trim Lines (B16)	
	_ Marl Deposits (B15) _ Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2) Crayfish Burrows (C8)	
		<ul> <li>Saturation Visible on Aerial Imagery (C9)</li> </ul>	
	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)	
	_ Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)	
	Thin Muck Surface (C7)	Shallow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)	1

Sparsely Vegetated Cor	ncave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present?	Yes No	✓ Depth (inches):	
Water Table Present?	Yes 🖌 No 🔄	Depth (inches): <u>1</u>	
Saturation Present? (includes capillary fringe)	Yes 🖌 No	Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <u>v</u> No

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

#### Remarks:

The feature is saturated at the surface and exhibits recharge hydrology. Standing water was present in the wetland at the time of survey but not at the sample point. Ruts from logging are present in the wetland, which may be influencing hydrology.

Sampling Point: wirc1017f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute	Dominan Species?	t Indicator	Dominance Test worksheet:
1. <u>Fraxinus nigra</u>				Number of Dominant Species That Are OBL, FACW, or FAC:5(A)
2. Acer saccharum		Y		
3. Acer rubrum	_		FAC	Total Number of Dominant Species Across All Strata: <b>7</b> (B)
4. <u>Tsuga canadensis</u>				
				Percent of Dominant Species That Are OBL, FACW, or FAC:71 (A/B)
5				
6				Prevalence Index worksheet:
7		= Total Co		Total % Cover of: Multiply by:
Capling (Christian (Distring) 15	23		over	OBL species         21         x 1 =         21           FACW species         43         x 2 =         86
Sapling/Shrub Stratum (Plot size: <u>15</u> )	2	N		FAC species $8 \times 3 = 24$
1. <u>Acer saccharum</u>				FACU species $12 \times 4 = 48$
2				UPL species x 5 =
3				Column Totals: <u>84</u> (A) <u>179</u> (B)
4				Prevalence Index = B/A = <u>2.13</u>
5				
6				Hydrophytic Vegetation Indicators:
7				<ul> <li>1 - Rapid Test for Hydrophytic Vegetation</li> <li>2 - Dominance Test is &gt;50%</li> </ul>
	2	= Total Co	over	$\sim$ 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Rubus pubescens</u>			FACW	data in Remarks or on a separate sheet)
2. <u>Equisetum sylvaticum</u>	10	<u> </u>	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Ribes triste</u>	10	Y	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Chrysosplenium americanum</u>	6	N	OBL	be present, unless disturbed or problematic.
5. <u>Carex crinita</u>	5	<u>N</u>	OBL	Definitions of Vegetation Strata:
6. <u>Ranunculus cf. recurvatus</u>	2	N	FACW	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Ranunculus abortivus</u>	2	N	FAC	at breast height (DBH), regardless of height.
8. <u>Acer rubrum</u>	1	N	FAC	Sapling/shrub – Woody plants less than 3 in. DBH
9. <i>Impatiens capensis</i>	1	N	FACW	and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	57	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30 )				
1				
2				
3.				Hydrophytic
4.				Vegetation
···	0	= Total Co		Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate				

The feature is black ash-dominated hardwood swamp, with sugar maple, red maple, and eastern hemlock also dominant in the canopy. Dwarf raspberry, swamp red currant, and woodland horsetail are dominant in the ground layer. Part of the wetland canopy has been selectively harvested with black ash slash present in the wetland.

SOIL
------

Profile Des	cription: (Describe t	o the dep	oth needed	to docun	nent the i	ndicator	or confirm	the absence	e of indicators.)
Depth	Matrix	0/			x Features		Loc <sup>2</sup>	<b>-</b> /	
(inches)	Color (moist)	<u>%</u>	Color (n	<u>10ist)</u>		Type <sup>1</sup>		Texture	Remarks
	<u>10YR 2/1</u>	100			_0_			MMI	loam
	<u>7.5YR 2.5/1</u>	100			_0_		·	CL	
6-20	<u>7.5YR 3/3</u>	90	<u>7.5YR</u>	4/3	_10_	C	M	SCL	Faint redox
<sup>1</sup> Type: C=C Hydric Soil Histoso Histic E Black H Hydroge Stratifie Deplete Thick D Sandy M Sandy M Sandy F Strippeo	oncentration, D=Deple	D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.							n: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils <sup>3</sup> : Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L) Dark Surface (S9) (LRR K, L) Manganese Masses (F12) (LRR K, L, R) nont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) Parent Material (F21) Shallow Dark Surface (TF12) (Explain in Remarks)
	f hydrophytic vegetati Layer (if observed):			logy mus		nt, unico.		n problemati	
Туре:									
Depth (in	ches):							Hydric Soi	I Present? Yes No
Remarks:									
Soils obs	served to be lo	amy m	iucky mi	neral (	over cla	ay loai	m over s	andy cla	ay loam.



wirc1017f\_w\_NW



wirc1017f\_w\_SE

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	EJO/JSW		
File #:	Date of visit(s):		
wirc1017	2020-05-23		
Location:	Ecological Landsca	ape:	
PLSS: sec 28 T046N R001W	Cupatian Minaral Dangas		
	Superior Mineral Ranges	5	
Lat: _46.438567 Long: _90.499563	Watershed:		
	LS11, Potato River		
County: <u>Iron</u> Town/City/Village: Gurney town			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Lupton-Pleine-Cathro complex, 0 to 1 percent slopes. Gogebic, very	Wetland Type(s):		
stony-Pence, very stony-Cathro complex, 0 to 18 percent slopes.	PFO - hardwood swamp		
Field Verified:		lowamp	
Series not verified. Soils were observed to be	Wetland Size:	Wetland Area Impacted	
loamy mucky mineral over clay loam over sandy	0.0343	0.0343	
	Vegetation:		
clay loam.	Plant Community Description(s):		
Hydrology:	The feature is a black ash-dominated hardwood swamp, with sugar		
The feature appears to have a saturated hydrologic regime and exhibits	maple, red maple, and eastern hemlock also dominant in the canopy.		
recharge hydrology. Standing water was present in the wetland at the time	Dwarf raspberry, swamp red currant, and woodland horsetail are		
of survey but not at the sample point. Ruts from logging are present in the		ayer. Part of the wetland canopy has	
wetland, which may be influencing hydrology. Recent harvests in and around wetland may also affect hydrology.	selectively narvested, wi	th black ash slash present in the wetland.	
around worlding may also anot hydrology.			

# SITE MAP

#### **SECTION 1: Functional Value Assessment**

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

GW-4: The top layer of soils were observed to be loamy mucky mineral. WH-7: The wetland is a part of a larger habitat block with the potential to support SGCN species. WQ-2, ST-5: The wetland is in a depression and likely receives surface water from the surrounding 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	Black throated green warbler, hermit thrush observed in vicinity of wetland				
	Y	Mammals, herpetofauna, 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 invertebrates

#### **SECTION 2: Floristic Integrity**

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

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Rubus pubescens*			PFO	Rare
Equisetum sylvaticum*			PFO	Rare
Fraxinus nigra*			PFO	Rare
Ribes triste*			PFO	Rare
Chrysosplenium americanum*			PFO	Rare
Acer rubrum			PFO	Rare
Acer saccharum			PFO	Rare
Caltha palustris			PFO	Rare
Carex crinita			PFO	Rare
Packera aurea			PFO	Rare
Tsuga canadensis			PFO	Rare
Osmunda cinnamomea			PFO	Barren
Glyceria striata			PFO	Barren
Acer saccharum			PFO	Barren
Matteuccia struthiopteris			PFO	Barren
Onoclea sensibilis			PFO	Barren
Ranunculus abortivus			PFO	Barren
Ranunculus cf. recurvatus			PFO	Barren
Symphyotrichum puniceum			PFO	Barren
Acer rubrum			PFO	Barren
Impatiens capensis			PFO	Barren
Ribes glandulosum			PFO	Barren

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

Although part of the canopy has been harvested, the wetland has an intact herbaceous layer with moderate species richness.

#### 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
Х	Х	M C		С	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
	V		N.4	0	Removal of herbaceous stratum – mowing,
	X		М	С	grading, earthworms, etc.
Х	х		н	С	Removal of tree or shrub strata – logging, unprescribed fire
	Х		L	С	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 has been selectively harvested recently with remnant slash and stumps present. The wetland is near a gravel logging trail. Earthworms are present in the surrounding forest with the potential to impact the wetland's herbaceous layer.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE				
	Low	Medium	High	Exceptional	NA
Floristic Integrity		~			
Human Use Values		<ul> <li>✓</li> </ul>			
Wildlife Habitat		<ul> <li>✓</li> </ul>			
Fish and Aquatic Life Habitat		<ul> <li>✓</li> </ul>			
Shoreline Protection					<b>/</b>
Flood and Stormwater Storage	<b>~</b>				
Water Quality Protection		<ul> <li>✓</li> </ul>			
Groundwater Processes	~				

FUNCTION	RATIONALE
Floristic Integrity	The canopy has been partially harvested but the herbaceous layer is still intact.
Human Use Values	The wetland is part of a larger forest that provides recreational opportunities.
Wildlife Habitat	The wetland is part of a larger forest that supports a diversity of wildlife.
Fish and Aquatic Life Habitat	The wetland has standing water at the time of survey with potential to host aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely receives and holds stormwater from the surrounding upland forest.
Water Quality Protection	The wetland has a dense, persistent, and intact herbaceous layer with the potential to catch and filter precipitation and runoff. However, the feature itself does not receive substantial stormwater in the survey area, and tree harvest has likely decreased this ability.
Groundwater Processes	The wetland is a part of a larger forest that plays an important role in protecting the area's groundwater, but exhibits primarily goundwater 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

		_			
Project/Site: Line 5 Relocation P	<u>'roject</u>	City/County: Iro	n	Sampling	) Date: <u>2020-05-23</u>
Applicant/Owner: Enbridge	_		Stat	e: Wisconsin Sampli	ing Point: <u>wirc1017_u</u>
Investigator(s): <u>JSW/EJO</u>		Section, Townshi	p, Range: <u>Sec 2</u>	8 T046N R001	W
Landform (hillslope, terrace, etc.): Side	Slope	Local relief (concave	e, convex, none): <u>N</u>	lone	Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral	Forests Lat: 46.4385	548	_ Long: <u>-90.49</u>	9453	Datum: WGS84
Soil Map Unit Name: Lupton-Pleine	-Cathro complex	<u>, 0 to 1 percen</u>	t slopes N	WI classification:	
Are climatic / hydrologic conditions on the	site typical for this time of	f year? Yes 🔽	No (If no,	explain in Remarks.)	
Are Vegetation, Soil, or Hy	ydrology significar	ntly disturbed?	Are "Normal Circu	mstances" present?	Yes 🖌 No
Are Vegetation, Soil, or Hy	ydrology naturally	problematic?	(If needed, explain	any answers in Rema	arks.)
SUMMARY OF FINDINGS - Att	ach site map showi	ing sampling po	int locations, t	ransects, import	ant features, etc.
Hydrophytic Vegetation Present?	Yes No 🗸	Is the Sar	npled Area		
Hydric Soil Present?	Yes No 🖌	within a V	Vetland?	Yes No	<ul> <li>✓</li> </ul>
Wetland Hydrology Present?	Yes No 🖌	If yes, opt	onal Wetland Site I	D:	
Remarks: (Explain alternative procedure	es here or in a separate re	eport.)			

Terrando. (Explain alternative procedures here of in a separate report.)	• · · · ·
The upland sample point is located on a slope in a mesic hardwood forest.	Sugar maple and lady
fern are dominant.	

#### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 Sc	bils (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)
Field Observations:	
Surface Water Present? Yes No <u>&lt;</u> Depth (inches):	
Water Table Present? Yes <u>No</u> Depth (inches):	
Saturation Present? Yes <u>Ves</u> No <u>V</u> Depth (inches): <u>Unchanged</u>	Wetland Hydrology Present? Yes No _
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks: The sample point is located on a moderately well drained s	ide slope
The sample point is located on a moderately well drained s	ide slope.

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. <u>Acer saccharum</u>			FACU	Number of Dominant Species That Are OBL, FACW, or FAC:3(A)
2. <u>Tilia americana</u>				
3				Total Number of Dominant Species Across All Strata: 6 (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC:50 (A/B)
5				· · · · · · · · · · · · · · · · · · ·
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
a 11 / 10 / 10 / 10 / 10 / 10 / 10 / 10	0	= Total Cov	/er	OBL species         0         x 1 =         0           FACW species         0         x 2 =         0
Sapling/Shrub Stratum (Plot size: <u>15</u> )	4 5	V		FAC species $x_2 = FAC species x_3 = 105$
1. <u>Acer saccharum</u>				FACU species $105 \times 4 = 420$
2. <u>Lonicera canadensis</u>			FACU	UPL species $0 \times 5 = 0$
3				Column Totals: <u>140</u> (A) <u>525</u> (B)
4				
5				Prevalence Index = B/A = <u>3.75</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	20	= Total Cov	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u> )				<ul> <li>3 - Prevalence Index is ≤3.0<sup>1</sup></li> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting</li> </ul>
1. <u>Athyrium angustum</u>	15	Y	FAC	data in Remarks or on a separate sheet)
2. <u>Acer saccharum</u>	10	N	<u>FACU</u>	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Trientalis borealis</u>	10	Y	FAC	1
4. <u>Dryopteris intermedia</u>			FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Tsuga canadensis</u>			FACU	Definitions of Vegetation Strata:
6. Rubus occidentalis	_	Ν		
7. <u>Maianthemum racemosum</u>			FACU	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8. <u>Prunus virginiana</u>			FACU	
9				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
12.	65	= Total Cov		height.
Woody Vine Stratum (Plot size: 30 )				
,				
1				
2				
3				Hydrophytic Vegetation
4				Present? Yes No <u>v</u>
		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate The vegetation is consistent with that o		ic hardw	ood for	rest.

Profile Desc	cription: (D	escribe	to the dept	th needed to docur	nent the	indicator o	or confirm	the absence of	indicators	.)	
Depth		Matrix			x Feature						
(inches)	Color (r	<u>noist)</u>	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-5	<u>7.5YR</u>	3/2	100		0	<u> </u>		SIL			
5-20	5YR	3/4	100		0			SIL			
		0/ 1	100			· ·					
			·		·	· ·					
			·								
			·		·	· ·	<u> </u>				<u> </u>
			·		·	· ·					
			·		·	· ·					<u> </u>
			·			·					
			·								
			letion, RM=	Reduced Matrix, MS	S=Maske	d Sand Gra	ins.	<sup>2</sup> Location: F		0,	
Hydric Soil								Indicators for		-	
Histosol				Polyvalue Belov		e (S8) ( <b>LRR</b>	R,			RR K, L, ML	
	pipedon (A2	2)		MLRA 149B)						(A16) ( <b>LRR</b>	
	stic (A3)			Thin Dark Surfa							.RR K, L, R)
	en Sulfide (A			Loamy Mucky N			L)		ace (S7) (L		
	d Layers (A d Below Dai		o (A11)	Loamy Gleyed		2)				face (S8) ( <b>L</b> 59) ( <b>LRR K,</b>	
	ark Surface		e (ATT)	Depleted Matrix Redox Dark Su		\					L) LRR K, L, R)
	lucky Miner			Depleted Dark St					-		(MLRA 149B)
-	Bleyed Matri			Redox Depress		')					(MERCA 149B) A, 145, 149B)
	Redox (S5)	x (0+)							nt Material		4, 140, 1400)
-	Matrix (S6)	)								urface (TF1)	2)
	rface (S7) (		ILRA 149B	5)					plain in Rer		_,
	. , .	,		,				、		,	
<sup>3</sup> Indicators o	f hydrophyti	c vegetat	tion and we	tland hydrology mus	t be pres	ent, unless	disturbed	or problematic.			
Restrictive	Layer (if ob	served):									
Туре:											
Depth (in	ches):							Hydric Soil Pre	esent? Y	/es	No 🖌
Remarks:											
	ators of	hydric	soil we	re observed.							
		nyano									



wirc1017\_u\_S



wirc1017\_u\_W

Project/Site: Line 5 Relocation Project	City/County: Iron	Sam	pling Date: <u>2020-05-20</u>
Applicant/Owner: Enbridge		State: Wisconsin Sa	ampling Point: <u>wirc1006f_w</u>
Investigator(s): <u>EJO/JSW</u>	Section, Township, Range:	<u>sec 22 T046N R0</u>	01W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, n	one): <u>Concave</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.4	55410 Long: <u>-9</u>	0.476685	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony	-Cathro complex, 0 to 18 percent s	lopes NWI classification:	PEM1C
Are climatic / hydrologic conditions on the site typical for this tin	ne of year? Yes 🖌 🖌 No	(If no, explain in Remarl	<s.)< td=""></s.)<>
Are Vegetation, Soil, or Hydrology sign	ificantly disturbed? Are "Norm	al Circumstances" preser	it? Yes No
Are Vegetation, Soil, or Hydrology natu	rally problematic? (If needed	, explain any answers in F	Remarks.)
SUMMARY OF FINDINGS – Attach site map sh	owing sampling point locat	ions, transects, imp	oortant features, etc.
Hydrophytic Vegetation Present?       Yes        No         Hydric Soil Present?       Yes        No         Wetland Hydrology Present?       Yes        No	within a Wetland?	N Yes _ ✔ M	
Remarks: (Explain alternative procedures here or in a separa Feature is a seasonally inundated black a Slash is present in wetland from previous by mesic hardwoods. Upland sample poir	ash swamp dominated by logging operations. Wet	land is in depress	0
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (	minimum of two required)

Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Aquatic Fauna (B13)</li> <li>Saturation (A3)</li> <li>Marl Deposits (B15)</li> <li>Water Marks (B1)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Presence of Reduced Iron (C4)</li> <li>Algal Mat or Crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Inundation Visible on Aerial Imagery (B7)</li> <li>Sparsely Vegetated Concave Surface (B8)</li> </ul>	Stunted or Stressed Plants (D1)
Field Observations:	
Surface Water Present? Yes <u></u> No Depth (inches): 0.25	
Water Table Present? Yes <u>v</u> No Depth (inches): 0	
Saturation Present? Yes <u>v</u> No Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <u> V</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions) if available:
Remarks: Feature is seasonally inundated with primarily surface wate	

Sampling Point: wirc1006f\_w

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. <u>Fraxinus nigra</u>				Number of Dominant Species That Are OBL, FACW, or FAC:4 (A)
2. <u>Acer rubrum</u>				
3				Total Number of Dominant Species Across All Strata:4(B)
4				
				Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	30	= Total Cov	/er	OBL species         17         x1 =         17
Sapling/Shrub Stratum (Plot size: 15 )	_			FACW species <u>30</u> $x = 60$ FAC species <u>5</u> $x = 15$
1. <u>Ribes glandulosum</u>	5	<u>     Y     </u>	<u>FACW</u>	FAC species $\underline{0}$ x 3 - $\underline{15}$
2			<u> </u>	UPL species $0 \times 5 = 0$
3				Column Totals: <u>52</u> (A) <u>92</u> (B)
4				
5				Prevalence Index = B/A = <u>1.77</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	_	= Total Cov		_ 2 - Dominance Test is >50%
Herb Stratum (Plot size:5 )				$\checkmark$ 3 - Prevalence Index is $\leq 3.0^1$
1. <u>Carex crinita</u>	10	Y	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. <u>Carex tuckermanii</u>				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Caltha palustris</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6			<u> </u>	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	17	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3			. <u> </u>	Hydrophytic
4				Vegetation
·	_	= Total Cov		Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate s			/ei	
Feature is a black ash swamp with prim	narily fri	nged se	dge in t	he ground layer at time of survey.
	•	0	U	0 1 1

SOIL
------

Profile Des	cription: (Desci	ribe to the dep	th needed	to docur	nent the i	indicator	or confirm	the absence	e of indicato	rs.)	
Depth	Matr				x Feature						
(inches)	Color (moist		Color (	moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
	<u>10YR 2/</u>				0			MMI	<u>silt</u>		<u> </u>
6-10	<u>10YR 3/</u>	<u>2 98</u>	5YR	3/4	2	<u>C_</u>	_PL_	SICL	Disting	ct redox	
10-20	<u>10YR 3/</u>	1 50			0			CL			
10-20	<u>10YR 4/</u>	<u>′3    50  </u>			0	. <u> </u>		CL			
					·	·					
					·	·					
						·					
											<u> </u>
	oncentration, D=	Depletion, RM	Reduced	Matrix, MS	S=Masked	d Sand Gra	ains.			Lining, M=Mat	
Hydric Soil			<b>.</b>		o (					natic Hydric	
Histosol Histic F	(A1) pipedon (A2)		-	alue Belov RA 149B)		(S8) ( <b>LRF</b>	κR,			LRR K, L, ML ox (A16) (LRR	
	istic (A3)			,		_RR R, MI	LRA 149B)			or Peat (S3) ( <b>L</b>	
Hydroge	en Sulfide (A4)		🖌 Loam	y Mucky N	/lineral (F	1) ( <b>LRR K</b>		Dark \$	Surface (S7)	(LRR K, L)	
	d Layers (A5)	5 (A 4 4)		y Gleyed I		2)				Surface (S8) (L	
·	d Below Dark Su ark Surface (A12	• •		ted Matrix Cark Su				Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R)			
	Aucky Mineral (S	,		ted Dark Su	• • •				-		(MLRA 149B)
	Gleyed Matrix (S4			x Depress		.,					A, 145, 149B)
-	Redox (S5)				. ,				Parent Materi		
	d Matrix (S6)									Surface (TF1	2)
Dark Su	Irface (S7) (LRR	R, MLRA 1498	3)					Other	(Explain in F	Remarks)	
<sup>3</sup> Indicators c	f hydrophytic ve	getation and we	etland hydro	ology mus	t be prese	ent, unless	s disturbed	or problemati	c.		
Restrictive	Layer (if observ	ved):									
Туре:										<b>X</b>	
Depth (in	ches):							Hydric Soi	Present?	Yes 🖌	NO
Remarks: Soils silt	y mucky mi	ineral over	silty cl	av loar	n and	mixed	clay loa	m			
	y maony mi		Sitty Of	ay loai	in and	mixeu					



wirc1006f\_w\_N



wirc1006f\_w\_SW

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	EJO/JSW ´´			
File #:	Date of visit(s):			
wirc1006	2020-05-20			
Location:	Ecological Landsca	ape:		
PLSS: sec 22 T046N R001W	Superior Mineral Range	S		
		-		
Lat: <u>46.455335</u> Long: <u>-90.476617</u>	Watershed: LS11, Potato River			
Company to a contract of the second sec	,			
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 18 percent	Wetland Type(s):			
slopes	PFO - hardwood swamp			
Field Verified:				
Series not verified. Soils were observed to be	Wetland Size:	Wetland Area Impacted		
loamy mucky mineral over clay loam.	0.0134	0.0134		
	Vegetation:	1		
	Plant Community	Description(s):		
Hydrology:	The feature is a	black ash swamp with		
The feature is seasonally inundated, with	primarily fringed sedge and Tuckerman's sedge dominant in the herbaceous layer at			
primarily surface water and atmospheric inputs.				
	the time of survey.			
		<del>.</del>		

SITE MAP

#### **SECTION 1: Functional Value Assessment**

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

HU-6, WH-7: The wetland contains multiple strata and is part of larger forested habitat with the potential to support sensitive species. WH-6: The wetland has variable microtopgraphy, supporting both hydrophytic and upland-associated plant. 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, chestnut-sided warbler, least flycatcher hear in or near 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

#### **SECTION 2: Floristic Integrity**

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

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Abies balsamea			PFO	Barren
Acer rubrum			PFO	Rare
Caltha palustris			PFO	Barren
Carex crinita			PFO	Rare
Carex tuckermanii*			PFO	Rare
Dryopteris intermedia			PFO	Barren
Epilobium cf. coloratum			PFO	Barren
Fraxinus nigra*			PFO	Rare
Lemna sp.			PFO	Barren
Osmundastrum cinnamomeum			PFO	Barren
Ribes glandulosum			PFO	Barren
Rubus idaeus			PFO	Barren
Tsuga canadensis			PFO	Barren

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

Floristic quality is high, with a good assemblage of native species, multiple strata, and no exotic species observed.

#### 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
V	x		м	с	Removal of herbaceous stratum – mowing,
Х					grading, earthworms, etc.
Х	x		м	С	Removal of tree or shrub strata – logging,
^	^		171		unprescribed fire
	Х		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)

The wetland is located within a forested area that has been previously harvest, and is adjacent to a forest trail. Earthworms are present in surrounding uplands, with the potential to impact wetland vegetation.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION			SIGNIFICANC	E	
	Low	Medium	High	Exceptional	NA
Floristic Integrity			$\checkmark$		
Human Use Values		$\checkmark$			
Wildlife Habitat			$\checkmark$		
Fish and Aquatic Life Habitat		$\checkmark$			
Shoreline Protection					$\checkmark$
Flood and Stormwater Storage		$\checkmark$			
Water Quality Protection			$\checkmark$		
Groundwater Processes			$\checkmark$		

FUNCTION	RATIONALE						
Floristic Integrity	The wetland has a good assemblage of native species, multiple strata present, and no exotic species observed.						
Human Use Values	The wetland is a part of larger forested habitat which hosts a variety of wildlife valuable to recreation.						
Wildlife Habitat	The wetland has multiple strata present and is a part of larger intact forested community.						
Fish and Aquatic Life Habitat	Standing water was observed in wetland at time of survey, which has the potential to host 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 is an isolated depression with 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		

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling	Date: <u>2020-05-22</u>
Applicant/Owner: Enbridge		State: Wisconsin Samplin	ıg Point: <u>wira008e_xw1</u>
Investigator(s): <u>EJO/JSW</u>	Section, Township, Range: <u>S</u>	ec 21 T046N R001V	V
Landform (hillslope, terrace, etc.): Depression			
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.445	158 Long: <u>-9(</u>	0.487775	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Ca	athro complex, 0 to 6 percent slo	opes NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes∕ No	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significa	antly disturbed? Are "Norma	al Circumstances" present? Y	es No
Are Vegetation, Soil, or Hydrology naturally	y problematic? (If needed,	explain any answers in Remar	rks.)
SUMMARY OF FINDINGS – Attach site map show	ing sampling point location	ons, transects, importa	ant features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area		

Hydrophytic Vegetation Present?	Yes _ ✓ No	is the Sampled Area
Hydric Soil Present?	Yes No	within a Wetland? Yes <u>√</u> No
Wetland Hydrology Present?	Yes _ ✓ No	If yes, optional Wetland Site ID:
5	urated wet meadow	dominated by fringed sedge and woolgrass. Feature vy equipment use on trail may be influencing wetland

### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
✓ Surface Water (A1) ✓ Water-Stained 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 So	pils (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)
Field Observations:	
Surface Water Present? Yes <u>✓</u> No Depth (inches): <u>2</u>	
Water Table Present? Yes _ ✓ No Depth (inches): 0	
Saturation Present? Yes <u>√</u> No Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes∕ No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Demositor	
Remarks: Feature appears to be seasonally saturated as a whole, bu	t sample point appears seasonally
flooded. Hydrology likely influenced by forest trail that inter-	
nooded. Hydrology likely innuenced by forest trail that inter-	

Sampling Point: wira008e\_xw1

Tree Stratum (Plot size: 30 )	Absolute		nt Indicator ? Status	Dominance Test worksheet:
				Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across All Strata: 2 (B)
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	over	OBL species <u>15</u> x 1 = <u>15</u>
Sapling/Shrub Stratum (Plot size:15)				FACW species4 x 2 =8
1				FAC species x 3 =6
2				FACU species x 4 =0
				UPL species x 5 =
3				Column Totals: <u>21</u> (A) <u>29</u> (B)
4				Prevalence Index = B/A = 1.380952380952381
5				
6				Hydrophytic Vegetation Indicators:
7				_ 1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co	over	2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u> )				$\checkmark$ 3 - Prevalence Index is <3.0 <sup>1</sup>
1. <u>Carex crinita</u>	7	Y	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. <u>Scirpus cyperinus</u>			OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Iris versicolor</u>				
4. <u>Ribes glandulosum</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
5. <u>Rubus idaeus</u>				Definitions of Vegetation Strata:
6. <u>Impatiens capensis</u>	1	N	<u>FACW</u>	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.		_		Woody vines – All woody vines greater than 3.28 ft in
		= Total Co		height.
Woody Vine Stratum (Plot size: <u>30</u> )			5761	
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes ✓ No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate				
Feature is a wet meadow dominated by	/ tringed	a seage	e and wo	olgrass. Sample plot appears
representative of wetland.				

SOIL
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Profile Des	cription: (Describe f	to the dep	th needed				or confirm	the absence	of indicators.)
Depth (inches)	<u>Matrix</u> Color (moist)	%	Color (I		<u>x Features</u> %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
<u>0-3</u>	10YR 2/1	100		1000()	0	турс			
	<u>10YR 4/2</u>	100						<u>SIL</u>	
	<u>5YR 3/3</u>	_85_	<u>5YR</u>	4/6	15	<u> </u>	_M_	VFSL	
					·				
<sup>1</sup> Type: C=C	concentration, D=Depl	etion, RM=	Reduced	Matrix, M	S=Masked	Sand Gra	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil									for Problematic Hydric Soils <sup>3</sup> :
<u> </u>	( )		-		w Surface	(S8) ( <b>LR</b>	RR,		1uck (A10) ( <b>LRR K, L, MLRA 149B</b> )
	pipedon (A2) listic (A3)			RA 149B) Dark Surfa		RR R. MI	LRA 149B)		Prairie Redox (A16) ( <b>LRR K, L, R</b> ) lucky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	en Sulfide (A4)				/lineral (F1				urface (S7) ( <b>LRR K, L</b> )
	d Layers (A5)	<i></i>			Matrix (F2)	)		-	lue Below Surface (S8) (LRR K, L)
-	d Below Dark Surface ark Surface (A12)	e (A11)		ted Matrix	(F3) rface (F6)				ark Surface (S9) (LRR K, L) anganese Masses (F12) (LRR K, L, R)
	Mucky Mineral (S1)				Surface (F	7)			ont Floodplain Soils (F19) (MLRA 149B)
	Gleyed Matrix (S4)				ions (F8)				Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Redox (S5)								arent Material (F21)
	d Matrix (S6) urface (S7) ( <b>LRR R, M</b>		8)						hallow Dark Surface (TF12) Explain in Remarks)
			•)						
	of hydrophytic vegetat	ion and we	etland hydro	ology mus	st be prese	nt, unless	s disturbed	or problematic	. <u> </u>
	Layer (if observed):								
Туре: <u>G</u>								Hydric Soil	Present? Yes <u>√</u> No
	nches): <u>17.0</u>		<u> </u>					Hyunc Soli	
Remarks:	served to be lo	am ove	er siltv l	oam o	ver ver	v fine ·	sandv l	oam over	aravel
			oncy i	ouni o		y mile .	oundyi		graver.



wira008e\_xw1\_N



wira008e\_xw1\_S

Project/Site: Line 5 Relocation Project	City/County: Iror	Sampling Date: 20	)20-05-22
Applicant/Owner: Enbridge			
Investigator(s): <u>EJO/JSW</u>			
Landform (hillslope, terrace, etc.): Depression			%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 4			
Soil Map Unit Name: <u>Lupton-Pleine-Cathro co</u>			
-	•	-	
Are climatic / hydrologic conditions on the site typical for the			
Are Vegetation, Soil, or Hydrology		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	o showing sampling poi	nt locations, transects, important feat	ures, etc.
Hydrophytic Vegetation Present? Yes	No Is the Sam	bled Area	
Hydric Soil Present? Yes _✓		etland? Yes <u>√</u> No	
Wetland Hydrology Present? Yes		nal Wetland Site ID:	
Remarks: (Explain alternative procedures here or in a s	eparate report.)		
Feature is a saturated wet meadow do	, ,	<b>o</b> ,	
intermittent stream and is surrounded	by mesic hardwoods	and alder thicket.	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two	required)
Primary Indicators (minimum of one is required; check al	II that apply)	Surface Soil Cracks (B6)	
Surface Water (A1) Wa	ater-Stained Leaves (B9)	Drainage Patterns (B10)	
	uatic Fauna (B13)	Moss Trim Lines (B16)	
Saturation (A3) Ma	arl Deposits (B15)	Dry-Season Water Table (C2)	
Water Marks (B1) Hy	/drogen Sulfide Odor (C1)	Crayfish Burrows (C8)	
Sediment Deposits (B2) O>	kidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Image	ery (C9)
Drift Deposits (B3) Pr	esence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)	
Algal Mat or Crust (B4) Re	ecent Iron Reduction in Tilled Sc	ils (C6) _∠ Geomorphic Position (D2)	
Iron Deposits (B5) Th	in Muck Surface (C7)	Shallow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7) Ot	her (Explain in Remarks)	Microtopographic Relief (D4)	
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present? Yes No D	epth (inches):		
Water Table Present? Yes _ ✓ No D	epth (inches): <u>8</u>		
Saturation Present? Yes <u>√</u> No <u>D</u>	epth (inches): <u>6</u>	Wetland Hydrology Present? Yes N	lo
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well	. aerial photos, previous inspec	ions). if available:	
	,	,,	
Remarks: Feature is seasonally saturated.			
realure is seasonally saturated.			

Sampling Point: wira008e\_xw2

Tree Stratum       (Plot size:	1.	Tree Stratum (Plot size: 30 )	Absolute		t Indicator	Dominance Test worksheet:
2	2	,				
3.	3.					That Are OBL, FACW, or FAC: (A)
4	4.					
5	5.	3			·	Species Across All Strata: (B)
6	a.	4				Percent of Dominant Species
7.	7.	5				That Are OBL, FACW, or FAC: $100$ (A/B)
7.	7.	6				Prevalence Index worksheet
	0         = Total Cover         OBL species         22         x 1 =         22           1. Acer rubrum         5         Y         FAC         FACU species         12         x 2 =         24           2.	7				
Saping/Shrub Stratum (Plot size:15)       1.       Acer rubrum5 Y_EAC       FAC species8 x 3 =24         2.      600000000000000000000000000000	Sapting/Strub Stratum (Plot size: 15)       1       Acer rubrum       5       Y       FAC       FAC       Secies       8       x 3 =       24         2.					
1. Acer rubrum       5       Y       FAC       FAC species       8       x3 =       24         2	1. Acer rubrum       5       Y       FAC       FAC species       8       x 3 =       24         2.	Sapling/Shrub Stratum (Plot size: 15 )				
PACUS Problematic       FACU species       1       x4 =	PACUATION       S       Image: Constraint of the second se		5	V	FAC	
3	3.					
4.	4.					UPL species x 5 =
5.       Prevalence Index = B/A = 1/20030232581385         6.	5.       Prevalence Index = B/A = 1.7209302323581385         6.					Column Totals: <u>43</u> (A) <u>74</u> (B)
3.	3.	4			·	
7.	7.	5			·	Prevalence index = $B/A = \frac{1.7209302325581395}{1.7209302325581395}$
		6			·	Hydrophytic Vegetation Indicators:
		7				
Herb Stratum (Plot size:	Herb Stratum (Plot size:					
1. Carex crinita       20       Y       OBL	1. Carex crinita       20       Y       OBL       -4 - Morphological Adaptations (Provide support data in Remarks: (Include photo numbers here or on a separate sheet.)         2. Ribes glandulosum       5       N       FACW         3. Onoclea sensibilis       5       N       FACW         4. Rubus idaeus       2       N       FACW         5. Ranunculus recurvatus       2       N       FACW         6. Micranthes pensylvanica       2       N       OBL         7. Matteuccia struthiopteris       1       N       FACU         9.	Herb Stratum (Plot size: 5)				
2. Ribes glandulosum       5       N       FACW	2. Ribes glandulosum       5       N       FACW       Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)         3. Onoclea sensibilis       5       N       FACW       Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.         4. Rubus idaeus       2       N       FACW       FACW         5. Ranunculus recurvatus       2       N       FACW         6. Micranthes pensylvanica       2       N       OBL         7. Matteuccia struthiopteris       1       N       FACU         8. Anemone quinquefolia       1       N       FACU         9.		20	Y	OBI	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
a. Onoclea sensibilis	a. Dooclea sensibilis       5       N       FACW         3. Onoclea sensibilis       5       N       FACW         4. Rubus idaeus       2       N       FAC         5. Ranunculus recurvatus       2       N       FACW         6. Micranthes pensylvanica       2       N       OBL         7. Matteuccia struthiopteris       1       N       FACU         8. Anemone quinquefolia       1       N       FACU         9.					
4. Rubus idaeus       2       N       FAC       Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.         5. Ranunculus recurvatus       2       N       FACW       Definitions of Vegetation Strata:         6. Micranthes pensylvanica       2       N       OBL       Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.         8. Anemone quinquefolia       1       N       FACU         9.	4.       Rubus idaeus       2       N       FAC       Indicators of hydric soli and wetland hydrology must be present, unless disturbed or problematic.         5.       Ranunculus recurvatus       2       N       FACW       Definitions of Vegetation Strata:         6.       Micranthes pensylvanica       2       N       OBL       Tree – Woody plants 3 in. (7.6 cm) or more in diamet at breast height (DBH), regardless of height.         8.       Anemone quinquefolia       1       N       FACU         9.					
5. Ranunculus recurvatus       2       N       FACW         6. Micranthes pensylvanica       2       N       OBL         7. Matteuccia struthiopteris       1       N       FACU         8. Anemone quinquefolia       1       N       FACU         9.       1       N       FACU         9.       -       -       -         10.       -       -       -         11.       -       -       -         12.       -       -       -         13.       -       -       -         14.       -       -       -         15.       -       -       -         16.       -       -       -         17.       -       -       -         18.       -       -       -         19.       -       -       -         10.       -       -       -       -         11.       -       -       -       -         10.       -       -       -       -         10.       -       -       -       -         19.       -       -       -	5. Ranunculus recurvatus       2       N       FACW         6. Micranthes pensylvanica       2       N       OBL         7. Matteuccia struthiopteris       1       N       FACU         8. Anemone quinquefolia       1       N       FACU         9.       1       N       FACU         9.					
6. Micranthes pensylvanica       2       N       OBL         7. Matteuccia struthiopteris       1       N       FAC         8. Anemone quinquefolia       1       N       FACU         9.       1       N       FACU         9.	6. Micranthes pensylvanica       2       N       OBL         7. Matteuccia struthiopteris       1       N       FAC         8. Anemone quinquefolia       1       N       FAC         9.       1       N       FAC         10.       1       N       FACU         11.       10.       1       N         12.            13.            14.            15.            16.            17.       Matteuccia struthiopteris       1       N         16.        1       N       FACU         9.             10.             11.              12.              17.              18. <td< td=""><td></td><td></td><td></td><td></td><td>be present, unless disturbed or problematic.</td></td<>					be present, unless disturbed or problematic.
7. Matteuccia struthiopteris       1       N       FAC         8. Anemone quinquefolia       1       N       FACU         9.       1       N       FACU         9.	7. Matteuccia struthiopteris       1       N       FAC         8. Anemone quinquefolia       1       N       FACU         9.       1       N       FACU         9.					Definitions of Vegetation Strata:
7. Matteuccia struthiopteris       1       N       FAC         8. Anemone quinquefolia       1       N       FACU         9.	7. Matteuccia struthiopteris       1       N       FAC       at breast height (DBH), regardless of height.         8. Anemone quinquefolia       1       N       FACU       Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.         9.					<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
9.	9.	7. <u>Matteuccia struthiopteris</u>	1	N	<u>FAC</u>	
9	9.	8. <u>Anemone quinquefolia</u>	1	N	<u>FACU</u>	Sapling/shrub – Woody plants less than 3 in. DBH
11.	11.	9				
11.	11.	10				Herb – All herbaceous (non-woody) plants, regardless
12.	12.	11.				
$38$ = Total Cover       height.         Woody Vine Stratum (Plot size: 30)          1.          2.          3.          4.          0       = Total Cover         Hydrophytic Vegetation Present? Yes $\checkmark$ No         Remarks: (Include photo numbers here or on a separate sheet.)	$     \begin{array}{c}         38 = Total Cover \\         \underline{38} = Total Cover \\         \underline{38} = Total Cover \\         \underline{38} = Total Cover \\         \underline{30} \\         \underline{30}$					Woody vines – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:30)         1	Woody Vine Stratum (Plot size: 30)         1.         2.         3.         4.         0         = Total Cover    Hydrophytic Vegetation Present? Yes ✓ No Remarks: (Include photo numbers here or on a separate sheet.)			= Total Co		height.
1.	1	Weedy Vine Stratum (Plat size: 30)	_00_	- 10(a) 00	VCI	
2.	2.					
3.	3.					
4	4					
4.	4.	3				
Remarks: (Include photo numbers here or on a separate sheet.)	Remarks: (Include photo numbers here or on a separate sheet.)	4				
			0	= Total Co	ver	
Feature is a wet meadow dominated by fringed sedge.	Feature is a wet meadow dominated by fringed sedge.					•
		Feature is a wet meadow dominated by	/ tringed	i seage	•	

SOIL
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Profile Des	cription: (Describe t	o the dept	h needed to docun	nent the	indicator	or confirm	the absence	of indicators.)	
Depth	Matrix	·		x Feature	S1		_	_	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Rema	
0-8	<u>7.5YR 2.5/2</u>	100					_MMI_	silty with so	<u>me sand</u>
8-20	7.5YR 2.5/2	100		0			COSL		
	<u></u>	<u> </u>							
				·					
		·		·					<u> </u>
					·				
		·		·					
					·				
<u> </u>				·	·				
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Maske	d Sand Gra	ains.		n: PL=Pore Lining, M=	
Hydric Soil								for Problematic Hyd	
Histoso			Polyvalue Below		e (S8) ( <b>LR</b> F	RR,		Muck (A10) (LRR K, L	
	pipedon (A2) istic (A3)		MLRA 149B) Thin Dark Surfa			PA 1498		Prairie Redox (A16) ( Mucky Peat or Peat (S	
	en Sulfide (A4)		Loamy Mucky M					Surface (S7) (LRR K, I	
	d Layers (A5)		Loamy Gleyed I			, _,		alue Below Surface (S	
	d Below Dark Surface	e (A11)	Depleted Matrix		,			Dark Surface (S9) (LR	
Thick D	ark Surface (A12)		Redox Dark Sur	rface (F6)	)		Iron-N	langanese Masses (F	12) ( <b>LRR K, L, R</b> )
	Mucky Mineral (S1)		Depleted Dark S	Surface (I	=7)		Piedm	ont Floodplain Soils (I	F19) ( <b>MLRA 149B</b> )
	Gleyed Matrix (S4)		Redox Depress	ions (F8)				Spodic (TA6) (MLRA	144A, 145, 149B)
-	Redox (S5)							Parent Material (F21)	
	d Matrix (S6)		<b>`</b>				-	Shallow Dark Surface	(TF12)
	Irface (S7) (LRR R, M	LRA 149B	)				Other	(Explain in Remarks)	
<sup>3</sup> Indicators o	of hydrophytic vegetati	on and we	tland hydrology mus	t be pres	ent, unless	disturbed	or problemati	C.	
	Layer (if observed):		, , ,		,				
Type:									
Depth (in	ches):						Hydric Soi	I Present? Yes	✓No
Remarks:							-		
	served to be lo	amv mi	ucky mineral (	over c	oarse s	andv Ic	oam.		
		j							



wira008e\_xw2\_NW



wira008e\_xw2\_SE

Project/Site: Line 5 Relocation Project	City/County: Iron Sampling Date: 2020-05-22
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wira008f_xw1</u>
Investigator(s): <u>EJO/JSW</u>	Section, Township, Range: <u>sec 21 T046N R001W</u>
	cal relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.44526	4 Long: <u>-90.488001</u> Datum: <u>WGS84</u>
	ro complex, 0 to 6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes _ ✔ _ No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes _ ✓ No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes ✓ No         Hydric Soil Present?       Yes ✓ No         Wetland Hydrology Present?       Yes ✓ No	within a Wetland? Yes <u>√</u> No
Remarks: (Explain alternative procedures here or in a separate report Feature is a seasonally saturated hardwood sy been selectively harvested and has slash pres	wamp dominated by red and sugar maple. Feature has

### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
✓ Surface Water (A1) ✓ Water-Stained 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 F	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 So	ils (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)
Field Observations:	
Surface Water Present?       Yes _ ✓ _ No Depth (inches):	
Water Table Present? Yes <u>✓</u> No Depth (inches): <u>0</u>	
Saturation Present? Yes <u>✓</u> No Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _ ✓ No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	tions), if available:
Remarks:	
Feature is seasonally saturated and appears to have recha	rge hydrology.

Sampling Point: wira008f\_xw1

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1. <u>Acer rubrum</u>				That Are OBL, FACW, or FAC: (A)
2. Acer saccharum				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>60</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
	30	= Total Cov	ver	OBL species <u>3</u> x 1 = <u>3</u>
Sapling/Shrub Stratum (Plot size: 15 )				FACW species <u>26</u> x 2 = <u>52</u>
1. <u>Corylus cornuta</u>	4	Y	FACU	FAC species26 x 3 =78
2. Acer rubrum				FACU species <u>19</u> x 4 = <u>76</u>
3				UPL species $0 \times 5 = 0$
4				Column Totals: <u>74</u> (A) <u>209</u> (B)
5				Prevalence Index = B/A =2.82
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
<b>F</b> ,		= Total Cov	ver	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: 5_)	20	Ň		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Carex cf. intumescens</u>		<u> </u>	FACW	data in Remarks or on a separate sheet)
2. <u>Ribes glandulosum</u>			<u>FACW</u>	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Rubus idaeus</u>		<u>     N                               </u>	<u>FAC</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Carex cf. leptonervia</u>	3	. <u> </u>	_FAC_	be present, unless disturbed or problematic.
5. <u>Scutellaria lateriflora</u>	3	<u>     N     </u>	OBL	Definitions of Vegetation Strata:
6. <u>Carex cf. radiata</u>	2	<u>     N                               </u>	FAC	
7. <u>Onoclea sensibilis</u>	1	N	FACW	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
12	- <u> </u>	= Total Cov	·	height.
Marcharline Charters (Plotoire) 30		= 10tai 00	Vei	
Woody Vine Stratum (Plot size: <u>30</u> )				
1			·	
2				
3				Hydrophytic
4				Vegetation Present? Yes <u>√</u> No
		= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate		- d and c		and in the canony and greater bladder.
sedge in the ground layer. Sample plot	•		•	aple in the canopy and greater bladder
Seuge in the ground layer. Cample plot	appear	STepies	Selliauve	

Profile Desc	cription: (D	escribe t	o the dep	oth needed	to docun	nent the i	ndicator	or confirm	the absence	e of indicators.)
Depth		Matrix				x Features	4		_	
(inches)	Color (r		%	Color (r	noist)		Type'	Loc <sup>2</sup>	Texture	Remarks
	<u>7.5YR</u>	2.5/1	100			_0_		·	MMI	loam
	<u>7.5YR</u>	4/2	_90_	<u>7.5YR</u>	4/4	_10_	_C_	<u> </u>	SCL	
_4-20_	5YR	4/3	_85_	5YR	4/6	_15_	_C_	_M	SCL	
								·		
								·		
								·		
1								·	2	
<sup>1</sup> Type: C=C Hydric Soil		n, D=Deple	etion, RM	=Reduced N	Matrix, MS	S=Masked	Sand Gra	ains.		n: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils <sup>3</sup> :
Histosol				Polvva	alue Belov	v Surface	(S8) ( <b>LRF</b>	R.		Muck (A10) ( <b>LRR K, L, MLRA 149B</b> )
	pipedon (A2	)		-	RA 149B)		(00) (11	,		Prairie Redox (A16) ( <b>LRR K, L, R</b> )
	istic (A3)							RA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A d Layers (A			-	-		l) ( <b>LRR K</b> ,	, L)		Surface (S7) (LRR K, L)
	d Below Dar		(A11)		ed Matrix	Matrix (F2 (F3)	)			alue Below Surface (S8) (LRR K, L) Dark Surface (S9) (LRR K, L)
	ark Surface		( )			face (F6)				langanese Masses (F12) (LRR K, L, R)
	Aucky Miner			·		Surface (F	7)			nont Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	Gleyed Matri	x (S4)		Redox	Depressi	ions (F8)				Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy Redox (S5) Stripped Matrix (S6)						_ Red Parent Material (F21) _ Very Shallow Dark Surface (TF12)				
	Irface (S7) (I		LRA 149	<b>B</b> )						(Explain in Remarks)
31	f hu alan a hu di	4 - 4:		مقاميه والمربط		4 h a		مانية بريام ما		_
<sup>3</sup> Indicators o <b>Restrictive</b>			on and w	etiano nyoro	logy mus	t be prese	ent, uniess		or problemati	с.
Type:		,-								
	ches):								Hydric Soi	I Present? Yes <u>√</u> No
Remarks:	,									
Soils obs	served to	o be lo	amy m	lucky mi	ineral o	over sa	andy cl	ay loam	with red	lox below 2 inches.





wira008f\_xw1\_SE

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling Date: <u>2020-05-22</u>
Applicant/Owner: Enbridge		_ State: <u>Wisconsin</u> Sampling Point: <u>wira008f_xw2</u>
Investigator(s): <u>EJO/JSW</u>		
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, no	ne): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat	: <u>46.442905</u> Long: <u>-9(</u>	D.490032 Datum: WGS84
Soil Map Unit Name: Lupton-Pleine-Cathro		
Are climatic / hydrologic conditions on the site typical f		
Are Vegetation, Soil, or Hydrology		
Are Vegetation, Soil, or Hydrology		explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site n	hap showing sampling point location	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No Is the Sampled Area	
	No within a Wetland?	Yes No
Wetland Hydrology Present? Yes	No If yes, optional Wetland	d Site ID:
Feature is a saturated hardwood sw maple dominant in the canopy. Spo layer. Wetland community appears from beaver activity.	tted jewelweed and dwarf raspl	perry are dominant in the ground
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; chec	k all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)	Marl Deposits (B15)	Dry-Season Water Table (C2)
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)
<u> </u>	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)

Surface Water Present?	Yes	_ No _✓	Depth (inches):	_		
Water Table Present?	Yes	_ No _✓	Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes	_ No _✓	Depth (inches):	Wetland Hydrology Present?	Yes <u>√</u>	No
Describe Recorded Data (str	eam gauge,	monitoring v	vell, aerial photos, previous ins	pections), if available:		
Beaver activity has	elevated	d water ta	able from historic lev	bserved in wetland but no rels. Some rutting from pr enced hydrology in parts.	evious lo	

Sparsely Vegetated Concave Surface (B8)

Field Observations:

✓ FAC-Neutral Test (D5)

Sampling Point: wira008f\_xw2

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )	% Cover	Species?	Status	Number of Dominant Species
1. <u>Thuja occidentalis</u>			<u>FACW</u>	That Are OBL, FACW, or FAC: (A)
2. <u>Tsuga canadensis</u>	20	Y	FACU	Total Number of Dominant
3. <u>Fraxinus nigra</u>	10	N	<u>FACW</u>	Species Across All Strata: (B)
4. <u>Acer saccharum</u>	5	N	<u>FACU</u>	Percent of Dominant Species
5. <u>Acer rubrum</u>	5	N	FAC	That Are OBL, FACW, or FAC:(A/B)
6. <u>Betula alleghaniensis</u>	5	N	FAC	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	65	= Total Co	ver	OBL species         0         x 1 =         0
Sapling/Shrub Stratum (Plot size:15)				FACW species <u>65</u> x 2 = <u>130</u>
1. <u>Acer saccharum</u>	2	Ν	FACU	FAC species <u>19</u> x 3 = <u>57</u>
2				FACU species <u>34</u> x 4 = <u>136</u>
3				UPL species x 5 =
				Column Totals: <u>118</u> (A) <u>323</u> (B)
4				Prevalence Index = B/A = 2.73728813559322
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				$\sim$ 2 - Dominance Test is >50%
_	2	= Total Co	ver	$\sim$ 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Impatiens capensis			<u>FACW</u>	data in Remarks or on a separate sheet)
2. <u>Rubus pubescens</u>	15	<u> </u>	<u>FACW</u>	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Acer saccharum</u>	7	<u>     N                               </u>	<u>FACU</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Dryopteris intermedia</u>	5	<u>     N                               </u>	FAC	be present, unless disturbed or problematic.
5. <u>Acer rubrum</u>	4	<u>     N                               </u>	FAC	Definitions of Vegetation Strata:
6			·	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9			·	and greater than or equal to 3.28 ft (1 m) tall.
10			·	Herb – All herbaceous (non-woody) plants, regardless
11	·			of size, and woody plants less than 3.28 ft tall.
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	51	= Total Co	ver	
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3				Hydrophytic
4				Vegetation
		= Total Co	ver	Present? Yes <u>√</u> No
Remarks: (Include photo numbers here or on a separate s	sheet.)	hito and	or cost	orn homiook, and black ach dominant

Feature is a hardwood swamp with northern white cedar, eastern hemlock, and black ash dominant in the canopy and spotted jewelweed and dwarf raspberry dominant in the ground layer. Black ash and red maple more abundant along the south edge of the wetland. The plant community is in a transitional state due to a recently elevated water table from beaver activity.

Profile Desc	cription: (Describe f	to the depth	needed to docum	nent the i	indicator o	or confirm	the absence	of indicator	's.)	
Depth	Matrix			<pre>K Feature</pre>	s					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-16	<u>10YR 2/1</u>	100		0			MMI	loam		
16-20	<u>10YR 2/1</u>	100		0			С			
					·					
							,			
										<u>.</u>
	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	=Masked	Sand Gra	iins.			ining, M=Matri	
Hydric Soil									natic Hydric So	
Histosol	. ,	-	Polyvalue Below		(S8) ( <b>LRR</b>	R,		. , .	LRR K, L, MLR	,
	pipedon (A2)		MLRA 149B)						x (A16) ( <b>LRR</b>	
	istic (A3) en Sulfide (A4)	_	Thin Dark Surface Loamy Mucky M					Surface (S7)	r Peat (S3) (LF	$\mathbf{K}\mathbf{K}\mathbf{K},\mathbf{L},\mathbf{K}$
	d Layers (A5)	<u> </u>	Loamy Gleyed N Loamy Gleyed N			L)			urface (S8) (LF	RRK.L)
	d Below Dark Surface	e (A11)	_ Depleted Matrix		,				(S9) (LRR K, L	
	ark Surface (A12)		Redox Dark Sur						asses (F12) ( <b>L</b>	
Sandy N	lucky Mineral (S1)	_	_ Depleted Dark S		7)		Piedm	ont Floodplai	in Soils (F19) (	MLRA 149B)
	Bleyed Matrix (S4)	_	_ Redox Depressi	ons (F8)					) ( <b>MLRA 144A</b>	, <b>145, 149B</b> )
-	Redox (S5)							arent Materia		
	Matrix (S6)								Surface (TF12	)
Dark Su	rface (S7) (LRR R, N	ILRA 149B)					Other	(Explain in R	emarks)	
<sup>3</sup> Indicators o	f hydrophytic vegetat	ion and wetl	and hydrology mus	t be prese	ent. unless	disturbed	or problemation	C.		
	Layer (if observed):				,			••		
Type:	, ,									
	abaa);						Hydric Soil	Present?	Yes∕	No
Remarks:	ches):									
	served to be da	ark loom	w mucky min	oralo	vor clav	,				
					ver clay					



wira008f\_xw2\_NE



wira008f\_xw2\_SW

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	EJO/JSW		
File #:	Date of visit(s):		
wira008_x	2020-05-22		
Location:	Ecological Landsca	pe:	
PLSS: sec 21 T046N R001W	Superior Mineral Ranges		
Lat: <u>46.445117</u> Long: <u>-90.487783</u>	Watershed:		
	LS11, Potato River		
County: Iron Town/City/Village: Gurney town			
SITE DESCRIPTION	1		
Soils:	WWI Class:		
Mapped Type(s):	S3H, T3/5K, T3K		
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent	Wetland Type(s):		
slopes. Lupton-Pleine-Cathro complex, 0 to 1 percent slopes.	PFO/PEM - hardwoo	d swamp/fresh wet meadow complex	
Field Verified:			
Series not verified. In wet meadows, soils were observed to be loam over silty loam over very fine sandy loam, and restricted by gravel, as well as	Wetland Size:	Wetland Area Impacted	
mucky mineral soils over course sandy loam. In the forested components,	1.8620	1.8620	
soils were observed to have a loamy mucky mineral layer over sandy clay	Vegetation:		
loam and clay.	Plant Community D	escription(s):	
Hydrology:		wood swamp. The dominant canopy species include red hite cedar, eastern hemlock, and black ash, and	
The feature is seasonally saturated, and appears to have recharge hydrology. The wetland hydrology in the emergent components has likely been affected by the presence of, and use	selective logging has somewhat	at altered the prevalence of tree/shrub species in the	
of heavy machinery on, forest logging trails. The southern emergent component is adjacent		elweed, dwarf raspberry, and greater bladder sedge are us species. In the wet meadows, fringed sedge and	
to an intermittent stream that is likely connected to Coil Creek, and due to the topographic position of this waterbody the wetland appears to discharge some water into it.	woolgrass are the dominant sp		

# SITE MAP

### **SECTION 1: Functional Value Assessment**

			Functional Value Assessment
HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	N	Y	Used for recreation (hunting, birding, hiking, etc.). List: birding, 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
_			In or adjacent to RED FLAG areas
5	Y	Y	List: Trout streams: Coil 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			Wildlife Habitat
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 $\geq$ 50%(south) 75% (north) intact
5	1	1	Occurs in a Joint Venture priority township
6	N	N	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
0	Y	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
7	N	Y	
0			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	Y	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	N	N	Wetland is connected or contiguous with perennial stream or lake
2	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	N	Y	Vegetation is inundated in spring
SP			Shoreline Protection
1	N	N	Along shoreline of a stream, lake, pond or open water area ( $\geq 1$ acre) - if no, not applicable
2			Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
2	N	N	water levels or high flows – if no, not applicable
3	N	N	Densely rooted emergent or woody vegetation
ST			Storm and Floodwater Storage
1	Y	Y	Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	N	Y	Water flow through wetland is NOT channelized
3	Y	Y	Dense, persistent vegetation
4	N	N	Evidence of flashy hydrology
5	N	Y	Point or non-point source inflow
6	N	Ň	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with ≤10% wetland
8	Y	Y	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	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	Y	Y	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	N	N N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	N N	Stormwater or surface water from agricultural land is major hydrology source
8	1	1	Discharge to surface water
<u> </u>	N	N	Natural land cover in 100m buffer area < 50%
-	N	N	Groundwater Processes
GW			
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	Ν	Ν	Wetland is within a wellhead protection area

HU-5: The feature is associated with an intermittent waterbody that likely connects with Coil Creek outside of the survey area. The wetland complex itself may also continue its association with the waterbody outside of the survey area, based on WWI data and topography. WH-8: The wetland complex is large and part of an intact forest with the potential to support SGCN species. ST-5: The wetland likely receives and holds stormwater from surrounding uplands and forest logging trails. FA-2: Portions of the wetland complex had standing water at the time of survey, with frogs observed and potential to host other aquatic life. WQ-4: The feature is associated with an intermittent stream.

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

Observed	Potential	Species/Habitat/Comments
	Y	Hermit thrush, winter wren, and other songbirds were heard in the vicinity of wetland
	Y	Mammals, herpetofauna
Y	Y	Frogs

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Anemone quinquefolia			PEM	Barren
Carex crinita*			PEM	Patchy
Iris versicolor			PEM	Barren
Matteuccia struthiopteris			PEM	Barren
Micranthes pensylvanica			PEM	Barren
Ranunculus recurvatus			PEM	Barren
Ribes glandulosum			PEM	Rare
Scirpus cyperinus*			PEM	Rare
Acer rubrum*			PFO	Patchy
Acer saccharum*			PFO	Patchy
Betula alleghaniensis			PFO	Rare
Carex cf. intumescens*			PFO	Rare
Carex cf. leptonervia			PFO	Barren
Carex cf. radiata			PFO	Barren
Corylus cornuta			PFO	Barren
Dryopteris intermedia			PFO	Rare
Fraxinus nigra			PFO	Rare
Ribes glandulosum			PFO	Rare
Rubus pubescens			PFO	Rare
Scutellaria lateriflora			PFO	Barren
Thuja occidentalis*			PFO	Rare
Tsuga canadensis*			PFO	Rare
Impatiens capensis*			PFO/PEM	Rare
Onoclea sensibilis			PFO/PEM	Rare
Rubus idaeus			PFO/PEM	Rare

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

As a whole, the wetland complex has high floristic integrity, with a good diversity of native species, well-developed strata, and few exotic species observed. The feature has been impacted by selective logging harvest, but this does not appear to have introduced problematic invasive species and the hardwood swamp plant communities can be expected to persist.

### 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
Х	x		М	С	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		м	<u> </u>	Removal of herbaceous stratum – mowing,
			IVI	С	grading, earthworms, etc.
Х	x		М	С	Removal of tree or shrub strata – logging, unprescribed fire
Х	Х		Н	С	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)

Part of the wetland complex has likely been compacted by previous logging operations, which have influenced wetland hydrology. Portions of the wetland have also had previous tree harvests. The wetland is part of a larger forest that has earthworms, which may potentially impact the wetland's herbaceous species.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION			SIGNIFICANC	E	
	Low	Medium	High	Exceptional	NA
Floristic Integrity			$\checkmark$		
Human Use Values		$\checkmark$			
Wildlife Habitat			$\checkmark$		
Fish and Aquatic Life Habitat		$\checkmark$			
Shoreline Protection					$\checkmark$
Flood and Stormwater Storage			$\checkmark$		
Water Quality Protection			$\checkmark$		
Groundwater Processes		$\checkmark$			

FUNCTION	RATIONALE
Floristic Integrity	The wetland as a whole has a good diversity of natives, well-developed strata, and minimal coverage of exotic species.
Human Use Values	The wetland and surrounding upland forest are a relatively large and intact system which offers numerous recreational activities.
Wildlife Habitat	The wetland and surrounding forest are relatively intact with potential to support a diversity of wildlife. Multiple songbirds and herpetofauna were observed in and around the wetland complex.
Fish and Aquatic Life Habitat	The wetland contained multiple areas with standing water at the time of survey, which can potentially support a diversity of aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland complex is relatively large and likely receives and holds floodwater and stormwater from surrounding streams/uplands/logging trails.
Water Quality Protection	The wetland complex is relatively large and likely plays an important role in protecting water quality. Dense and persistent vegetation is persistent throughout much of wetland.
Groundwater Processes	The wetland complex is relatively large 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

Project/Site: Line 5 Relocation Project	_ City/County: <u>Iron</u>	Sampling I	Date: <u>20</u>	<u>20-05-22</u>
Applicant/Owner: Enbridge		State: Wisconsin Samplin	ng Point: <u>v</u>	vira008_xu1
Investigator(s): <u>JSW/EJO</u>	_ Section, Township, Range: <u>Se</u>	<u>c 21 T046N R001V</u>	V	
Landform (hillslope, terrace, etc.): Talf	Local relief (concave, convex, non	e): <u>None</u>	_ Slope (	%): <u>0-2%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.4451</u>	38 Long: <u>-90</u>	.487983	Datum: 📐	<u>NGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Cat	hro complex, 0 to 6 percent slop	oes NWI classification:		
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes No (	f no, explain in Remarks.)		
Are Vegetation, Soil, or Hydrology significan	tly disturbed? Are "Normal	Circumstances" present? Ye	′es <u>√</u>	No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, ex	xplain any answers in Remar	rks.)	
SUMMARY OF FINDINGS – Attach site map showin	ng sampling point location	ns, transects, importa	ant featu	ıres, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No∕ No∕	Is the Sampled Area within a Wetland? Yes No∕
Wetland Hydrology Present?	Yes	No <u></u>	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced The upland sample point the forest floor with abund	is located i	n a mesic har	dwood forest. A recent selective harvest has left

## HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 F	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 So	ils (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)
Field Observations:	
Surface Water Present?       Yes       No _ ✓       Depth (inches):	
Water Table Present? Yes No _ ✓ Depth (inches):	
Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No∕
(includes capillary fringe)	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	
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(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	

Sampling Point: <u>wira008\_xu1</u>

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. <u>Acer saccharum</u>				Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2. Acer rubrum				
3				Total Number of Dominant Species Across All Strata: 6 (B)
4				( )
5				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)
6				
				Prevalence Index worksheet:
7		= Total Cov		Total % Cover of:         Multiply by:           OBL species         x 1 =
Operline (Oberland, Oberland, Oberland, 15	_40_		/ei	FACW species $0$ $x^{T} = 0$
Sapling/Shrub Stratum (Plot size: 15 )	4 5	V	FAOL	FAC species $30 \times 3 = 90$
1. <u>Acer saccharum</u>				FACU species $95 \times 4 = 380$
2. <u>Ostrya virginiana</u>	5	Y	<u>FACU</u>	UPL species $0 \times 5 = 0$
3				Column Totals: <u>125</u> (A) <u>470</u> (B)
4				
5				Prevalence Index = B/A = <u>3.76</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	20	= Total Cov	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Anemone quinquefolia</u>	25	Y	<u>FACU</u>	data in Remarks or on a separate sheet)
2. <u>Carex leptonervia</u>	10	<u>    N     </u>	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Dryopteris intermedia</u>			_FAC_	
4. <u>Maianthemum canadense</u>			FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Polygonatum pubescens			FACU	
6. <u>Acer saccharum</u>				Definitions of Vegetation Strata:
7. Panax trifolius				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
				at breast height (DBH), regardless of height.
8 9				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12	67			height.
20		= Total Cov	/er	
Woody Vine Stratum (Plot size: 30)				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes No∕
		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate		ia hardu	upped for	reat
The vegetation is consistent with that o	a mesi			ບວເ.

Profile Desc	ription: (D	escribe t	o the dept	th needed to docum	nent the i	indicator	or confirm	the absence of	f indicators.)	
Depth Matrix Redox Features								_	_	
(inches)	Color (r		%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture _	Remarks	
	<u>10YR</u>	2/2	100		0	·		<b>L</b>		
	<u>7.5R</u>	3/2	100		0	·				
	<u>5YR</u>	3/4	100		0					
						·				
						·				
						·				
						·				
		D=Dopl			-Mookor	- <u> </u>		<sup>2</sup> Logation:	PL-Doro Liping M-Matrix	
Hydric Soil		i, D=Depi		Reduced Matrix, MS	s=iviasked		ans.		PL=Pore Lining, M=Matrix. or Problematic Hydric Soils <sup>3</sup> :	
Histosol				Polyvalue Below	v Surface	(S8) ( <b>LRF</b>	RR,		ick (A10) ( <b>LRR K, L, MLRA 149B</b> )	
	pipedon (A2	)		MLRA 149B)					rairie Redox (A16) ( <b>LRR K, L, R</b> )	
	istic (A3) en Sulfide (A	4)		Thin Dark Surfa Loamy Mucky M	. , .		,		rface (S7) ( <b>LRR K, L, R</b> )	
	d Layers (A5			Loamy Gleyed N			, ⊑)	Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L)		
	d Below Dar		e (A11)	Depleted Matrix		,		Thin Dark Surface (S9) (LRR K, L)		
	ark Surface			Redox Dark Sur	• • •			Iron-Manganese Masses (F12) (LRR K, L, R)		
-	Aucky Miner Gleyed Matri			Depleted Dark S		-7)			nt Floodplain Soils (F19) ( <b>MLRA 149B</b> ) podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )	
-	Redox (S5)	x (34)		Redox Depressi					ent Material (F21)	
-	I Matrix (S6)								allow Dark Surface (TF12)	
	rface (S7) (I		ILRA 149B	5)					xplain in Remarks)	
<sup>3</sup> Indicators o	f hvdrophyti	c vegetati	ion and we	tland hydrology mus	t be prese	ent. unless	disturbed	or problematic.		
Restrictive	• • •	-								
Туре: <u>Со</u>	obble									
Depth (in	ches): <u>15.</u>	0						Hydric Soil P	resent? Yes No _✓	
Remarks:		1						с. I I I		
			a depti	n of 15 inches	due to	o the p	resence	e of cobble.	. No indicators of hydric	
soil were	observe	ea.								



wira008\_xu1\_S



wira008\_xu1\_W

Project/Site: Line 5 Relocation Project	City/County: <u>Iron</u>	Sampling [	Date: <u>2020-05-22</u>				
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Sampline	g Point: <u>wira008_xu2</u>				
Investigator(s): <u>JSW/EJO</u>	Section, Township, Range: <u>Sec</u>	<u>21 T046N R001V</u>	/				
Landform (hillslope, terrace, etc.): Side Slope	Local relief (concave, convex, none)	: <u>None</u>	_ Slope (%): <u>0-2%</u>				
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.443(</u>	) <u>58</u> Long: <u>-90.</u> 4	189815	Datum: <u>WGS84</u>				
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	f year? Yes No (If	no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significant	ntly disturbed? Are "Normal C	ircumstances" present? Ye	es No				
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, exp	blain any answers in Remark	кs.)				
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point location	s, transects, importa	nt features, etc.				

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No∕ No∕	Is the Sampled Area within a Wetland? Yes No∕
Wetland Hydrology Present?	Yes	No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed The upland sample point intermediate wood fern d	is located	in a mesic har	dwood forest on a slope. Sugar maple and rea.

# HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 R	oots (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 Soil	ls (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)
Field Observations:	
Surface Water Present? Yes No _ ✓ Depth (inches):	
Water Table Present? Yes No _ ✓ Depth (inches):	
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No∕
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	ons), if available:
The sample point is located on a gentle slope. No indicators	of wetland hydrology were observed.

Sampling Point: wira008\_xu2

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Acer saccharum</u>				Number of Dominant Species That Are OBL, FACW, or FAC:3(A)
2. <u>Thuja occidentalis</u>				That Are OBL, FACW, or FAC: (A)
3. <u>Acer rubrum</u>				Total Number of Dominant Species Across All Strata:8(B)
				、
4				Percent of Dominant Species That Are OBL, FACW, or FAC:38 (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	40	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $15$ x 2 = $30$
1. <u>Acer saccharum</u>				FAC species $38 \times 3 = 114$
2. <u>Corylus cornuta</u>	5	Y	<u>FACU</u>	FACU species         88         x 4 =         352           UPL species         0         x 5 =         0
3. Betula alleghaniensis	5	Y	FAC	OF L species $0$ $X3 = 0$ Column Totals:         141         (A)         496         (B)
4				
5				Prevalence Index = B/A = <u>3.517730496453901</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)	_20_	. 1010100		$\_$ 3 - Prevalence Index is $\leq 3.0^1$
1. Dryopteris intermedia	25	V	EAC	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
			FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Acer saccharum</u>				
3. <u>Maianthemum canadense</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Claytonia caroliniana</u>			FACU	be present, unless disturbed or problematic.
5. <u>Carex pedunculata</u>			_FAC_	Definitions of Vegetation Strata:
6. <u>Oryzopsis asperifolia</u>	2	<u>     N                               </u>	·	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Polygonatum pubescens</u>	2	. <u> </u>	<u>FACU</u>	at breast height (DBH), regardless of height.
8. <u>Prunus virginiana</u>	1	N	<u>FACU</u>	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Brachyelytrum aristosum</u>	1	<u>     N                               </u>		and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
	79	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)		•		
1				
2				
				Undersche Ale
3				Hydrophytic Vegetation
4				Present? Yes No
Remarks: (Include photo numbers here or on a separate	<u>0</u>	= Total Co	ver	
The vegetation is consistent with that of		ic hardv	vood for	est.

Profile Dese	cription: (Describ	e to the dept	h needed to docum	nent the	indicator	or confirn	n the absence of indica	ators.)		
Depth	Matrix		Redox	K Feature	s					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
	<u>10YR 2/2</u>	100		_0			L			
	<u>7.5YR 3/2</u>	_ 100 _		_0_			SIL			
6-20	<u>5YR 3/4</u>	100		_0_			SIL			
					·					
					·					
		·			·					
					<u> </u>					
		pletion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gra	ains.		re Lining, M=Matrix.		
Hydric Soil	Indicators:						Indicators for Prob	olematic Hydric Soils <sup>3</sup> :		
Histosol	. ,		Polyvalue Below		(S8) ( <b>LRF</b>	RR,		0) ( <b>LRR K, L, MLRA 149B</b> )		
	pipedon (A2)		MLRA 149B)					edox (A16) ( <b>LRR K, L, R</b> )		
	istic (A3)		Thin Dark Surfa					eat or Peat (S3) (LRR K, L, R)		
	en Sulfide (A4) d Layers (A5)		Loamy Mucky M Loamy Gleyed M			, L)	Dark Surface (S	w Surface (S8) ( <b>LRR K, L</b> )		
	d Below Dark Surfa		Depleted Matrix		-)		-			
	ark Surface (A12)		Redox Dark Sur					Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R)		
	Aucky Mineral (S1)		Depleted Dark S	,			-	Piedmont Floodplain Soils (F19) (MLRA 149B)		
-	Gleyed Matrix (S4)		Redox Depressi		,		Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )			
Sandy F	Redox (S5)						Red Parent Material (F21)			
	d Matrix (S6)						Very Shallow Dark Surface (TF12)			
Dark Su	rface (S7) (LRR R,	MLRA 149B	)				Other (Explain i	in Remarks)		
<sup>3</sup> Indicators o	f hydrophytic veget	ation and we	tland hydrology mus	t be pres	ent, unless	s disturbed	d or problematic.			
	Layer (if observed		,	•						
Туре:										
Depth (in	ches):						Hydric Soil Present	? Yes No∕		
Remarks:										
No indica	ators of hydri	c soil we	re observed.							
	-									



wira008\_xu2\_E



wira008\_xu2\_N

Project/Site: Line 5 Reloc	ation Proiect		City/County: Iro	n	Samp	ling Date: <u>2020</u> .	-05-22
Applicant/Owner: Enbridge	-						
			_ Section, Township, Range: <u>sec 27 T046N R001W</u>				
Landform (hillslope, terrace, etc							
Subregion (LRR or MLRA): <u>No</u>	rthcentral Forests				495004		<u>0 2 /0</u>
Soil Map Unit Name: Gogebic,							
Are climatic / hydrologic condition		-					
Are Vegetation, Soil	, or Hydrology	significantly	disturbed?	Are "Normal	Circumstances" present	?Yes _✓ No	)
Are Vegetation, Soil	, or Hydrology	naturally pro	oblematic?	(If needed, ex	xplain any answers in Re	emarks.)	
SUMMARY OF FINDING	SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Prese Hydric Soil Present?		✓ No		npled Area Vetland?	Yes∕N	0	
Wetland Hydrology Present?							
Remarks: (Explain alternative				ional wetland	Site ID:		
Feature is a seasona	ally saturated	wet meadow	, dominated	by fringed	d sedge and mo	squito bulrus	h.
Feature occurs on a	•			• •	-		
			· ····, · · · · · · · · · · · · · · · ·		<b>,</b>	·····	37
HYDROLOGY							
Wetland Hydrology Indicato	rs:			-	Secondary Indicators (m	ninimum of two requ	<u>uired)</u>
Primary Indicators (minimum of	of one is required;	check all that apply)			Surface Soil Cracks	s (B6)	
Surface Water (A1)		✓ Water-Stained	Leaves (B9)	-	Drainage Patterns (	B10)	
High Water Table (A2)		Aquatic Fauna			Moss Trim Lines (B	16)	
Saturation (A3)		Marl Deposits			Dry-Season Water	Table (C2)	
Water Marks (B1)		Hydrogen Sulfi		-	Crayfish Burrows (C	28)	
Sediment Deposits (B2)		Oxidized Rhizo		Roots (C3)			;9)
Drift Deposits (B3)		Presence of Re		-	Stunted or Stressec		
Algal Mat or Crust (B4)			Reduction in Tilled Soils (C6) Geomorphic Position (D2)				
Iron Deposits (B5)		Thin Muck Sur					
Inundation Visible on Aeri		Other (Explain	in in Remarks) Microtopographic Relief (D4)				
Sparsely Vegetated Conc	ave Surface (B8)			-	✓ FAC-Neutral Test (I	D5)	
Field Observations:							
Surface Water Present?		✓ Depth (inches					
Water Table Present?		✓ Depth (inches					
Saturation Present? (includes capillary fringe)	Yes No _	✓ Depth (inches	):	Wetland H	ydrology Present? Yo	es <u> </u>	
Describe Recorded Data (stre	am gauge, monito	ring well, aerial photo	os, previous inspe	ctions), if avail	lable:		
Remarks:							
Feature is seasonall	v saturated.	Standing wate	er is present	in feature	e but not at sam	ple point.	
Feature's hydrology		•				p.o po	
r oataro o nyarology							

Sampling Point: wirc1015e\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute	Dominant		Dominance Test worksheet:
		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2 3				Total Number of Dominant Species Across All Strata:2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	_	= Total Cov		OBL species         22         x 1 =2
Sapling/Shrub Stratum (Plot size: 15 )				FACW species x 2 =14
1				FAC species <u>5</u> x 3 = <u>15</u>
				FACU species x 4 =0
2				UPL species x 5 =
3				Column Totals: <u>34</u> (A) <u>51</u> (B)
4				Prevalence Index = B/A =1.5
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				$\checkmark$ 2 - Dominance Test is >50%
_		= Total Cov	ver	$\checkmark$ 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Carex crinita</u>	15	<u>    Y     </u>	<u>OBL</u>	data in Remarks or on a separate sheet)
2. <u>Scirpus cf. hattorianus</u>	7	<u>     Y     </u>	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Solidago gigantea</u>	5	<u>     N                               </u>	<u>FACW</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Osmunda claytoniana</u>	4	N	_FAC_	be present, unless disturbed or problematic.
5. <u>Equisetum sylvaticum</u>	2	<u>     N                               </u>	FACW	Definitions of Vegetation Strata:
6. <u>Rumex obtusifolius</u>			FAC	
7				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9	·			and greater than or equal to 3.28 ft (1 m) tall.
				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	34	= Total Cov	ver	
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3				Hydrophytic
4				Vegetation
		= Total Cov	ver	Present? Yes <u>√</u> No
Remarks: (Include photo numbers here or on a separate s				envite bulgade. Consula alat anna a s
Feature is a wet meadow dominated by	ringed	i sedge	and mo	squito buirusn. Sample plot appears
representative of wetland.				

Profile Dese	cription: (Describe t	o the dep	th needed	to docun	nent the i	ndicator	or confirn	n the absence	of indicator	rs.)	
Depth	Matrix				x Features						
(inches)	Color (moist)	%	Color (I	<u>moist)</u>	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
	<u>7.5YR 2.5/2</u>	100						SIL			
	<u>7.5YR 3/2</u>	100						SIL			
	<u>5YR 4/3</u>	85	_5YR	4/6		_C_	_M_	COSL			
					·						
	·										
					·						
	oncentration, D=Deple	etion, RM	Reduced	Matrix, MS	S=Masked	Sand Gra	ains.			ining, M=Matri	
Hydric Soil										natic Hydric S	
Histosol					w Surface	(S8) ( <b>LRF</b>	RR,				
	pipedon (A2) istic (A3)			<b>RA 149B</b> ) Dark Surfa			LRA 149B			x (A16) ( <b>LRR I</b> or Peat (S3) ( <b>LF</b>	,
	en Sulfide (A4)				/lineral (F1				urface (S7)		, _,,
	d Layers (A5)				Matrix (F2	)				urface (S8) (LF	
	d Below Dark Surface	(A11)		ted Matrix						(S9) (LRR K, L	
	ark Surface (A12) /lucky Mineral (S1)				rface (F6) Surface (F	7)			-	asses (F12) (L	
	Gleyed Matrix (S4)			Corress		')		<ul> <li>Piedmont Floodplain Soils (F19) (MLRA 149B)</li> <li>Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</li> </ul>			
	Redox (S5)				( - )			Red Parent Material (F21)			, -, -,
	d Matrix (S6)							Very Shallow Dark Surface (TF12)			
Dark Su	Irface (S7) (LRR R, M	LRA 1498	<b>3</b> )					Other (	Explain in R	emarks)	
<sup>3</sup> Indicators o	of hydrophytic vegetati	on and we	etland hvdro	oloav mus	t be prese	ent. unless	s disturbed	d or problematic.	_		
	Layer (if observed):					,			-		
Туре: <u>G</u>	ravel/cobble										
Depth (in	ches): <u>17.0</u>							Hydric Soil	Present?	Yes <u>√</u>	No
Remarks:											
Soils obs	served to be si	lt Ioam	over co	barse s	sandy l	oam o'	ver cob	oble.			





wirc1015e\_w\_SW

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	EJO/JSW Ó			
File #:	Date of visit(s):			
wirc1015	2020-05-22			
Location:	Ecological Landsca	ape:		
PLSS: sec 27 T046N R001W	Superior Mineral Range			
		5		
Lat: <u>46.442045</u> Long: <u>-90.484910</u>	Watershed:			
	LS11, Potato River			
County: Iron Town/City/Village: Gurney town				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent	Wetland Type(s): PEM - fresh wet meadow			
slopes				
Field Verified:				
Series not verified. Soils were observed to be silty	Wetland Size:	Wetland Area Impacted		
loam over course sandy loam with a gravel/cobble	0.6079	0.6079		
restrictive layer. Soils exhibited red parent material.	Vegetation:			
	Plant Community	Description(s):		
Hydrology:	The wetland is a wet meadow dominated by			
The wetland is seasonally saturated. Standing water was	fringed sedge and mosquito bulrush, and as it			
present in the wetland at the time of survey. The	occurs on a forest trail disturbance-tolerant			
wetland's hydrology is likely influenced by rutting present				
on the forest trail on which the wetland occurs.	species are dominant.			

# SITE MAP

### **SECTION 1: Functional Value Assessment**

			Functional Value Assessment
HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	N	Y	Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding, hiking
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
-			In or adjacent to RED FLAG areas
5	N	N	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			Wildlife Habitat
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	N	N	100 m buffer – natural land cover >50%(south) 75% (north) intact
5			Occurs in a Joint Venture priority township
6	N	N	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
0	N	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
7	N	Y	
0			plans
8	Y	Y	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present $\geq$ 45 days
10	Y	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	N	N	Wetland is connected or contiguous with perennial stream or lake
2	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	N	Y	Vegetation is inundated in spring
SP			Shoreline Protection
1	N	N	Along shoreline of a stream, lake, pond or open water area ( $\geq 1$ acre) - if no, not applicable
0			Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
2	N	N	water levels or high flows – if no, not applicable
3	N	N	Densely rooted emergent or woody vegetation
ST			Storm and Floodwater Storage
1	N	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	N N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N N	Within a watershed with $\leq 10\%$ wetland
8		1	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
° WQ	N	N	Water Quality Protection
1	NI NI	NI NI	Provides substantial storage of storm and floodwater based on previous section
	N	N	Basin wetland or constricted outlet
2	N	Y	
	N	N	Water flow through wetland is NOT channelized
4	N	N	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	N	Stormwater or surface water from agricultural land is major hydrology source
8	N	N	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	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
5	IN	IN	

WH-7: The wetland is a part of a larger forest with potential to host SGCN species. WH-10: The wetland had some standing water at the time of survey, with aquatic invertebrates present. ST-5: The wetland likely receives stormwater from the surrounding upland

> 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	Deer tracks
	Y	Other mammals, 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	Y	Aquatic invertebrates

### **SECTION 2: Floristic Integrity**

### Plant Community Integrity (circle)\*

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Carex crinita*			PEM	Rare
Scirpus cf. hattorianus*			PEM	Rare
Solidago gigantea			PEM	Rare
Osmunda claytoniana			PEM	Barren
Equisetum sylvaticum			PEM	Barren
Scirpus cyperinus			PEM	Barren
Onoclea sensibilis			PEM	Barren
Rumex obtusifolius			PEM	Barren

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

The wetland has a good coverage of native species, with minimal presence of exotic species, but has relatively low diversity and is composed of disturbance-favoring 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
Х	x		н	С	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		м	<u> </u>	Removal of herbaceous stratum – mowing,
			IVI	С	grading, earthworms, etc.
Х	x		М	С	Removal of tree or shrub strata – logging, unprescribed fire
Х	Х		M	С	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 occurs on a forest trail and has been rutted by heavy equipment. The wetland occurs within a forest that has been harvested (the trail was cleared historically). Earthworms are present in surrounding forest with potential to impact the wetland's herbaceous layer.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE						
	Low	Medium	High	Exceptional	NA		
Floristic Integrity		$\checkmark$					
Human Use Values		$\checkmark$					
Wildlife Habitat	$\checkmark$						
Fish and Aquatic Life Habitat		$\checkmark$					
Shoreline Protection					$\checkmark$		
Flood and Stormwater Storage		$\checkmark$					
Water Quality Protection							
Groundwater Processes	$\checkmark$						

FUNCTION	RATIONALE
Floristic Integrity	The wetland has a good coverage of native species and minimal presence of exotic species, but has a relatively low species richness.
Human Use Values	The wetland is part of a larger forest that offers multiple recreational opportunities.
Wildlife Habitat	The wetland is a part of a larger intact forest which hosts a diversity of wildlife.
Fish and Aquatic Life Habitat	The wetland had some standing water at the time of survey, in which aquatic invertebrates were observed.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely receives some stormwater runoff from the surrounding uplands and forest trail.
Water Quality Protection	The wetland has dense, persistent vegetation and is a part of a larger intact forest.
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.	Low
Cumulative Impacts	Operational vegetation maintenance.	Low
Spatial/Habitat Integrity	Temporary construction impacts.	Low
Rare Plant/Animal Communities/ Natural Areas	N/A	N/A

Project/Site: Line 5 Relocation Project	City/County:	Sampling Date: <u>2020-05-22</u>
Applicant/Owner: Enbridge	State	: <u>Wisconsin</u> Sampling Point: <u>wirc1015 u</u>
Investigator(s): <u>JSW/EJO</u>	Section, Township, Range: <u>Sec 27</u>	T046N R001W
Landform (hillslope, terrace, etc.): Talf		
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.4417</u>	<b>'65</b> Long: <u>-90.484</u> '	935 Datum: WGS84
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Ca	thro complex, 0 to 6 percent slopes N	VI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes No (If no, e	xplain in Remarks.)
Are Vegetation, Soil, or Hydrology significar	ntly disturbed? Are "Normal Circum	stances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain a	any answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No No	Is the Sampled Area within a Wetland? Yes No∕
Wetland Hydrology Present?	Yes	_ No <u>_</u>	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced The upland sample point	lures here or in a is located i	a separate report.) In a mesic hard	dwood forest dominated by sugar maple.

## HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 So	oils (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)
Field Observations:	
Surface Water Present? Yes No _ ✓ Depth (inches):	
Water Table Present? Yes No _ ✓ Depth (inches):	
Water Table Fresent? Fes No $\checkmark$ Depth (incres)	
Saturation Present? Yes No _ ✓ Depth (inches):	Wetland Hydrology Present? Yes No∕
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe)	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)         Remarks:	

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. Acer saccharum				Number of Dominant Species
				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across All Strata: 6 (B)
3				Species Across All Strata:6(B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	60	= Total Cov	/er	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $0 \times 2 = 0$
1. <u>Acer saccharum</u>	25	<u>    Y    </u>	FACU	FAC species $35 \times 3 = 105$
2. <u>Rubus idaeus</u>	5	<u>     N     </u>	FAC	FACU species <u>119</u> $x 4 = 476$
3				UPL species         0         x 5 =         0           Column Totals:         154         (A)         581         (B)
4				
5				Prevalence Index = $B/A = 3.77272727272727272727272727272727272727$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size:5)				$\_$ 3 - Prevalence Index is $\leq 3.0^1$
1. <u>Carex leptonervia</u>	10	V	EAC	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. <u>Claytonia caroliniana</u>			FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Trientalis borealis</u>		<u> </u>		
4. <u>Acer saccharum</u>		 N	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
5. <u>Dryopteris intermedia</u>				be present, unless disturbed or problematic.
			<u>_FAC</u>	Definitions of Vegetation Strata:
6. <u>Hepatica nobilis</u>				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Polygonatum pubescens</u>				at breast height (DBH), regardless of height.
8. <u>Uvularia sessilifolia</u>			FACU	Sapling/shrub – Woody plants less than 3 in. DBH
9. <i>Maianthemum canadense</i>			<u>FACU</u>	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Aralia nudicaulis</u>	2	<u>    N</u>	<u>FACU</u>	Herb – All herbaceous (non-woody) plants, regardless
11. <u>cf. Brachyelytrum aristosum</u>	1	<u>     N     </u>		of size, and woody plants less than 3.28 ft tall.
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
		= Total Cov	/er	neight.
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3				Hydrophytic
4.				Vegetation
		= Total Cov	/er	Present? Yes No∕
Remarks: (Include photo numbers here or on a separate				
The vegetation is consistent with that o	f an upla	and me	sic hard	wood forest.

I

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox	<pre>K Feature</pre>	s			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	<u>10YR 2/2</u>	100		_0_			<u>     L                               </u>	
2-12	5YR 3/3	100		0			SIL	
							·	
		·					. <u> </u>	
		· ·						
							·	
		· ·					·	
		· ·					·	
		· ·					·	
	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	=Maske	d Sand Gra	ains.		L=Pore Lining, M=Matrix.
Hydric Soil								Problematic Hydric Soils <sup>3</sup> :
Histosol		-	Polyvalue Below		e (S8) ( <b>LRF</b>	RR,		(A10) ( <b>LRR K, L, MLRA 149B</b> )
	pipedon (A2)		MLRA 149B)					irie Redox (A16) ( <b>LRR K, L, R</b> )
	istic (A3) en Sulfide (A4)	-	Thin Dark Surfa Loamy Mucky M					ky Peat or Peat (S3) ( <b>LRR K, L, R</b> ) ace (S7) ( <b>LRR K, L</b> )
	d Layers (A5)	-	Loamy Gleyed N			, ⊑)		Below Surface (S8) (LRR K, L)
	d Below Dark Surface	e (A11)	Depleted Matrix		-)			Surface (S9) (LRR K, L)
-	ark Surface (A12)		Redox Dark Sur		)			anese Masses (F12) ( <b>LRR K, L, R</b> )
	/ucky Mineral (S1)	-	Depleted Dark S	•	,		-	Floodplain Soils (F19) (MLRA 149B)
-	Gleyed Matrix (S4)	-	Redox Depressi					odic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy F	Redox (S5)						Red Parer	nt Material (F21)
	d Matrix (S6)							ow Dark Surface (TF12)
Dark Su	Irface (S7) (LRR R, N	ILRA 149B	)				Other (Exp	olain in Remarks)
<sup>3</sup> Indicators o	f hydrophytic vegetat	ion and wet	land hydrology mus	t he nres	ent unless	disturbed	or problematic	
	Layer (if observed):		and nyarology mas	t be pres	crit, unicoe			
Type: <u>C</u>	• • •							
	ches): <u>12.0</u>						Hydric Soil Pre	esent? Yes No∕
Remarks:	ches). <u>12.0</u>							
	t dia bevond '	12 inche	e due to the r	rosor	nce of c	obblo	No indicator	s of hydric soil were
observed				16361		obble.		s of flydric soll were
	J.							



wirc1015\_u\_S



wirc1015\_u\_W

Project/Site: Line 5 Relocation Project	City/County: Iron	county: <u>Iron</u> Sampling Date: <u>2020-0</u>				
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Sampling Point: W	<u>irc1014f_w</u>			
Investigator(s): <u>EJO/JSW</u>	Section, Township, Range:	sec 27 T046N R001W				
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, ne	one): <u>Concave</u> Slope (%	): <u>0-2%</u>			
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.441941 Long: -90.483507 Datum: WC						
Soil Map Unit Name: Gogebic, very stony-Pence, very ston	y-Cathro complex, 0 to 6 percent sl	opes NWI classification:				
Are climatic / hydrologic conditions on the site typical for this ti	me 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 nat	urally problematic? (If needed,	explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map sh	nowing sampling point locati	ons, transects, important featu	res, etc.			
Hydrophytic Vegetation Present? Yes No _	Is the Sampled Area					
Hydric Soil Present? Yes <u>✓</u> No	within a Watland?	Yes ∕ No				
Wetland Hydrology Present?   Yes No _	If yes, optional Wetlar	d Site ID:				
Remarks: (Explain alternative procedures here or in a separ Feature is a seasonally flooded hardwood	ate report.) d swamp (vernal pool) co	mmunity dominated by gree	n ash			
and black ash. Fringed sedge is dominar	it in the ground layer but i	s sparse as much of the fea	ture is			
flooded at time of survey.						

### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	(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 Odo	r (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres	s 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	7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rem	arks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _ ✓ Depth (inches):	
Water Table Present? Yes <u>✓</u> No Depth (inches): <u>2</u>	
Saturation Present? Yes <u>√</u> No Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, prev	ious inspections), if available:
Remarks:	
Feature is saturated at the surface with standing wa	ater present in wetland at time of survey, but not
at sample point. Algal crust present at sample point	

Sampling Point: <u>wirc1014f\_w</u>

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?	t Indicator Status	Dominance Test worksheet:
1. <u>Fraxinus pennsylvanica</u> )				Number of Dominant Species
2. Fraxinus nigra				That Are OBL, FACW, or FAC: (A)
3. <u>Acer rubrum</u>				Total Number of Dominant Species Across All Strata:6(B)
				( )
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
	40	= Total Co	ver	OBL species x 1 =0
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $30 \times 2 = 60$
1. <u>Acer saccharum</u>	5	Y	FACU	FAC species $14 \times 3 = 42$
2. <u>Acer rubrum</u>				FACU species <u>5</u> x 4 = <u>20</u>
3				UPL species $0$ $x 5 =$ $0$ Column Totals: <u>59</u> (A) <u>132</u> (B)
4				$\begin{bmatrix} \text{Column rotals.} & \underline{39} \\ \end{bmatrix} (A) = \underline{132} (B)$
5				Prevalence Index = B/A = <u>2.24</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Co		∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u> )	<u> </u>	10101 00	VCI	$\underline{}$ 3 - Prevalence Index is $\leq 3.0^1$
1. <u>Carex crinita</u>	10	V	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. <u>Rubus idaeus</u>				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8			·	Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11			·	of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	12	= Total Co	ver	height.
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3.				Hudronhutio
4				Hydrophytic Vegetation
	_	= Total Co		Present? Yes <u>√</u> No
Remarks: (Include photo numbers here or on a separate			VCI	
Feature is hardwood swamp dominated		en ash	and blad	ck ash in the canopy and fringed
sedge in the ground layer. Ground laye				
pool.	-		-	

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth Matrix Redox Features										
(inches)	Color (moist)	%	Color (m	noist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-1	<u>10YR 2/2</u>	100			_0_			_MMI_	silt loam	
	<u>7.5YR 4/2</u>	100			_0_			SIL		
_7-16_	7.5YR 4/2	90	<u>7.5YR</u>	4/6	10	С	М	SIL		
	<u> </u>									
<sup>1</sup> Type: C=C	oncentration, D=Depl	etion RM	=Reduced M	latrix MS		Sand Gra	ains	<sup>2</sup> Location	: PL=Pore Lining, M=Matrix.	
Hydric Soil					mashea		unio.		for Problematic Hydric Soils <sup>3</sup> :	
Histoso	I (A1)		Polyval	lue Below	v Surface	(S8) ( <b>LRF</b>	RR,	2 cm 1	Muck (A10) ( <b>LRR K, L, MLRA 149B</b> )	
	pipedon (A2)			RA 149B)		. , .			Prairie Redox (A16) (LRR K, L, R)	
	istic (A3)						_RA 149B		Mucky Peat or Peat (S3) (LRR K, L, R)	
	en Sulfide (A4)				lineral (F1		, L)		Surface (S7) (LRR K, L)	
	d Layers (A5)	( ) ] ]	-	-	Matrix (F2)	)		-	alue Below Surface (S8) (LRR K, L)	
	d Below Dark Surface ark Surface (A12)	e (ATT)		ed Matrix	face (F6)				Dark Surface (S9) (LRR K, L) langanese Masses (F12) (LRR K, L, R)	
	Mucky Mineral (S1)				Surface (F	7)			ont Floodplain Soils (F19) (MLRA 149B)	
-	Gleyed Matrix (S4)			Depressi		,			Spodic (TA6) (MLRA 144A, 145, 149B)	
	Redox (S5)							✓ Red Parent Material (F21)		
	d Matrix (S6)							-	Shallow Dark Surface (TF12)	
Dark Su	urface (S7) (LRR R, N	ILRA 1491	3)					Other	(Explain in Remarks)	
<sup>3</sup> Indicators o	of hydrophytic vegetat	ion and we	etland hydrol	loav musi	t be prese	nt unless	s disturbed	or problemati	2	
	Layer (if observed):		suunu nyuru			, u				
Туре: <u>С</u>										
	iches): <u>16</u>							Hydric Soil	Present? Yes∕ No	
Remarks:										
	served to be lo	amv m	ucky mi	neral d	over sil	t loam	over c	obble		
		any n				. rouin	010.0	000101		



wirc1014f\_w\_NW



wirc1014f\_w\_SE

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	EJO/JSW			
File #:	Date of visit(s):			
wirc1014	2020-05-22			
Location:	Ecological Landsca	pe:		
PLSS: <u>sec 27 T046N R001W</u>	Superior Mineral Ranges			
Lat: <u>46.442017</u> Long: <u>-90.483443</u> County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>	Watershed: LS11, Potato River			
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes	Wetland Type(s): PFO - hardwood swamp			
Field Verified:				
Series not verified. Soils were observed to be loamy mucky mineral over silt loam with a cobble	Wetland Size: 0.0085	Wetland Area Impacted 0.0085		
restrictive layer.	Vegetation: Plant Community Description(s):			
Hydrology: The wetland is seasonally saturated with standing water present at the time of survey. Algal crust was also present in the wetland at the time of survey.	The wetland is a hardwood swamp dominated by green ash and black ash in the canopy, and fringed sedge in th herbaceous layer. At the time of survey, the herbaceous vegetation was mostly sparse as the wetland was primarily a vernal pool.			

# SITE MAP

### SECTION 1: Functional Value Assessment

	-	-	Functional Value Assessment
HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	N	Y	Used for recreation (hunting, birding, hiking, etc.). List: birding, 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
-			In or adjacent to RED FLAG areas
5	N	N	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
ŴH			Wildlife Habitat
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	1	Y	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
0	N	ř	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
7	N	Y	plans
0			
8	N	Y	Part of a large habitat block that supports area sensitive species
9	N	Y	Ephemeral pond with water present <u>&gt; 45 days</u>
10	N	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	N	N	Wetland is connected or contiguous with perennial stream or lake
2	N	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	Y	Y	Vegetation is inundated in spring
SP			Shoreline Protection
1	N	N	Along shoreline of a stream, lake, pond or open water area ( $\geq 1$ acre) - if no, not applicable
2			Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
2	N	N	water levels or high flows – if no, not applicable
3	N	N	Densely rooted emergent or woody vegetation
ST			Storm and Floodwater Storage
1	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 $\leq$ 10% wetland
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
ŴQ			Water Quality Protection
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 N	Vegetated wetland associated with a lake or stream
5	N	Y	Dense, persistent vegetation
6	Y	Y Y	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7			Stormwater or surface water from agricultural land is major hydrology source
8	N	N N	Discharge to surface water
0 9	N	N N	
	N	N	Natural land cover in 100m buffer area < 50% Groundwater Processes
GW			
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	Ν	Y	Wetland soils are organic
5	Ν	N	Wetland is within a wellhead protection area

WH-7: The wetland is relatively intact and part of a larger intact forest with potential to support SGCN species. ST-5: the wetland likely only receives stormwater from surrounding uplands. FA-2: the wetland has standing water at the time of survey, with the 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	proated sparrow, black-throated green warbler, and other songbirds were heard in vicinity of				
	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

### **SECTION 2: Floristic Integrity**

### Plant Community Integrity (circle)\*

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Fraxinus nigra*			PFO	Rare
Fraxinus pennsylvanica*			PFO	Rare
Acer rubrum*			PFO	Rare
Carex crinita*			PFO	Rare
Acer saccharum			PFO	Rare
Acer rubrum			PFO	Barren
Carex tuckermanii			PFO	Barren
Rubus idaeus			PFO	Barren
Ulmus americana			PFO	Barren
Betula alleghaniensis			PFO	Barren
Claytonia caroliniana			PFO	Barren
Epilobium cf. coloratum			PFO	Barren
Maianthemum canadense			PFO	Barren
Osmunda claytoniana			PFO	Barren
Scutellaria lateriflora			PFO	Barren

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

The wetland overall has a moderate diversity of native species, well-developed strata, 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
					Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	V			0	Removal of herbaceous stratum – mowing,
	X		M	С	grading, earthworms, etc.
V	v		N.4	0	Removal of tree or shrub strata – logging,
Х	X		M	С	unprescribed fire
	Х		М	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)

Slash is present in the wetland from previous logging operations, and the surrounding forest has had some harvests. 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			$\checkmark$			
Human Use Values		$\checkmark$				
Wildlife Habitat			$\checkmark$			
Fish and Aquatic Life Habitat		$\checkmark$				
Shoreline Protection					$\checkmark$	
Flood and Stormwater Storage	$\checkmark$					
Water Quality Protection		$\checkmark$				
Groundwater Processes	$\checkmark$					

FUNCTION	RATIONALE
Floristic Integrity	The wetland has an intact plant community, with a moderate diversity of species, well-developed strata, and minimal presence of exotic species.
Human Use Values	The wetland is a part of a larger forest that offers multiple recreational opportunities, such as hunting and birding.
Wildlife Habitat	The wetland is an intact plant community with well-developed strata and is part of a larger intact forest, which can support a diversity of wildlife.
Fish and Aquatic Life Habitat	The wetland had standing water at the time of survey, which may support aquatic life. There is evidence that water pooling is frequent and of long durations.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is small and likely receives and holds stormwater only from the surrounding uplands.
Water Quality Protection	The wetland has a well-developed canopy important for rainwater interception; the wetland is a part of a larger intact forest.
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

Project/Site: Line 5 Relocation Project	City/County: <u>Iron</u>	Sampling	Date: 2020-05-22
Applicant/Owner: <u>Enbridge</u>		State: Wisconsin Samplin	ng Point: <u>wirc1014_u</u>
Investigator(s): <u>JSW/EJO</u>	Section, Township, Range	: <u>sec 27 T046N R001V</u>	V
Landform (hillslope, terrace, etc.): Talf		none): <u>None</u>	
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.441	940 Long:	-90.483608	Datum: WGS84
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-C	athro complex, 0 to 6 percent	slopes NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes <u>√</u> No	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significa	antly disturbed? Are "Nor	mal Circumstances" present? Y	′es No
Are Vegetation, Soil, or Hydrology naturall	y problematic? (If neede	ed, explain any answers in Remar	rks.)
SUMMARY OF FINDINGS - Attach site map show	ing sampling point loca	ations, transects, importa	ant features, etc.

		- I	1 31	-, ,		,
Hydrophytic Vegetation Prese	ent? Yes	No∕	Is the Sampled Area	Nee	No. (	

Hydrophylic vegetation Present?	res	NO	
Hydric Soil Present?	Yes	No <u>_</u>	within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceen The upland sample point road. Sugar maple domin	is located	in a mesic har	dwood forest forest near the edge of a logging

### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 F	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 So	ils (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)
Field Observations:	
Surface Water Present? Yes No _✓ Depth (inches):	
Water Table Present? Yes No _ ✓ Depth (inches):	
Saturation Present? Yes No _ ✓ Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe)	
(includes capillary fringe)	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
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(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Acer saccharum</u>				Number of Dominant Species That Are OBL, FACW, or FAC: (A)
				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across All Strata: 5 (B)
3				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)
5			·	That Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
7		·		Total % Cover of: Multiply by:
	50	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 )				FACW species x 2 =0
1. <u>Acer saccharum</u>	20	<u> </u>	FACU	FAC species <u>45</u> x 3 = <u>135</u>
2. <u>Ostrya virginiana</u>			FACU	FACU species <u>105</u> x 4 = <u>420</u>
3. <u>Rubus idaeus</u>				UPL species $0 \times 5 = 0$
4				Column Totals: <u>150</u> (A) <u>555</u> (B)
				Prevalence Index = B/A =3.7
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
_		= Total Co	ver	$3 - Prevalence Index is \leq 3.0^{1}$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Rubus idaeus</u>			FAC	data in Remarks or on a separate sheet)
2. <u>Acer saccharum</u>	10	<u>     N     </u>	<u>FACU</u>	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Dryopteris intermedia	10	Y	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Claytonia caroliniana</u>	10	<u> </u>	FACU	be present, unless disturbed or problematic.
5. <u>Carex leptonervia</u>	_	<u>    N</u>	FAC	Definitions of Vegetation Strata:
6. <u>Uvularia sessilifolia</u>	5	N	FACU	
7. <u>Trientalis borealis</u>		N	FAC	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8. Polygonatum pubescens		N	FACU	
9				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10			·	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12				height.
		= Total Co	ver	
Woody Vine Stratum (Plot size: 30)				
1				
2				
3			·	Hydrophytic
4				Vegetation Present? Yes No√
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate				
The upland vegetation is consistent wit	h that o	f an upl	and mes	sic hardwood forest edge.

Profile Desc	cription: (Describe	to the dept	n needed to docum	nent the	indicator	or confirm	the absence of indic	ators.)	
Depth	Matrix		Redo	x Feature	s				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
	<u>10YR 2/2</u>	100		0			L		
	<u>7.5YR 3/3</u>	100		_0_					
6-20	<u>5YR 3/4</u>	100		0			SIL		
				·			·		
							··		
	oncentration, D=Depl	letion, RM=I	Reduced Matrix, MS	S=Maske	d Sand Gra	ains.	<sup>2</sup> Location: PL=Pc		
Hydric Soil							Indicators for Prot	-	
Histosol	(A1) pipedon (A2)	-	Polyvalue Belov MLRA 149B		e (S8) ( <b>LR</b> I	RR,	2 cm Muck (A1 Coast Prairie R	, ,	,
	istic (A3)		Thin Dark Surfa		LRR R. MI	LRA 149B)			
	en Sulfide (A4)	-	Loamy Mucky N	. , .		,	Dark Surface (		, , , , , , , , , , , , , , , , , , ,
	d Layers (A5)	-	Loamy Gleyed		2)		Polyvalue Belo		
	d Below Dark Surface	e (A11) _	Depleted Matrix		\		Thin Dark Surfa		K, L) ) (LRR K, L, R)
	ark Surface (A12) /lucky Mineral (S1)	-	Redox Dark Su Depleted Dark \$						9) ( <b>MLRA 149B</b> )
-	Gleyed Matrix (S4)	-	Redox Depress						4A, 145, 149B)
	Redox (S5)	_		. ,			Red Parent Ma		
	l Matrix (S6)						Very Shallow D		=12)
Dark Su	rface (S7) (LRR R, N	ILRA 149B)	1				Other (Explain	in Remarks)	
<sup>3</sup> Indicators o	f hydrophytic vegetat	ion and wet	and hydrology mus	t be pres	ent, unless	disturbed	or problematic.		
Restrictive	Layer (if observed):								
Туре:									
Depth (in	ches):						Hydric Soil Present	? Yes	No <u>_</u>
Remarks:									
No indica	ators of hydric	soil wei	e observed.						





wirc1014\_u\_W

Project/Site: Line 5 Relocation P	roject	City/County: Iron	Sam	Sampling Date: 2020-05-22		
Applicant/Owner: <u>Enbridge</u>	-		State: <u>Wisconsin</u> Sa	ampling Point: <u>wirc1013e_w</u>		
Investigator(s): <u>EJO/JSW</u>		Section, Township, Range:	<u>sec 22 T046N R0</u>	01W		
Landform (hillslope, terrace, etc.): Depr	ession La	ocal relief (concave, convex, n	one): <u>Concave</u>	Slope (%): <u>0-2%</u>		
Subregion (LRR or MLRA): Northcentral	Forests Lat: <u>46.44782</u>	28 Long: <u>-9</u>	0.483016	Datum: WGS84		
Soil Map Unit Name: <u>Gogebic, very ston</u>	y-Pence, very stony-Cath	ro complex, 0 to 6 percent s	lopes NWI classification:			
Are climatic / hydrologic conditions on the	site typical for this time of y	rear? Yes _ ✓ No	(If no, explain in Remark	<s.)< th=""></s.)<>		
Are Vegetation, Soil, or Hy	drology significantly	y disturbed? Are "Norm	al Circumstances" presen	it? Yes No		
Are Vegetation, Soil, or Hy	drology naturally p	roblematic? (If needed,	, explain any answers in F	Remarks.)		
SUMMARY OF FINDINGS - Atta	ach site map showing	g sampling point locati	ions, transects, imp	oortant features, etc.		
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative procedure	Yes <u>√</u> No Yes <u>√</u> No	If yes, optional Wetland	N Yes _ ✓ _ N			
Feature is a seasonally satu of survey. Feature occurs m from previous logging opera	urated wet meadov nainly on forest trai	w dominated by fring				
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indicators (I	minimum of two required)		
Primary Indicators (minimum of one is re	<u>quired; check all that apply</u>	)	Surface Soil Crack	as (B6)		
Surface Water (A1)	Water-Stained	( )	Drainage Patterns	· · ·		
High Water Table (A2)	Aquatic Fauna	a (B13)	Moss Trim Lines (E	316)		
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 F	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 So	ils (C6) _∠ Geomorphic Position (D2)
Iron Deposits (B5)		Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aer	rial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Cond	cave Surface (B8)		_ FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present?	Yes No	✓ Depth (inches):	
Water Table Present?	Yes <u>√</u> No	Depth (inches): <u>18</u>	
Saturation Present? (includes capillary fringe)	Yes _∡ No	Depth (inches): <u>18</u>	Wetland Hydrology Present? Yes _ ✓ No
Describe Recorded Data (stre	eam gauge, monitori	ing well, aerial photos, previous inspect	ions), if available:

#### Remarks:

Feature is seasonally saturated and wetland hydrology is likely partially artificial due to rutting from previous logging operations. Water table and saturation observed at 18 inches below surface. Some surface water present in wetland but not at sample point.

Sampling Point: wirc1013e\_w

Tree Stratum (Plot size: 30 )	Absolute	Dominant		Dominance Test worksheet:
,		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across All Strata: 2 (B)
3				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Cov	/er	OBL species <u>15</u> x 1 = <u>15</u>
Sapling/Shrub Stratum (Plot size: 15 )				FACW species <u>3</u> x 2 = <u>6</u>
1				FAC species x 3 =3
2				FACU species x 4 =0
3				UPL species x 5 =
				Column Totals: <u>19</u> (A) <u>24</u> (B)
4 5				Prevalence Index = B/A = <u>1.263157894736842</u>
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
_		= Total Cov	/er	$3$ - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Carex crinita</u>	10	<u>    Y     </u>	<u>OBL</u>	data in Remarks or on a separate sheet)
2. <u>Scirpus cf. hattorianus</u>	5	<u>    Y    </u>	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <i>Impatiens capensis</i>	2	N	<u>FACW</u>	<sup>1</sup> Indiastors of hydric coil and watland hydrology must
4. <u>Onoclea sensibilis</u>			<u>FACW</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Matteuccia struthiopteris</u>			FAC	Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9 10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	19	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2.				
3				- Uudronhudio
				Hydrophytic Vegetation
4				Present? Yes <u>√</u> No
		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate s Feature is a wet meadow dominated by		l sedae.	Feature	e has approximately 80% bare ground

near sample plot at time of survey. Higher vegetative coverage is present in the interior of the wetland.

SOIL
------

Profile Des	cription: (De	escribe t	o the dep	oth needed	to docun	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth		Matrix	0/			x Features		. 2	<b>-</b> ,		
(inches)	Color (m		<u>%</u>	Color (r	noist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-1	<u>7.5YR 2</u>	2.5/2	100						SIL		
1-3	<u>5YR</u>	4/2	95	<u>7.5YR</u>	3/4		_C_	_M_	SIL		
3-6	5YR	4/3	90	5YR	4/4	10	С	М	SL		
6-20	5YR	4/3	80	5YR	4/6	20		M	SL	Prominent redox	
		<u> - 1 0</u>	_00_		-7/0						
						·					
						·					
						·					
						·					
									21 11		
Hydric Soil	Concentration	, D=Deple	etion, RIV	=Reduced I	Matrix, MS	S=Masked	Sand Gr	ains.		n: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils <sup>3</sup> :	
Histoso				Polyva	lue Belov	w Surface	(S8) ( <b>I R</b> I	R		Muck (A10) ( <b>LRR K, L, MLRA 149B</b> )	
	pipedon (A2)				RA 149B)		(00) (	,		Prairie Redox (A16) ( <b>LRR K, L, R</b> )	
	listic (A3)			Thin D	ark Surfa	ice (S9) (L	.RR R, M	LRA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)	
	en Sulfide (A				-	/lineral (F1		, L)		Surface (S7) ( <b>LRR K, L</b> )	
	d Layers (A5		(11)		-	Matrix (F2	)		Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)		
	ed Below Dark ark Surface (		(ATT)		ed Matrix	rface (F6)					
	Mucky Minera					Surface (F	7)		<ul> <li>Iron-Manganese Masses (F12) (LRR K, L, R)</li> <li>Piedmont Floodplain Soils (F19) (MLRA 149B)</li> </ul>		
-	Gleyed Matrix					ions (F8)	,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
	Redox (S5)								Red Parent Material (F21)		
	d Matrix (S6)								Very Shallow Dark Surface (TF12) Other (Explain in Remarks)		
Dark St	urface (S7) (L	.RR R, M	LRA 149	в)					Other	(Explain in Remarks)	
<sup>3</sup> Indicators of	of hydrophytic	vegetati	on and w	etland hydro	ology mus	t be prese	nt, unles	s disturbed	or problemation	C.	
	Layer (if obs	-									
Туре:											
Depth (ir	nches):								Hydric Soil	Present? Yes <u>√</u> No	
Remarks:	,										
Soils ob	served to	be sil	lt Ioam	over sa	andy lo	am wit	h redo	x below	v 1 inch.		
					-						





wirc1013e\_w\_SE

Project/Site: Line 5 Relocation Project	City/County: Iron	Samp	pling Date: <u>2020-05-22</u>
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Sa	mpling Point: <u>wirc1013f_w1</u>
Investigator(s): <u>EJO/JSW</u>	Section, Township, Rang	e: <u>sec 22 T046N R0</u>	01W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex	x, none): <u>Concave</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 4	6.447727 Long:	-90.482387	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very	stony-Cathro complex, 0 to 6 percer	nt slopes NWI classification:	
Are climatic / hydrologic conditions on the site typical for the	nis time of year? Yes <u>√</u> No	(If no, explain in Remark	(S.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "No	ormal Circumstances" present	t?Yes _✓ No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If need	ded, explain any answers in R	Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling point loc	ations, transects, imp	oortant features, etc.
Hydrophytic Vegetation Present? Yes	No Is the Sampled A		
Hydric Soil Present? Yes	NO	? Yes <u>√</u> N	10
Wetland Hydrology Present? Yes	No If yes, optional We	etland Site ID:	

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

Feature is a seasonally saturated hardwood swamp dominated by black ash and sugar maple in canopy. Feature has been previously harvested with slash and ruts present in wetland. Ruts have likely artificially influenced hydrology to some extent.

#### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 R	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 So	oils (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)
Field Observations:	
Surface Water Present? Yes No ∡ Depth (inches):	
Water Table Present? Yes <u>✓</u> No Depth (inches): <u>16</u>	
Water Table Present?       Yes _ ✓ No Depth (inches): 16         Saturation Present?       Yes _ ✓ No Depth (inches): 16         (includes capillary fringe)       Yes _ ✓ No Depth (inches): 16	Wetland Hydrology Present? Yes No
Saturation Present? Yes 🗸 No Depth (inches): 16	
Saturation Present? Yes <u>✓</u> No Depth (inches): <u>16</u> (includes capillary fringe)	
Saturation Present?       Yes _ ✓       No       Depth (inches): 16         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
Saturation Present?       Yes _ ✓       No       Depth (inches): 16         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	tions), if available:
Saturation Present?       Yes _ ✓ _ No Depth (inches): 16         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       Feature is seasonally saturated. Hydrology likely influenced	tions), if available: d by rutting from previous logging
Saturation Present?       Yes _ ✓       No       Depth (inches): 16         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	tions), if available: d by rutting from previous logging
Saturation Present?       Yes _ ✓ _ No Depth (inches): 16         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       Feature is seasonally saturated. Hydrology likely influenced	tions), if available:
Saturation Present?       Yes _ ✓ _ No Depth (inches): 16         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       Feature is seasonally saturated. Hydrology likely influenced	tions), if available:
Saturation Present?       Yes _ ✓ _ No Depth (inches): 16         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       Feature is seasonally saturated. Hydrology likely influenced	tions), if available:
Saturation Present?       Yes _ ✓ _ No Depth (inches): 16         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       Feature is seasonally saturated. Hydrology likely influenced	tions), if available:
Saturation Present?       Yes _ ✓ _ No Depth (inches): 16         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       Feature is seasonally saturated. Hydrology likely influenced	tions), if available: d by rutting from previous logging
Saturation Present?       Yes _ ✓ _ No Depth (inches): 16         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       Feature is seasonally saturated. Hydrology likely influenced	tions), if available: d by rutting from previous logging
Saturation Present?       Yes _ ✓ _ No Depth (inches): 16         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       Feature is seasonally saturated. Hydrology likely influenced	tions), if available: d by rutting from previous logging

Sampling Point: wirc1013f\_w1

Tree Stratum (Plot size:30)	Absolute % Cover		t Indicator	Dominance Test worksheet:
1. <u>Fraxinus nigra</u>			FACW	Number of Dominant Species
2. Acer saccharum				That Are OBL, FACW, or FAC: (A)
				Total Number of Dominant Species Across All Strata: 6 (B)
3				· · · · · · · · · · · · · · · · · · ·
4				Percent of Dominant Species That Are OBL, FACW, or FAC:67(A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co	ver	OBL species <u>10</u> x 1 = <u>10</u>
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $41$ x 2 = $82$
1. <u>Alnus incana</u>	7	Y	<u>FACW</u>	FAC species $6 \times 3 = 18$
2. <u>Acer saccharum</u>	2	Y	FACU	FACU species         15         x 4 =         60           UPL species         0         x 5 =         0
3. <u>Rubus idaeus</u>	1	N	FAC	Column Totals: $72$ (A) $170$ (B)
4				
5				Prevalence Index = $B/A = 2.36$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Co		2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u> )		- 10(a) 00	VCI	$\checkmark$ 3 - Prevalence Index is $\leq 3.0^1$
1. <u>Carex crinita</u>	10	V		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
			FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Rubus pubescens</u>				
3. <u>Maianthemum canadense</u>			FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Onoclea sensibilis</u>			FACW	be present, unless disturbed or problematic.
5. <u>Rubus idaeus</u>			_FAC_	Definitions of Vegetation Strata:
6. <i>Impatiens capensis</i>				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Osmunda claytoniana</u>	2	N	<u>FAC</u>	at breast height (DBH), regardless of height.
8. <u>Ranunculus abortivus</u>	1	<u>    N     </u>	<u>FAC</u>	Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
		= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1				
			·	
2				
3			·	Hydrophytic Vegetation
4				Present? Yes <u>√</u> No
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate Feature is a hardwood swamp dominated set the second	sheet.) ed hy hl	ack as	h and su	gar maple in capopy and fringed
sedge and dwarf raspberry in the grour	•			gai maple in carlopy and imiged

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth		Matrix				x Features						
(inches)	Color (r	noist)	%	Color (r	noist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
	<u>10YR</u>	2/1	100						SIL			
	<u>7.5R</u>	4/2	_90_	5YR	4/3		_C_	_M_	SIL			
	5YR	4/3	_85_	5YR	4/6		_C_	_M_	SIL			
14-20	5YR	4/3	_80_	5YR	4/6	_20_	_C_	_M_	SIL			
						·						
			<u> </u>									
1									2			
<sup>1</sup> Type: C=C Hydric Soil		ı, D=Depl	etion, RM=	Reduced I	Matrix, MS	S=Masked	Sand Gra	iins.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils <sup>3</sup> :		
Histosol				Polyva	alue Belov	v Surface	(S8) ( <b>LRR</b>	R,		luck (A10) (LRR K, L, MLRA 149B)		
	pipedon (A2	)			<b>RA 149B</b> )					Prairie Redox (A16) (LRR K, L, R)		
	istic (A3)	4						.RA 149B)				
	en Sulfide (A d Layers (A				-	Matrix (F2	1) ( <b>LRR K,</b>	L)	Dark Surface (S7) (LRR K, L)			
	d Below Dar		e (A11)		ted Matrix		)			Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)		
	ark Surface		()			face (F6)			Iron-Manganese Masses (F12) (LRR K, L, R)			
	Aucky Miner					Surface (F			Piedmont Floodplain Soils (F19) (MLRA 149B)			
Sandy C	Gleyed Matri	x (S4)		Redox	Depress	ions (F8)			Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )			
Sandy F	Redox (S5)								Red Parent Material (F21)			
	d Matrix (S6)								Very Shallow Dark Surface (TF12)			
Dark Su	Irface (S7) (	LRR R, M	ILRA 149E	<b>B</b> )					Other (	(Explain in Remarks)		
<sup>3</sup> Indicators o	of hydrophyti	c vegetat	ion and we	etland hydro	ology mus	t be prese	ent, unless	disturbed	or problematic	).		
Restrictive		-										
Туре:												
Depth (in	ches):								Hydric Soil Present? Yes _ ✓ No			
Remarks:												
Soils obs	served to	o be si	It loam	with re-	dox be	low the	e top la	iyer.				



wirc1013f\_w1\_SW

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling Date: 2020-05-22
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Sampling Point: <u>wirc1013f_w2</u>
Investigator(s): EJO/JSW		
Landform (hillslope, terrace, etc.): <u>Depression</u> Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.44</u> Soil Map Unit Name: <u>Gogebic, very stony-Pence, very stony</u> Are climatic / hydrologic conditions on the site typical for this tim	Long: <u>-9</u>	0.481747 Datum: WGS84 Detum: WGS84
Are Vegetation, Soil, or Hydrology signif Are Vegetation, Soil, or Hydrology natur SUMMARY OF FINDINGS – Attach site map sho	ficantly disturbed? Are "Norma rally problematic? (If needed,	al Circumstances" present? Yes <u>√</u> No explain any answers in Remarks.)
Hydrophytic Vegetation Present? Yes <u>✓</u> No <u>Hydric Soil Present?</u> Yes <u>✓</u> No <u>Wetland Hydrology Present?</u> Yes <u>✓</u> No <u>Remarks:</u> (Explain alternative procedures here or in a separat Feature is a seasonally saturated hardwood fringed sedge in the ground layer. Feature occurs near forest trail.	within a Wetland? If yes, optional Wetland te report.) od swamp dominated by	
HYDROLOGY Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that	apply)	Surface Soil Cracks (B6)
✓       High Water Table (A2)       Aquatic         ✓       Saturation (A3)       Marl Dep         Water Marks (B1)       Hydroge         Sediment Deposits (B2)       Oxidized         Drift Deposits (B3)       Presence	n Sulfide Odor (C1) I Rhizospheres on Living Roots (C3) e of Reduced Iron (C4)	<ul> <li>Drainage Patterns (B10)</li> <li>Moss Trim Lines (B16)</li> <li>Dry-Season Water Table (C2)</li> <li>Crayfish Burrows (C8)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> <li>Stunted or Stressed Plants (D1)</li> </ul>
Algal Mat or Crust (B4) Recent I	ron Reduction in Tilled Soils (C6)	✓ Geomorphic Position (D2)

Iron Deposits (B5)	Thin Muck Surface (C	C7) Shallow Aquitard (D3)
Inundation Visible on A	erial Imagery (B7) Other (Explain in Ren	marks) Microtopographic Relief (D4)
Sparsely Vegetated Co	ncave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present?	Yes No _ ✓ Depth (inches):	
Water Table Present?	Yes _ ✓ No Depth (inches): <u>10</u>	
Saturation Present? (includes capillary fringe)	Yes _ ✓ No Depth (inches): <u>8</u>	Wetland Hydrology Present? Yes No
Describe Recorded Data (st	tream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:		

Feature is seasonally saturated, with standing water present in wetland but not at sample point. Wetland has variable microtopography with scattered depressions and hummocks.

Sampling Point: wirc1013f\_w2

	Absolute		t Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species		
1. <u>Acer rubrum</u>				That Are OBL, FACW, or FAC: (A)		
2. <u>Betula alleghaniensis</u>				Total Number of Dominant		
3. <u>Acer saccharum</u>			FACU	Species Across All Strata: (B)		
4. <u>Fraxinus nigra</u>				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC: <u>75</u> (A/B)		
6				Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
	32	= Total Co	ver	OBL species <u>17</u> x 1 = <u>17</u>		
Sapling/Shrub Stratum (Plot size: 15 )				FACW species <u>11</u> x 2 = <u>22</u>		
1. <u>Acer saccharum</u>	5	Y	FACU	FAC species <u>30</u> x 3 = <u>90</u>		
2				FACU species <u>11</u> x 4 = <u>44</u>		
3				UPL species <u>0</u> x 5 = <u>0</u>		
4				Column Totals: <u>69</u> (A) <u>173</u> (B)		
5				Prevalence Index = B/A =2.51		
6				Hydrophytic Vegetation Indicators:		
7				1 - Rapid Test for Hydrophytic Vegetation		
·				2 - Dominance Test is >50%		
Herb Stratum (Plot size:5)	<u>5</u> = Total Cover			$\_$ 3 - Prevalence Index is ≤3.0 <sup>1</sup>		
1. <u>Carex crinita</u>	15	V		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)		
2. Polygonum cilinode				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)		
3. <u>Rubus pubescens</u>			FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must		
4. <u>Ulmus americana</u>			FACW	be present, unless disturbed or problematic.		
5. <u>Solidago gigantea</u>			FACW	Definitions of Vegetation Strata:		
6. <u>Ranunculus abortivus</u>				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter		
7. Matteuccia struthiopteris			<u>FAC</u>	at breast height (DBH), regardless of height.		
8. <u>Scutellaria lateriflora</u>	1	<u>     N     </u>	OBL	Sapling/shrub – Woody plants less than 3 in. DBH		
9. <u>Glyceria cf. striata</u>	1	<u>     N     </u>	OBL	and greater than or equal to 3.28 ft (1 m) tall.		
10. <u>Rubus idaeus</u>	1	N	FAC	Herb – All herbaceous (non-woody) plants, regardless		
11. <u>Panax trifolius</u>	1	<u>    N     </u>		of size, and woody plants less than 3.28 ft tall.		
12. Maianthemum canadense	1	Ν	FACU	Woody vines – All woody vines greater than 3.28 ft in		
	38	= Total Co	ver	height.		
Woody Vine Stratum (Plot size: 30)						
1,						
2			·			
3				Hydrophytic Vegetation		
4				Present? Yes <u>√</u> No		
Demortos (Includo aboto pumbero baro en en entre		= Total Co	ver			
Remarks: (Include photo numbers here or on a separate Feature is a hardwood swamp with red		domina	nt in the	canopy and fringed sedge dominant		
in the ground layer. Easture was soled	•					

in the ground layer. Feature was selectively harvested and black ash stumps are present. Sugar maple and yellow birch mainly occur on hummocks scattered throughout wetland.

SOIL	
------	--

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth Matrix				Redox	x Features		0					
(inches)	Color (n		%	Color (n	noist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	_
0-1	<u>10YR</u>	2/2	100			_0_			_MMI_	silt loa	am	_
	<u>10YR</u>	2/1	100			_0_			SIL			_
	<u>7.5YR</u>	3/2	_95_	<u>7.5YR</u>	4/4	_5_	_C_	_M_	COSL			_
5-8	<u>7.5YR</u>	4/2	_90_	<u>7.5YR</u>	4/4	_10_	_C_	_M_	COSL			
8-18	5YR	4/3	_80_	5YR	4/6	_20_	_C_	_M_	COSL			
												_
	_			_								
												_
												_
												_
<sup>1</sup> Type: C=C	<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											matic Hydric Soils <sup>3</sup> :	
Histosol							(S8) ( <b>LRF</b>	RR,		2 cm Muck (A10) (LRR K, L, MLRA 149B)		
	pipedon (A2)	)			RA 149B)						ox (A16) ( <b>LRR K, L, R</b> )	
	istic (A3)	4)				. , .		RA 1498				
	en Sulfide (A d Layers (A5			-	-	Matrix (F2	l) ( <b>LRR K</b>	, L)	Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L)			
	d Below Dar		(A11)	-	ed Matrix		)		-		(S9) (LRR K, L)	
	ark Surface (		(,,,,,)		Dark Sur						(86) (Litter, L) lasses (F12) (LRR K, L, R	)
	/ucky Minera	. ,		Deplet	ed Dark S	Surface (F	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)			
Sandy G	Bleyed Matrix	x (S4)		Redox Depressions (F8)					Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
	Redox (S5)									arent Materi		
	Matrix (S6)			<b>P</b> \						<ul> <li>Very Shallow Dark Surface (TF12)</li> <li>Other (Explain in Remarks)</li> </ul>		
Dark Su	rface (S7) ( <b>L</b>	_RR R, M	LRA 1498	3)					Other	(Explain in F	Remarks)	
			on and we	etland hydro	logy mus	t be prese	ent, unless	disturbed	or problemation	).		
Restrictive	• •											
	ravel/cobb								Hydric Soil	Present?	Yes 🗸 No	
Depth (In Remarks:	Depth (inches):     18.0       Hydric Soil Present?     Yes _ ✓ _ No											
	served to	he lo	amv m	ucky mi	neral d	over si	lt loam	over c	oarse san	dv loam	over gravel Third	d
Soils observed to be loamy mucky mineral over silt loam over coarse sandy loam over gravel. Third and fourth layers are not thick enough to meet the requirements of Redox Dark Surface and												
Depleted Matrix, respectively; however, their combined thickness qualifies as a hydric indicator. Red												
Parent Material is also met.												



wirc1013f\_w2\_NW



wirc1013f\_w2\_SE

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

WETLAND IDENTIFICATION				
Project name: Line 5 Relocation Project	Evaluator(s): EJO/JSW			
File #: wirc1013	Date of visit(s): 2020-05-22			
Location: PLSS: <u>sec 22 T046N R001W</u>	Ecological Landscap Superior Mineral Ranges	pe:		
Lat: <u>46.447699</u> Long: <u>-90.482384</u>	Watershed: LS11, Potato River			
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>				
SITE DESCRIPTION				
Soils: Mapped Type(s):	WWI Class: <sup>T3K</sup>			
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes	Wetland Type(s): PFO/PEM - hardwood swamp/fresh wet meadow complex			
Field Verified:				
Series not verified. Forested wetland soils were observed to be silty loam with prominent redox and mucky mineral over silt loam over course sandy loam with a gravel restrictive layer. In wet meadow, soils were observed to		Wetland Area Impacted 1.7352		
be silty loam over sandy loam with redox concentrations.	Vegetation: Plant Community Description(s):			
Hydrology: The wetland complex is primarily seasonally saturated, with standing water observed in parts of complex at time of survey. Part of the wetland's hydrology is likely influenced by rutting from previous logging operations.	The forested wetland community is dominated by a canopy of red maple, black ash, and sugar maple, and an herbaceous layer of fringed sedge and dwarf raspberry. The wet meadow community is dominated primarily by fringed sedge.			

# SITE MAP

### SECTION 1: Functional Value Assessment

,,			Functional Value Assessment
HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	Ν	Y	Used for recreation (hunting, birding, hiking, etc.). List: birding, hunting, hiking
2	Ν	N	Used for educational or scientific purposes
3	Ν	Y	Visually or physically accessible to public
4	Ν	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Ν	N	In or adjacent to RED FLAG areas List:
6	Ν	Y	Supports or provides habitat for endangered, threatened or special concern species
7	Ν	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	Y	Y	3 or more strata present (>10% cover)
3	Ν	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	Y	Y	100 m buffer – natural land cover <a>&gt;</a>
5	Ν	N	Occurs in a Joint Venture priority township
6	Ν	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	V	Y	Part of a large habitat block that supports area sensitive species
9	Y N	Y Y	Ephemeral pond with water present $\geq$ 45 days
10		Y Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N		Standing water provides habitat for amphibians and aquatic invertebrates
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA	Ν	N	Fish and Aquatic Life Habitat
<u>га</u> 1	NI	NI	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	
4 SP	N	N	Vegetation is inundated in spring Shoreline Protection
5P 1	NI	NI	
	Ν	N	Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
2	Ν	N	water levels or high flows – if no, not applicable
3	N	N	Densely rooted emergent or woody vegetation
ST	IN		Storm and Floodwater Storage
1	N	Y	Basin wetland, constricted outlet, has through-flow <u>or</u> is adjacent to a stream
2	N	Y	Water flow through wetland is NOT channelized
3	Y	Y	Dense, persistent vegetation
4	N N	N N	Evidence of flashy hydrology
5	N	Y	Point or non-point source inflow
6	N	ř N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with $\leq 10\%$ wetland
8	N	Y	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ	IN		Water Quality Protection
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 N	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	N N	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	N N	Discharge to surface water
9	N	N N	Natural land cover in 100m buffer area < 50%
GW	IN		Groundwater Processes
1	N	N	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N N	N N	Wetland remains saturated for an extended time period with no additional water inputs
4		N N	Wetland soils are organic
4 5	N N	N N	Wetland is within a wellhead protection area
5	IN	IN	

WH-7: The wetland is part of a larger habitat block with potential to host SGCN species. ST-5: The wetland likely receives stormwater from the surrounding uplands and logging trails. WH-6: The wetland has variable microtopography, supporting both hydrophytic and more upland-associated flora.

# 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	White-throated sparrow, least flycatcher, and other songbirds were heard in vicinity of wetland
	Y	Herpetofauna, mammals
Y	Y	Bear prints were observed in the wet meadow.

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Carex crinita*			PFO/PEM	Patchy
Acer saccharum*			PFO	Rare
Fraxinus nigra*			PFO	Rare
Rubus pubescens*			PFO	Rare
Alnus incana			PFO	Rare
Betula alleghaniensis			PFO	Rare
Polygonum cilinode			PFO	Rare
Scirpus cf. hattorianus			PEM	Rare
Impatiens capensis			PFO/PEM	Barren
Maianthemum canadense			PFO	Barren
Matteuccia struthiopteris			PFO/PEM	Barren
Onoclea sensibilis			PFO/PEM	Barren
Ranunculus abortivus			PFO	Barren
Rubus idaeus			PFO	Barren
Acer rubrum			PFO	Barren
Osmunda claytoniana			PFO	Barren
Solidago gigantea			PFO	Barren
Ulmus americana			PFO	Barren
Glyceria cf. striata			PFO	Barren
Panax trifolius			PFO	Barren
Rubus idaeus			PFO	Barren
Scutellaria lateriflora			PFO	Barren

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

The wetland complex as a whole has high floristic integrity, with good native species diversity, well-developed strata, 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
Х	x		М	С	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		м	0	Removal of herbaceous stratum – mowing,
			IVI	C	grading, earthworms, etc.
Х	x		М	С	Removal of tree or shrub strata – logging, unprescribed fire
Х	Х		М	С	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)

Parts of the wetland have been previously harvested for timber. Compaction from logging equipment has likely artificially influenced parts of the wetland's hydrology. Earthworms are present in the surrounding forest, with the potential to impact the wetland's herbaceous layer.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE									
	Low	Medium	High	Exceptional	NA					
Floristic Integrity			$\checkmark$							
Human Use Values		$\checkmark$								
Wildlife Habitat			$\checkmark$							
Fish and Aquatic Life Habitat	$\checkmark$									
Shoreline Protection					$\checkmark$					
Flood and Stormwater Storage		$\checkmark$								
Water Quality Protection			$\checkmark$							
Groundwater Processes		$\checkmark$								

FUNCTION	RATIONALE						
Floristic Integrity	The wetland has a good diversity of native species, well-developed strata, and minimal presence of exotic species.						
Human Use Values	The wetland is a part of a larger forest that offers multiple recreational opportunities, such as hunting, birding, and hiking.						
Wildlife Habitat	The wetland is a part of a large intact forest that has the potential to support a high diversity of wildlife.						
Fish and Aquatic Life Habitat	The wetland had few areas of standing water at the time of survey, but may be able to host some aquatic life.						
Shoreline Protection	N/A						
Flood and Stormwater Storage	The wetland likely receives and stormwater from surround uplands and intersecting forest trails.						
Water Quality Protection	The wetland is a part of a larger intact forest and largely consists of dense and persistent vegetation.						
Groundwater Processes	The wetland is a part of a larger intact forest 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

Project/Site: Line 5 Relocation Project	City/County: Iror	) San	npling Date: <u>2020-05-22</u>
Applicant/Owner: <u>Enbridge</u>		State: Wisconsin S	ampling Point: <u>wirc1013_u1</u>
Investigator(s): <u>EJO/JSW</u>	Section, Township	, Range: <u>sec 22 T046N R(</u>	001W
Landform (hillslope, terrace, etc.): Talf	-	convex, none): <u>None</u>	
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.447	527	Long: <u>-90.482329</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-C	athro complex, 0 to 6	percent slopes NWI classification	:
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes <u>√</u> ١	No (If no, explain in Remai	rks.)
Are Vegetation, Soil, or Hydrology significa	antly disturbed?	Are "Normal Circumstances" prese	nt? Yes _∡ No
Are Vegetation, Soil, or Hydrology naturall	y 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? Hydric Soil Present?	Yes No _ ✓ Yes No _ ✓	within a Watland? Vac No (
Wetland Hydrology Present?	Yes No_✓	_ If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedu Feature is a mesic hardwo mayflower dominant in the		ort.) d by sugar maple and red maple, with Canada

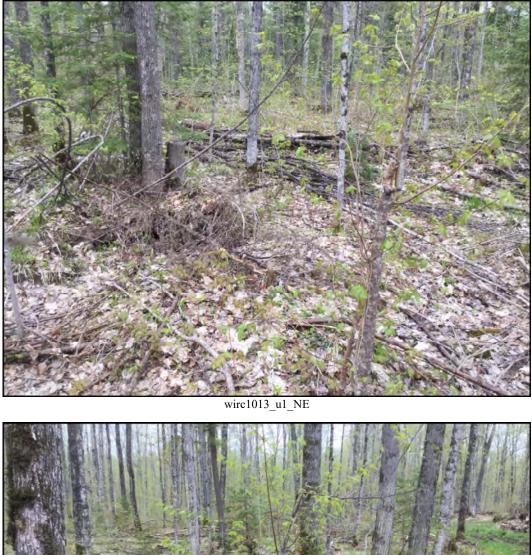
## HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 F	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 Sol	ils (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)
Field Observations:	
Surface Water Present? Yes No _ ✓ Depth (inches):	
Water Table Present? Yes No _✓ Depth (inches):	
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No∕
	ions), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	ions), if available:
	ions), if available:
	ions), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:

Sampling Point: wirc1013\_u1

Tree Stratum (Plot size: 30 )	Absolute	Dominan Species?	t Indicator	Dominance Test worksheet:
1. Acer saccharum				Number of Dominant Species
2. Acer rubrum				That Are OBL, FACW, or FAC: (A)
				Total Number of Dominant Species Across All Strata:4(B)
3				$\frac{-4}{-1}$
4				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	30	_ = Total Co	ver	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $0 \times 2 = 0$
1. <u>Betula alleghaniensis</u>	2	<u>     N     </u>	FAC_	FAC species $24$ x 3 = $72$
2				FACU species         27         x 4 =         108           UPL species         0         x 5 =         0
3				OF L species         O         X 3 -         O           Column Totals:
4			. <u> </u>	
5				Prevalence Index = B/A = <u>3.5294117647058822</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		_ = Total Co		2 - Dominance Test is >50%
Herb Stratum (Plot size:5 )				$3$ - Prevalence Index is $\leq 3.0^1$
1. <u>Maianthemum canadense</u>	10	Y	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. <u>Trientalis borealis</u>		<u> </u>	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Acer saccharum				
4. <u>Carex cf. arctata</u>			1/100	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Dryopteris intermedia</u>			FAC	Definitions of Vegetation Strata:
6				
7				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH
9			·	and greater than or equal to 3.28 ft (1 m) tall.
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
	21	_ = Total Co		height.
Woody Vine Stratum (Plot size: 30 )			vei	
1				
2				
3				Hydrophytic Vegetation
4			·	Present? Yes No ✓
		_ = Total Co	ver	
Remarks: (Include photo numbers here or on a separate Sample plot recorded in mesic hardwo	sneet.) od fores	st domin	ated by	sugar maple and red maple in the
canopy and Canada mayflower in the c				
	,	. <u>,</u>		

Profile Dese	cription: (Describe t	o the dep	th needed	to docun	nent the i	ndicator	or confirm	the absence of	indicators	s.)	
Depth	Matrix				x Features						
(inches)	Color (moist)	%	Color (r	noist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
	<u>7.5YR 3/2</u>	100						SIL			
3-6	<u>7.5YR 3/3</u>	100						SICL _			
_6-20	<u>5YR 4/4</u>	98	5YR	5/6	2	С	M	SICL			
					·						
					·						
					·						
					·						
<sup>1</sup> Type: C=C	oncentration, D=Depl	etion, RM=	Reduced I	Matrix, MS	S=Masked	Sand Gra	ains.	<sup>2</sup> Location: F	PL=Pore Li	ining, M=Mat	rix.
Hydric Soil								Indicators for			
Histosol	l (A1)		Polyva	alue Belov	v Surface	(S8) ( <b>LRF</b>	RR,	2 cm Muc	ck (A10) (L	.RR K, L, ML	RA 149B)
	pipedon (A2)			<b>RA 149B</b> )						k (A16) ( <b>LRR</b>	
	istic (A3)						RA 149B)			Peat (S3) (L	.RR K, L, R)
	en Sulfide (A4)		-	-	/lineral (F1		, L)	Dark Surface (S7) (LRR K, L)			
	d Layers (A5) d Rolow Dark Surface	(11)	-	-	Matrix (F2)	)		Polyvalue Below Surface (S8) (LRR K, L)			
	d Below Dark Surface ark Surface (A12)	e (ATT)		ted Matrix	face (F6)			<ul> <li>Thin Dark Surface (S9) (LRR K, L)</li> <li>Iron-Manganese Masses (F12) (LRR K, L, R)</li> </ul>			
	Aucky Mineral (S1)				Surface (F	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)			
	Gleyed Matrix (S4)			Depress		.,		Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )			
	Redox (S5)			-	( - )			Red Parent Material (F21)			
	d Matrix (S6)							Very Shallow Dark Surface (TF12)			
Dark Su	urface (S7) (LRR R, M	ILRA 1498	3)					Other (Ex	plain in Re	emarks)	
3											
	of hydrophytic vegetati Layer (if observed):	ion and we	etland hydro	ology mus	t be prese	ent, unless	disturbed	or problematic.			
	Layer (II observed):										
Type:	):							Hydric Soil Pr	asont?	Vos	No 🗸
	ches):							Tryane Son Pr	esent:	163	
Remarks:	anned to be al	ltı laan									
20112 003	served to be si	ity ioan	novers	Sity Cla	iy ioan	Ι.					





wirc1013\_u1\_SW

Project/Site: Line 5 Relocation Project	City/County: Iror	ן Sa	ampling Date: <u>2020-05-22</u>
Applicant/Owner: Enbridge		State: Wisconsin	Sampling Point: wirc1013_u2
Investigator(s): <u>JSW/EJO</u>	Section, Township	, Range: <u>sec 22 T046N F</u>	R001W
		convex, none): <u>None</u>	
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.445(	)45	Long: <u>-90.481745</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Ca	<u>athro complex, 0 to 6</u>	percent slopes NWI classification	on:
Are climatic / hydrologic conditions on the site typical for this time o	f year?Yes I	No (If no, explain in Rem	arks.)
Are Vegetation, Soil, or Hydrology significant	ntly disturbed?	Are "Normal Circumstances" pres	sent? Yes _ ✓ No
Are Vegetation, Soil, or Hydrology naturally	problematic?	(If needed, explain any answers i	n Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No∕ No∕	Is the Sampled Area within a Wetland? Yes No∕
Wetland Hydrology Present?	Yes	No <u>_</u>	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced The upland sample point and various species of fer	is located i		dwood forest dominated by sugar maple, wild leek,

### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 Sc	bils (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)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No _ ✓ Depth (inches):	
Water Table Present?       Yes No _ ✓ _ Depth (inches):         Saturation Present?       Yes No _ ✓ _ Depth (inches):         (includes capillary fringe)       Ves No _ ✓ _ Depth (inches):	Wetland Hydrology Present? Yes No∕
Saturation Present? Yes No ✓ Depth (inches):	
Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe)	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)	
Saturation Present?       Yes No       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec         Remarks:       Remarks:	tions), if available:
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       The overall topography is flat with frequent microdepression	tions), if available:
Saturation Present?       Yes No       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec         Remarks:       Remarks:	tions), if available:
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       The overall topography is flat with frequent microdepression	tions), if available:
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       The overall topography is flat with frequent microdepression	tions), if available:
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       The overall topography is flat with frequent microdepression	tions), if available:
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       The overall topography is flat with frequent microdepression	tions), if available:
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       The overall topography is flat with frequent microdepression	tions), if available:
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       The overall topography is flat with frequent microdepression	tions), if available:

Sampling Point: wirc1013\_u2

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. <u>Acer saccharum</u>				Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
2. <u>Betula alleghaniensis</u>				
3				Total Number of Dominant Species Across All Strata: 6 (B)
4				、 ,
5				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)
6				
				Prevalence Index worksheet:
7		= Total Co		Total % Cover of:         Multiply by:           OBL species          x 1 =
Sapling/Shrub Stratum (Plot size: 15 )	_40_		vei	FACW species $0$ $x^2 = 0$
	20	V	EACU	FAC species $30 \times 3 = 90$
1. <u>Acer saccharum</u>				FACU species x 4 =388
2				UPL species x 5 =
3				Column Totals: <u>127</u> (A) <u>478</u> (B)
4				Prevalence Index = B/A = 3.763779527559055
5				
6				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
_	_20_	= Total Co	ver	$3$ - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Allium tricoccum</u>				data in Remarks or on a separate sheet)
2. <u>Acer saccharum</u>				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Oryzopsis asperifolia</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. Dryopteris intermedia		<u>     Y     </u>		be present, unless disturbed or problematic.
5. <u>Carex pensylvanica</u>				Definitions of Vegetation Strata:
6. Athyrium angustum	5	<u>     N</u>	_FAC_	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Gymnocarpium dryopteris</u>	5	<u>     N     </u>	<u>FACU</u>	at breast height (DBH), regardless of height.
8. <u>Maianthemum canadense</u>	5	<u>     N     </u>	<u>FACU</u>	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Trillium cernuum</u>	5	<u>     N     </u>	_FAC_	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Claytonia caroliniana</u>	2	<u>     N     </u>	<u>FACU</u>	Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	82	= Total Co	ver	height.
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes No ✓
	_	= Total Co	ver	Present? Yes <u>No /</u>
Remarks: (Include photo numbers here or on a separate				
The vegetation is typical of an upland r	nesic ha	ardwood	forest.	
L				

Profile Des	cription: (Describe t	o the depth	n needed to docum	ent the i	indicator	or confirm	the absence of indic	ators.)
Depth	Matrix			Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	<u>7.5YR 2.5/2</u>	100		_0_			<u>     L                               </u>	
_3-20_	<u>5YR 3/3</u>	100		0			SIL	
					·			
					<u> </u>			
							·	
							·	
1			De duce e d Metrice MO				21	
Hydric Soil	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	=Masked	d Sand Gra	ains.		ore Lining, M=Matrix.
-			Debarekse Delev	Cumferes				-
Histoso	pipedon (A2)	_	Polyvalue Below MLRA 149B)	/ Surface	(58) ( <b>LR</b>	КК,		0) ( <b>LRR K, L, MLRA 149B</b> ) Redox (A16) ( <b>LRR K, L, R</b> )
	istic (A3)		Thin Dark Surface	co (S0) (I		DA 140B)		eat or Peat (S3) ( <b>LRR K, L, R</b> )
	en Sulfide (A4)	_	Loamy Mucky M				Dark Surface (	
	d Layers (A5)	-	Loamy Gleyed N			, _/		w Surface (S8) ( <b>LRR K, L</b> )
	d Below Dark Surface	(A11)	Depleted Matrix		-,		-	ace (S9) ( <b>LRR K, L</b> )
	ark Surface (A12)		 Redox Dark Sur		)			e Masses (F12) (LRR K, L, R)
	Aucky Mineral (S1)	_	Depleted Dark S	Surface (F	=7)		-	dplain Soils (F19) ( <b>MLRA 149B</b> )
Sandy 0	Gleyed Matrix (S4)	_	Redox Depressi	ons (F8)			Mesic Spodic (	TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)						Red Parent Ma	iterial (F21)
Stripped	d Matrix (S6)							Dark Surface (TF12)
Dark Su	Irface (S7) (LRR R, M	LRA 149B)					Other (Explain	in Remarks)
	of hydrophytic vegetati	on and wetl	and hydrology must	t be prese	ent, unless	disturbed	or problematic.	
Restrictive	Layer (if observed):							
Туре:								
Depth (in	ches):						Hydric Soil Present	t? Yes No∕
Remarks:								
No indica	ators of hydric	soil wer	e observed.					
	<b>,,</b>							





wirc1013\_u2\_W

Project/Site: Line 5 Relocation Project	City/County: <u>Iron</u> Sampling Date: <u>2020-05-21</u>
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wira006f_xw</u>
Investigator(s): <u>EJO/JSW</u>	Section, Township, Range: <u>sec 22 T046N R001W</u>
	cal relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.448358</u>	B. Long: <u>-90.484005</u> Datum: <u>WGS84</u>
Soil Map Unit Name:	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? 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 pro	blematic? (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         Hydric Soil Present?       Yes ✓       No         Wetland Hydrology Present?       Yes ✓       No	Is the Sampled Area within a Wetland? Yes ✓ No If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report Feature is a seasonally saturated hardwood sv	
HYDROLOGY	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 R	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 So	ils (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)
Field Observations:	
Surface Water Present? Yes No _ ✓ Depth (inches):	
Water Table Present? Yes <u>✓</u> No Depth (inches): <u>1</u>	
Saturation Present? Yes <u>✓</u> No Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes∕ No
Saturation Present? Yes <u>✓</u> No Depth (inches): <u>0</u> (includes capillary fringe)	
Saturation Present?       Yes _ ✓ _ No Depth (inches): 0	
Saturation Present? Yes <u>✓</u> No Depth (inches): <u>0</u> (includes capillary fringe)	tions), if available:
Saturation Present?       Yes _ ✓       No       Depth (inches): 0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	tions), if available:
Saturation Present?       Yes _ ✓       No       Depth (inches): 0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	tions), if available:
Saturation Present?       Yes _ ✓       No       Depth (inches): 0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	tions), if available:
Saturation Present?       Yes _ ✓       No       Depth (inches): 0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	tions), if available:
Saturation Present?       Yes _ ✓       No       Depth (inches): 0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	tions), if available:
Saturation Present?       Yes _ ✓       No       Depth (inches): 0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	tions), if available:
Saturation Present?       Yes _ ✓       No       Depth (inches): 0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	tions), if available:
Saturation Present?       Yes _ ✓       No       Depth (inches): 0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	tions), if available:

Sampling Point: wira006f\_xw

Trac Stratum (Dist size) 20	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )			<u>Status</u>	Number of Dominant Species
1. <u>Acer rubrum</u>				That Are OBL, FACW, or FAC: $4$ (A)
2. <u>Betula alleghaniensis</u>				Total Number of Dominant
3. <u>Fraxinus pennsylvanica</u>				Species Across All Strata: (B)
4		·		Percent of Dominant Species
5		·		That Are OBL, FACW, or FAC: <u>80</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 )				FACW species <u>23</u> x 2 = <u>46</u>
1				FAC species x 3 =84
2				FACU species <u>5</u> x 4 = <u>20</u>
				UPL species x 5 =
3				Column Totals: <u>56</u> (A) <u>150</u> (B)
4				Prevalence Index = B/A = 2.6785714285714284
5				
6				Hydrophytic Vegetation Indicators:
7				<ul> <li> 1 - Rapid Test for Hydrophytic Vegetation</li> <li> 2 - Dominance Test is &gt;50%</li> </ul>
	0	= Total Co	over	$\sim$ 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5)	4.0			4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Carex intumescens</u>			FACW	data in Remarks or on a separate sheet)
2. <u>Maianthemum canadense</u>		<u> </u>	<u>FACU</u>	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Carex bromoides</u>			<u>FACW</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Matteuccia struthiopteris</u>			FAC	be present, unless disturbed or problematic.
5. <u>Rubus pubescens</u>	2	<u>         N      </u>	<u>FACW</u>	Definitions of Vegetation Strata:
6. Dryopteris intermedia	1	<u>     N    </u>	FAC	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Lilium michiganense</u>	1	N	<u>FACW</u>	at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
		= Total Co	over	height.
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3				Hydrophytic Vegetation
4	_			Present? Yes <u>√</u> No
		= Total Co	over	
Remarks: (Include photo numbers here or on a separate Feature is a red maple-dominated hard		wamn v	with area	ter bladder sedge dominant in the
groundl ayer. Black ash slash appears		•	-	•

SOIL	S	ο		
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Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Ma			Redo	x Features					
(inches)	Color (mois	st) %	Color (	moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
	<u>7.5YR 3</u>	/2			_0_			MMI	loamy	
3-20	5YR 4	/3 85	_5YR	4/6	15	С	Μ	SIL	2	
			_0111							
		·								
		·			·					
1										
	oncentration, D	=Depletion, RM	I=Reduced	Matrix, MS	S=Masked	Sand Gra	ains.		n: PL=Pore Lining, M=Matrix.	
Hydric Soil			Doba		. Curfoco				s for Problematic Hydric Soils <sup>3</sup> :	
Histosol Histic E	pipedon (A2)			alue Belov RA 149B)		(58) ( <b>LR</b>	КК,		Muck (A10) ( <b>LRR K, L, MLRA 149B</b> )	
	listic (A3)			,		.RR R. MI	<b>.RA 149B</b> )	<ul> <li>Coast Prairie Redox (A16) (LRR K, L, R)</li> <li>5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</li> </ul>		
	en Sulfide (A4)			y Mucky N				Dark Surface (S7) ( <b>LRR K, L</b> )		
Stratifie	d Layers (A5)		Loam	y Gleyed I	Matrix (F2	)		Polyvalue Below Surface (S8) (LRR K, L)		
	d Below Dark S		·	ted Matrix	. ,			Thin Dark Surface (S9) (LRR K, L)		
	ark Surface (A1	,		k Dark Su	• •			Iron-Manganese Masses (F12) (LRR K, L, R)		
	Mucky Mineral (			ted Dark S		.7)		<ul> <li>Piedmont Floodplain Soils (F19) (MLRA 149B)</li> <li>Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</li> </ul>		
-	Sandy Gleyed Matrix (S4) Redox Depressions (F8) Sandy Redox (S5)						Red Parent Material (F21)			
-	d Matrix (S6)								Shallow Dark Surface (TF12)	
Dark Surface (S7) (LRR R, MLRA 149B)							-	(Explain in Remarks)		
	of hydrophytic ve	-	etland hydro	ology mus	t be prese	ent, unless	disturbed	or problemati	с.	
	Layer (if obser	ved):								
Type:										
Depth (in	Depth (inches):        Hydric Soil Present?   Yes   Yes							l Present? Yes _ ✓ No		
Remarks:										
Soils observed to be loamy mucky mineral over silt loam.										



wira006f\_xw\_E



wira006f\_xw\_W

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling Date: <u>2020-05-21</u>
Applicant/Owner: Enbridge		State: Wisconsin Sampling Point: wira006e_xw
Investigator(s): EJO/JSW		
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, conve	(, none): <u>Concave</u> Slope (%): <u>0-2%</u>
		-90.483363 Datum: WGS84
Soil Map Unit Name: <u>Gogebic, very stony-Pence, v</u>		
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 "No	ormal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If need	ed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site r	nap showing sampling point loc	ations, transects, important features, etc.
	No Is the Sampled A within a Wetland	
Wetland Hydrology Present? Yes _ ✓	No If yes, optional We	tland Site ID:
equipment.		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; che	ck all that apply)	Surface Soil Cracks (B6)
	Water-Stained Leaves (B9)	Drainage Patterns (B10)
	_ 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)
	_ 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)
Field Observations:		
Surface Water Present? Yes No _✓	_ Depth (inches):	

Water Table Present? Saturation Present? (includes capillary fringe)

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

Yes <u>✓</u> No \_\_\_\_ Depth (inches): <u>17</u>

Yes \_ ✓ No \_\_\_\_ Depth (inches): 16

Remarks:

Wetland is seasonally saturated and occurs on forest trail. Ruts and compaction in trail likely influence wetland hydrology. Water table and saturation observed.

Wetland Hydrology Present? Yes \_\_\_\_

No

Sampling Point: wira006e\_xw

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: <u>30</u> )	% Cover	Species?	Status	Number of Dominant Species		
1				That Are OBL, FACW, or FAC:	1	(A)
2			·	Total Number of Dominant		
3				Species Across All Strata:	1	(B)
4				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC:	100	(A/B)
6				Prevalence Index worksheet:		
7				Total % Cover of:	Multiply by:	
	0	= Total Co	ver	OBL species <u>45</u> x		
Sapling/Shrub Stratum (Plot size: 15 )				FACW species <u>6</u> x		
1,				FAC species <u>2</u> x	(3 = 6	_
				FACU species <u>0</u> x	(4 =	_
2				UPL species <u>0</u> x	<pre>&lt; 5 =</pre>	_
3				Column Totals: <u>53</u> (A	A) <u>63</u>	(B)
4				Prevalence Index = B/A =	<b>1.188679245283018</b>	8
5 6				Hydrophytic Vegetation Indica	ators:	
				1 - Rapid Test for Hydrophy		
7				2 - Dominance Test is >50%	-	
		= Total Co	ver	$\sim$ 3 - Prevalence Index is $\leq 3.0^1$		
Herb Stratum (Plot size: <u>5</u> )				4 - Morphological Adaptatio	ons <sup>1</sup> (Provide sup	porting
1. <u>Carex crinita</u>		<u> </u>	<u>OBL</u>	data in Remarks or on a	•	
2. <u>Scirpus cf. hattorianus</u>			<u>OBL</u>	Problematic Hydrophytic Ve	egetation' (Explai	n)
3. <u>Impatiens capensis</u>	2	N	<u>FACW</u>	<sup>1</sup> Indicators of hydric soil and we	tland hydrology n	auet
4. <u>Equisetum sylvaticum</u>	2	<u>     N                               </u>	FACW	be present, unless disturbed or		lust
5. <u>Osmunda claytoniana</u>	2	N	_FAC_	Definitions of Vegetation Stra	ita:	
6. <u>Onoclea sensibilis</u>	1	N	FACW	_		
7. <u>Ranunculus recurvatus</u>	1	N	FACW	Tree – Woody plants 3 in. (7.6 c at breast height (DBH), regardle		imeter
8				Sapling/shrub – Woody plants	less than 3 in. DI	зн
9				and greater than or equal to 3.2		
10				Herb – All herbaceous (non-woo	ody) plants, regar	dless
11				of size, and woody plants less th	han 3.28 ft tall.	
12				Woody vines - All woody vines	s greater than 3.2	8 ft in
	53	= Total Co	ver	height.		
Woody Vine Stratum (Plot size: <u>30</u> )						
1						
2						
3				Hydrophytic Vegetation		
4					No	
Remarks: (Include photo numbers here or on a separate s		= Total Co	ver			
Feature is a wet meadow dominated by		l sedae	. Sample	e is representative of fe	eature. Feat	ure
surrounded by recently harvested mesi	•	•	-			

SOIL
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Depth       Matrix       Redox Features       Type       Loc <sup>2</sup> Texture       Remarks         -0-3       10YR       2/1       100       0       SIL
0-3       10YR 2/1       100       0       SIL         3-5       10YR 2/1       70       0       SIL         3-5       7.5YR 4/3       30       0       SIL         5-10       7.5YR 4/3       90       5YR 4/6       10       C       M       SIL         10-20       5YR 4/4       80       5YR 4/6       20       C       M       SIL
3-5       10YR       2/1       70       0       SIL         3-5       7.5YR       4/3       30       0       SIL         5-10       7.5YR       4/3       90       5YR       4/6       10       C       M       SIL         10-20       5YR       4/4       80       5YR       4/6       20       C       M       SIL
3-5       7.5YR       4/3       30       0       SIL         5-10       7.5YR       4/3       90       5YR       4/6       10       C       M       SIL         10-20       5YR       4/4       80       5YR       4/6       20       C       M       SIL
5-10       7.5YR       4/3       90       5YR       4/6       10       C       M       SIL         10-20       5YR       4/4       80       5YR       4/6       20       C       M       SIL
10-20       5YR       4/4       80       5YR       4/6       20       C       M       SIL
Image:
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
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Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)       Polyvalue Below Surface (S8) (LRR R,       2 cm Muck (A10) (LRR K, L, MLRA 149B)         Histic Epipedon (A2)       MLRA 149B)       Coast Prairie Redox (A16) (LRR K, L, R)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)       5 cm Mucky Peat or Peat (S3) (LRR K, L, R)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (LRR K, L)       Dark Surface (S7) (LRR K, L)         Stratified Layers (A5)       Loamy Gleyed Matrix (F2)       Polyvalue Below Surface (S8) (LRR K, L)         Thick Dark Surface (A11)       Depleted Matrix (F3)       Thin Dark Surface (S9) (LRR K, L)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F6)       Iron-Manganese Masses (F12) (LRR K, L, R)         Sandy Redox (S5)       Kedox Depressions (F8)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Stripped Matrix (S6)       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.       Yes _ ✓ _ No
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Hydric Soil Present? Yes No Remarks:
Stripped Matrix (S6)      Very Shallow Dark Surface (TF12)        Dark Surface (S7) (LRR R, MLRA 149B)      Other (Explain in Remarks)         ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Restrictive Layer (if observed):         Type:            Depth (inches):
Dark Surface (S7) (LRR R, MLRA 149B) 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): No Remarks:
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.          Restrictive Layer (if observed):
Restrictive Layer (if observed):
Type:
Depth (inches):     Hydric Soil Present?     Yes _ ✓     No       Remarks:
Remarks:
Solis observed to be slit loam with redox below 5 inches.





wira006e\_xw\_W

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

WETLAND IDENTIFICATION					
Project name:	Evaluator(s):				
Line 5 Relocation Project	EJO/JSW				
File #:	Date of visit(s):				
wira006_x	2020-05-21				
Location:	Ecological Landscape:				
PLSS: sec 22 T046N R001W	Superior Mineral Ranges				
		-			
Lat: <u>46.448501</u> Long: <u>-90.484033</u>	Watershed:				
	LS11, Potato River				
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>					
Soils:	WWI Class:				
Mapped Type(s):	ТЗК				
Minocqua-Pleine-Cathro complex, 0 to 2 percent slopes. Gogebic, very	Wetland Type(s): PFO/PEM - fresh wet meadow/hardwood swamp complex				
stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes.					
Field Verified:					
Series not verified. In the emergent component soils were	Wetland Size:	Wetland Area Impacted			
observed to be a silt loam that became more reduced as	0.1234	0.1234			
depth increased. In the forested component soils were observed to be loamy mucky mineral over silt loam.	Vegetation:				
	Plant Community Description(s):				
Hydrology:	The wet meadow component is dominated by fringed sedge. This				
The hydrologic regime of the wetland is seasonally saturated.	component is surrounded by recently-harvested mesic hardwood forest. The forested component is a red maple-dominated hardwood swamp with greater bladder sedge dominant in the herbaceous				
The emergent component occurs on forest trail, with ruts and					
compaction in the trail likely influencing wetland hydrology.	strata. Black ash slash appears to be recently cut and is dense in the				
Standing water is present within the forested component.	wetland.				

## SITE MAP

## SECTION 1: Functional Value Assessment

			Functional Value Assessment
HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	Ν	Y	Used for recreation (hunting, birding, hiking, etc.). List: birding, hunting
2	Ν	N	Used for educational or scientific purposes
3	Ν	Y	Visually or physically accessible to public
4	Ν	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas
	IN	N	List:
6	Ν	Y	Supports or provides habitat for endangered, threatened or special concern species
7	Ν	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	Y	Y	3 or more strata present (>10% cover)
3	Ν	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	Y	Y	100 m buffer – natural land cover <a>&gt;</a>
5	Ν	N	Occurs in a Joint Venture priority township
6	Ν	Y	Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex, etc.)
7	NI	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
	N		plans
8	Y	Y	Part of a large habitat block that supports area sensitive species
9	Ν	N	Ephemeral pond with water present <u>&gt; 4</u> 5 days
10	Ν	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	Ν	N	Seasonally exposed mudflats present
12	Ν	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	Ν	N	Wetland is connected or contiguous with perennial stream or lake
2	Ν	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	Ν	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	Ν	N	Vegetation is inundated in spring
SP			Shoreline Protection
1	Ν	N	Along shoreline of a stream, lake, pond or open water area ( <a>2</a> 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	Ν	N	Densely rooted emergent or woody vegetation
ST			Storm and Floodwater Storage
1	Ν	Y	Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Ν	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	Ν	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	N	N	Provides substantial storage of storm and floodwater based on previous section
2	N	Y	Basin wetland <u>or</u> 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	Ν	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	Ν	N	Springs, seeps or indicators of groundwater present
2	Ν	N	Location near a groundwater divide or a headwater wetland
3	Ν	N	Wetland remains saturated for an extended time period with no additional water inputs
4	Ν	Y	Wetland soils are organic
5	Ν	Ν	Wetland is within a wellhead protection area

HU-1: The wetland is part of a larger forest which provides various recreational opportunities. WH-7: The developed tree strata and interspersion of habitat provides the potential to support SGCN species. GW-4: The hardwood swamp was observed to have a top layer of loamy mucky mineral soils.

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

Observed			
	Y	Hermit thrush, white-throated sparrow, other songbirds heard in vicinity of wetland	
	Y	Mammals, herpetofauna, 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 invertebrates

#### **SECTION 2: Floristic Integrity**

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

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Carex crinita*			PEM	Patchy
Equisetum sylvaticum			PEM	Barren
Impatiens capensis			PEM	Barren
Onoclea sensibilis			PEM	Barren
Osmunda claytoniana			PEM	Barren
Polygonum cilinode			PEM	Barren
Ranunculus recurvatus			PEM	Barren
Scirpus cf. hattorianus			PEM	Rare
Acer rubrum*			PFO	Rare
Betula alleghaniensis*			PFO	Rare
Caltha palustris			PFO	Rare
Carex bromoides*			PFO	Rare
Carex intumescens*			PFO	Rare
Dryopteris intermedia			PFO	Barren
Fraxinus pennsylvanica			PFO	Rare
Lilium michiganense			PFO	Barren
Maianthemum canadense*			PFO	Rare
Matteuccia struthiopteris			PFO	Barren
Rubus pubescens			PFO	Barren

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

The wetland as a whole was observed to have a 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
Х	x	М		С	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		м	0	Removal of herbaceous stratum – mowing,
			IVI	C	grading, earthworms, etc.
Х	x		М	С	Removal of tree or shrub strata – logging, unprescribed fire
Х	Х		М	С	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)

Selective harvest had recently occurred in the forested component prior to the time of survey. The emergent component is located on a forest trail which has been compacted and rutted by heavy equipment. Wetland is surrounded by upland forest that contains earthworms.

## SUMMARY OF FUNCTIONAL VALUES

FUNCTION			SIGNIFICANC	E	
E E E E E E E E E E E E E E E E E E E	Low	Medium	High	Exceptional	NA
Floristic Integrity			$\checkmark$		
Human Use Values		$\checkmark$			
Wildlife Habitat			$\checkmark$		
Fish and Aquatic Life Habitat		$\checkmark$			
Shoreline Protection					$\checkmark$
Flood and Stormwater Storage		$\checkmark$			
Water Quality Protection		$\checkmark$			
Groundwater Processes	$\checkmark$				

FUNCTION	RATIONALE
Floristic Integrity	The wetland has good diversity of native species, multiple strata present, and minimal presence of exotic species.
Human Use Values	Wetland is a part of larger forest community that provides multiple recreational opportunities.
Wildlife Habitat	The wetland is part of a large forested habitat block.
Fish and Aquatic Life Habitat	Standing water was present in the hardwood swamp at the time of survey, with potential to host aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely receives stormwater runoff from surrounding uplands and the associated trail.
Water Quality Protection	Wetland vegetation is intact and is dense and persistent.
Groundwater Processes	The wetland as a whole has primarily recharge hydrology. The emergent component's hydrology appears to be artificially influenced by logging activities, but the hardwood swamp's hydrologic function was intact.

## Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

# **Expected Project Impacts**

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

Project/Site: Line 5 Relocation Project	City/County:	Sampling	Date: 2020-05-21
Applicant/Owner: <u>Enbridge</u>		State: Wisconsin Samplir	ng Point: <u>wira006 xu</u>
Investigator(s): <u>JSW/EJO</u>	Section, Township, Range:	sec 22 T046N R001V	V
Landform (hillslope, terrace, etc.): Talf	Local relief (concave, convex, r		,
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.4484	452 Long: -	90.483662	Datum: WGS84
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Ca	athro complex, 0 to 6 percent s	lopes NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes <u>√</u> No	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? Are "Norm	nal Circumstances" present? Y	′es No
Are Vegetation, Soil, or Hydrology naturally	/ problematic? (If needed	l, explain any answers in Rema	rks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No <u></u> No <u></u>	Is the Sampled Area within a Wetland? Yes No∕	
Wetland Hydrology Present?	Yes	_ No <u>_</u>	If yes, optional Wetland Site ID:	
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located in a rich mesic hardwood forest. The water table may be high at				

certain times of the year, but not for a duration long enough to support hydrophytic vegetation. The forest has received a recent selective harvest.

#### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 Second	bils (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)
Field Observations:	
Surface Water Present? Yes No _ ✓ Depth (inches):	
Water Table Present? Yes No _ ✓ Depth (inches):	
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Pemerke:	
Remarks:	

The sample point is located in a mesic hardwood forest with undulating microtopography. There are small, unvegetated depressions with evidence of seasonal saturation, but these make up a small percentage of the forest area.

Sampling Point: wira006 xu

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. <u>Acer saccharum</u>				Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2. <u>Tsuga canadensis</u>				
3. <u>Acer rubrum</u>				Total Number of Dominant         Species Across All Strata:         4         (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov		OBL species         0         x1 =         0
Sapling/Shrub Stratum (Plot size:15)				FACW species $0 x^2 = 0$
1. <u>Acer saccharum</u>	10	Y	FACU	FAC species <u>10</u> x 3 = <u>30</u>
2				FACU species <u>115</u> x 4 = <u>460</u>
				UPL species x 5 =
3				Column Totals: <u>125</u> (A) <u>490</u> (B)
4				Prevalence Index = $B/A = 3.92$
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7		= Total Cov		2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u> )				$\_$ 3 - Prevalence Index is $\leq 3.0^1$
1. <u>Allium tricoccum</u>	25	V	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
		Y	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Maianthemum canadense</u>				
3. <u>Claytonia caroliniana</u>			FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Acer saccharum</u>			<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Trillium grandiflorum</u>				Definitions of Vegetation Strata:
6. <u>Dryopteris intermedia</u>				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	65	= Total Cov	/er	
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes No∕
	0	= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate The vegetation within the sample plot is	sheet.) S Charac	teristic	of a me	sic hardwood forest.
US Army Corps of Engineers				Northcentral and Northeast Region – Version 2.0

SOIL	S	ο		
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			to the dep	th needed				or confirm	the absence of	of indicators.)		
Depth (inches)	Color (r	Matrix moist)	%	Color (r		x Features	s Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-4	10YR	2/2	100			0			1			
4-16	5YR	3/3		5YR	3/1	2	<u>с</u>	M	SIL			
_4-10_	<u> </u>	<u> </u>	_ <u>30</u> _			<u>_</u>						
<sup>1</sup> Type: C=C	oncentratior	n, D=Depl	letion, RM	=Reduced I	Matrix, M	S=Masked	I Sand Gr	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.		
Hydric Soil	Indicators:								Indicators	for Problematic Hydric Soils <sup>3</sup> :		
Histosol						w Surface	(S8) ( <b>LRI</b>	RR,	<ul> <li>2 cm Muck (A10) (LRR K, L, MLRA 149B)</li> <li>Coast Prairie Redox (A16) (LRR K, L, R)</li> <li>5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</li> <li>Dark Surface (S7) (LRR K, L)</li> </ul>			
	pipedon (A2 istic (A3)	.)			RA 149B) Dark Surfa		RR R. M	LRA 149B)				
	en Sulfide (A	4)				Aineral (F						
	d Layers (A					Matrix (F2	2)			ue Below Surface (S8) (LRR K, L)		
	d Below Dar ark Surface		e (A11)		ted Matrix	(F3) rface (F6)				ark Surface (S9) (LRR K, L) Inganese Masses (F12) (LRR K, L, R)		
	Aucky Miner					Surface (FO)				ont Floodplain Soils (F19) (MLRA 149B)		
Sandy C	Bleyed Matri				x Depress					Spodic (TA6) (MLRA 144A, 145, 149B)		
-	Redox (S5)									rent Material (F21)		
	l Matrix (S6) Irface (S7) (I		II RA 1491	3)						nallow Dark Surface (TF12) Explain in Remarks)		
				-)								
		-		etland hydro	ology mus	st be prese	ent, unless	s disturbed (	or problematic.			
Restrictive		served):										
Туре: <u>С</u>		0							Hydric Soil	Present? Yes No∕		
	ches): <u>16.</u>	0							Hyune Soin			
Remarks: Could no	nt dia he	vond <sup>2</sup>	16 inch	es due '	to the	nresen	ice of c	cohhle				
	n aig bo	yona		00 000		procer						



wira006\_xu\_E



wira006\_xu\_S

Project/Site: Line 5 Relocation Project	City/County: Iron	Sam	pling Date: <u>2020-05-21</u>
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Sa	mpling Point: <u>wira001f_xw</u>
Investigator(s): <u>EJO/JSW</u>	Section, Township, Range: <u>Sec</u>	<u>ec 22 T046N R0</u>	01W
Landform (hillslope, terrace, etc.): Depression			
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.4500</u>	163 Long: <u>-90</u>	.482427	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Ca			
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes No (	If no, explain in Remark	(S.)
Are Vegetation, Soil, or Hydrology significar	tly disturbed? Are "Normal	Circumstances" present	t? Yes ∧ No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, e	xplain any answers in R	Remarks.)
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point locatio	ns, transects, imp	oortant features, etc.
Hydrophytic Vegetation Present?       Yes _ ✓ _ No         Hydric Soil Present?       Yes _ ✓ _ No	within a Wetland?	Yes_√ N	lo
Wetland Hydrology Present?   Yes _ ✓ No		Site ID:	
Remarks: (Explain alternative procedures here or in a separate re Feature is a seasonally saturated black ash s Feature adjacent to and within forest trail. Lo by stumps, slash, and ruts in wetland.	swamp with fringed sec	dge dominant in	ground layer.
HYDROLOGY Wetland Hydrology Indicatory		Cocondon Indicators (r	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that appl			minimum of two required)
i milary indicators (minimum of one is required, check all that appl	<b>y</b> /		

Primary indicators (minimum	or one is required;	check all that apply)	
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 F	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 Sol	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5)		Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aer	ial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Cond	ave Surface (B8)		✓ FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present?	Yes No _	✓ Depth (inches):	
Water Table Present?	Yes _∡ No_	Depth (inches): <u>3</u>	
Saturation Present? (includes capillary fringe)	Yes _∠ No _	Depth (inches): 0	Wetland Hydrology Present? Yes No
Describe Recorded Data (stre	am gauge, monitor	ring well, aerial photos, previous inspect	ctions), if available:

Remarks:

Feature is seasonally saturated. Surface water observed in wetland at time of survey but not at sample point. Hydrology may be in part influenced by previous logging operations as evidenced by ruts in wetland.

Sampling Point: <u>wira001f\_xw</u>

Tree Stratum (Plot size: 30)	Absolute		t Indicator	Dominance Test worksheet:
		Species?		Number of Dominant Species
1. <u>Fraxinus nigra</u>				That Are OBL, FACW, or FAC: (A)
<ol> <li><u>Betula alleghaniensis</u></li> <li><u>Acer rubrum</u></li> </ol>				Total Number of Dominant Species Across All Strata: 5 (B)
				( )
4				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80</u> (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co	ver	OBL species $64 \times 1 = 64$
Sapling/Shrub Stratum (Plot size: 15 )	_	Ň		FACW species $26$ x 2 = $52$ FAC species $12$ x 3 = $36$
1. <u>Alnus incana</u>				FACU species $4 \times 4 = 16$
2. <u>Tsuga canadensis</u>				UPL species $0 \times 5 = 0$
3				Column Totals: <u>106</u> (A) <u>168</u> (B)
4				
5				Prevalence Index = B/A = <u>1.5849056603773586</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	7	= Total Co	ver	$\checkmark$ 2 - Dominance Test is >50% $\checkmark$ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: 5 )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Carex crinita</u>	50	Y	OBL	data in Remarks or on a separate sheet)
2. <u>Carex stipata</u>	5	<u>    N</u>	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Scirpus cyperinus</u>	5	N	<u>OBL</u>	<sup>1</sup> Indiastors of hydric coil and watland hydrology must
4. <u>Glyceria cf. canadensis</u>	2	N	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Juncus effusus	2	N	OBL	Definitions of Vegetation Strata:
6. <i>Maianthemum canadense</i>		N	FACU	
7. <u>Equisetum sylvaticum</u>	1	N	FACW	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
		= Total Co	ver	height.
Woody Vine Stratum (Plot size: <u>30</u> )				
, 1,				
2				
3.				Hydrophytic
4				Vegetation
T		= Total Co		Present? Yes <u>√</u> No
Remarks: (Include photo numbers here or on a separate				
Feature is a black ash swamp with frin		ge dom	inant in	ground layer. Plot appears fairly
representative of the wetland.				

SOIL
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Profile Desc	cription: (Describe t	o the dep	oth needed	to docun	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth (inches)	Matrix Color (moist)	%	Color (n		<u>x Features</u> %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
<u>0-1</u>	7.5YR 2.5/2			10151)		Туре		MMI	silt	
1-4	10YR 2/2		7.5R	3/4	2	<u> </u>	M	SICL		
4-8	10YR 2/2	30	<u></u>		0			SICL		
4-8	10YR 4/2	60	7.5YR	3/4	10	C	M	SICL	Prominent redox	
8-20	7.5YR 4/3	70	7.5YR		30	 C	M		Prominent redox	
	<u> </u>	_/ _	1.011							
					·					
	oncentration, D=Deple	etion, RM	Reduced N	latrix, MS	S=Masked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix.	
Hydric Soil			Debag	lue Delev	. Curfooo				for Problematic Hydric Soils <sup>3</sup> :	
Histosol	pipedon (A2)			RA 149B)	v Surface	(30) ( <b>LK</b> F	К,		/luck (A10) ( <b>LRR K, L, MLRA 149B</b> ) Prairie Redox (A16) ( <b>LRR K, L, R</b> )	
Black Hi	istic (A3)						RA 149B)	5 cm M	Aucky Peat or Peat (S3) (LRR K, L, R)	
	en Sulfide (A4) d Layers (A5)		-	-	/lineral (F1 Matrix (F2		, <b>L</b> )		Surface (S7) (LRR K, L) Ilue Below Surface (S8) (LRR K, L)	
	d Below Dark Surface	(A11)	-	ed Matrix		)		-	bark Surface (S9) (LRR K, L)	
Thick Da	ark Surface (A12)	. ,	Redox	Dark Su	face (F6)			Iron-Manganese Masses (F12) (LRR K, L, R)		
-	Aucky Mineral (S1)				Surface (F	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
	Gleyed Matrix (S4) Redox (S5)			Depress	ions (F8)			Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> ) <u></u> Red Parent Material (F21)		
-	Matrix (S6)							Very Shallow Dark Surface (TF12)		
Dark Su	rface (S7) (LRR R, M	LRA 1491	3)					Other	(Explain in Remarks)	
<sup>3</sup> Indicators o	f hydrophytic vegetati	on and we	etland hydro	logy mus	t be prese	ent, unless	disturbed	or problemation	C.	
	Layer (if observed):		,	0,	•	-				
Туре:										
Depth (in	ches):							Hydric Soil	Present? Yes <u>√</u> No	
Remarks:	much to be mu	ol <i>u m</i> i	noral a	or allt		m				
	erved to be mu	СКУПП	neral ov	er sitt	y ciay i	oam.				



wira001f\_xw\_SE



wira001f\_xw\_W

Project/Site: Line 5 Relocation Project	_ City/County: <u>Iron</u> Sampling Date: <u>2020-06-1</u>
-	State: Wisconsin Sampling Point: wira001f_w
Investigator(s): <u>SBR/DGL</u>	
	ocal relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
	73 Long: <u>-90.481407</u> Datum: WGS84
	hro complex, 0 to 6 percent slopes NWI classification: PFO1/4B
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes No (If no, explain in Remarks.)
	lly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally	
SUMMARY OF FINDINGS – Attach site map showin	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes <u>✓</u> No	
Wetland Hydrology Present? Yes _ ✓ No	_ If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate rep	
•	ling water present in the hollows. The vegetation is
relatively sparse in the understory and Sphag	num moss cover is almost 50%.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply	· · · · · · · · · · · · · · · · · · ·
✓ Surface Water (A1) ✓ Water-Staine	
→ High Water Table (A2) Aquatic Faur	
✓ Saturation (A3) Marl Deposit	
Water Marks (B1) Hydrogen Su	
	zospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
	Reduced Iron (C4) Stunted or Stressed Plants (D1)
	Reduction in Tilled Soils (C6) _/ Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck S	
Inundation Visible on Aerial Imagery (B7) Other (Expla	
Sparsely Vegetated Concave Surface (B8) Field Observations:	FAC-Neutral Test (D5)
Surface Water Present?     Yes ✓     No     Depth (inche       Water Table Present?     Yes ✓     No     Depth (inche	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous inspections), if available:

The hydrologic regime is saturated.

Sampling Point: wira001f\_w2

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )			<u>Status</u>	Number of Dominant Species
1. <u>Acer rubrum</u>				That Are OBL, FACW, or FAC: (A)
2. <u>Fraxinus nigra</u>		<u>     Y    </u>	FACW	Total Number of Dominant
3. <u>Thuja occidentalis</u>			<u>FACW</u>	Species Across All Strata: (B)
4. <u>Acer saccharum</u>				Percent of Dominant Species
5. <u>Tsuga canadensis</u>	10	N	FACU	That Are OBL, FACW, or FAC: <u>80</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	95	= Total Co	over	OBL species <u>10</u> x 1 = <u>10</u>
Sapling/Shrub Stratum (Plot size: 15 )				FACW species <u>65</u> x 2 = <u>130</u>
1. <u>Tsuga canadensis</u>	15	Y	FACU	FAC species $60 \times 3 = 180$
2				FACU species         35         x 4 =         140           UPL species         0         x 5 =         0
3				Column Totals: <u>170</u> (A) <u>460</u> (B)
4				
5				Prevalence Index = B/A =2.71
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Co		∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)				$\checkmark$ 3 - Prevalence Index is $\leq 3.0^{1}$
1. <u>Acer rubrum</u>	20	Y	FAC	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. Osmundastrum cinnamomeum		Y	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Cornus canadensis		N	FAC	
4. <u>Carex cf disperma</u>		N	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Equisetum sylvaticum</u>				Definitions of Vegetation Strata:
6				
7				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
	60	= Total Co	over	height.
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes ✓ No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)			
Cover is not 100% due to area with rec		idation	and star	nding water throughout the
microtopography of hummocks and hol	IOWS.			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth		Matrix				x Features		. 2				
(inches)		(moist)	<u>%</u>	Color (r	<u>noist)</u>		Type'	Loc <sup>2</sup>	Texture	Remarks		
		2.5/1	100			_0_			MMI	loamy		
	<u>5YR</u>	3/1	_95_	<u>5YR</u>	_3/4_	_5_	_ <u>C</u> _	_M_	SIL			
10-20	<u>5YR</u>	4/3	100			_0_			SIL			
	·											
<sup>1</sup> Type: C=Co		n D=Denl	etion RM	=Reduced I	Matrix MS	 S=Masked	Sand Gra	ains	<sup>2</sup> Location	n: PL=Pore Lining, M=Matrix.		
Hydric Soil					viatrix, ivic					for Problematic Hydric Soils <sup>3</sup> :		
Histosol				-			(S8) ( <b>LRF</b>	RR,		Muck (A10) (LRR K, L, MLRA 149B)		
Histic Ep	pipedon (A	2)			RA 149B)					Prairie Redox (A16) ( <b>LRR K, L, R</b> )		
	n Sulfide (	A4)						<b>.RA 149B</b> ) , L)		Mucky Peat or Peat (S3) ( <b>LRR K, L, R</b> ) Surface (S7) ( <b>LRR K, L</b> )		
Stratified	l Layers (A	<b>\</b> 5)		Loam	Gleyed I	Matrix (F2		, , ,	Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)			
	d Below Da ark Surface	ark Surface	e (A11)		ted Matrix							
	lucky Mine				CDark Sui ted Dark S	Surface (F0)	7)		Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B)			
	leyed Mat				Depress		,		Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )			
-	edox (S5)								Red Parent Material (F21)			
	Matrix (Se	്) ( <b>LRR R, M</b>		3)					Very Shallow Dark Surface (TF12) Other (Explain in Remarks)			
				<b>_</b> )								
<sup>3</sup> Indicators of		-	ion and we	etland hydro	ology mus	t be prese	ent, unless	disturbed	or problemati	с.		
Restrictive I	ayer (if o	bserved):										
Type:												
Depth (ind	ches):								Hydric Sol	Present? Yes _ ✓ No		
Remarks: A loamy	mucky	minera	l soil a	ton siltv	loam							
Albanny	mucity	minera	1 3011 a	top sity	ioani.							



wira001f\_w2\_N



wira001f\_w2\_S

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	EJO/JSW		
File #:	Date of visit(s):		
wira001_x	2020-05-21		
Location:	Ecological Landsca	ape:	
PLSS: sec 22 T046N R001W	Superior Mineral Range	s	
Lat: <u>46.450063</u> Long: <u>-90.482427</u>	Watershed: LS11, Potato River		
	,		
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s): Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent	T3/5K		
slopes	Wetland Type(s): PFO - hardwood swamp		
Field Verified:			
Series not verified. Soils were observed to be	Wetland Size:	Wetland Area Impacted	
saturated mucky mineral over silty clay loam.	0.0991		
	Vegetation:	0.0001	
	Plant Community Description(s):		
Hydrology:	The feature is a black ash swamp with a		
The hydrologic regime of the feature is seasonally saturated. Surface	canopy composed of black ash, yellow birch, and red maple, with fringed sedge dominant		
water was observed in the wetland at the time of survey, but only in parts			
of the wetland. Hydrology may be in part influenced by previous logging operations, as evidenced by ruts in the wetland.			
	in the herbaceous layer.		

## SITE MAP

## SECTION 1: Functional Value Assessment

HU         Y/N         Potential         Human Use Values: recreation, culture, education, science, not in the second se	
2 N N Used for educational or scientific purposes	nting
	nung
3 N Y Visually or physically accessible to public	
4 N N Aesthetically pleasing due to diversity of habitat types, lack of poll	ution or degradation
5 N N List	
6 N Y Supports or provides habitat for endangered, threatened or specia	al concern species
7 N N In or adjacent to archaeological or cultural resource site	
WH Wildlife Habitat	
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	
4 Y Y 100 m buffer – natural land cover $\geq$ 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, we	
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 $\geq$ 45 days	a brata a
10 Y Y Standing water provides habitat for amphibians and aquatic invert	eprates
11 N N Seasonally exposed mudflats present	
12 N N Provides habitat scarce in the area (urban, agricultural, etc.)	
FA Fish and Aquatic Life Habitat	
1 N N Wetland is connected or contiguous with perennial stream or lake	
2 Y Y Standing water provides habitat for amphibians and aquatic invert	
3 N N Natural Heritage Inventory (NHI) listed aquatic species within aqua	
4 N Y Vegetation is inundated in spring	
SP         Shoreline Protection           1         N         Along shoreline of a stream lake, pend or open water area (>1 as	vra) if no not applicable
1 N N Along shoreline of a stream, lake, pond or open water area (>1 ac	
2 N N Potential for erosion due to wind fetch, waves, heavy boat traffic, e water levels or high flows – if no, not applicable	erosive sons, nuclualing
water levels of high hows – if ho, hot applicable	
3         N         Densely rooted emergent or woody vegetation           ST         Storm and Floodwater Storage	
1     Y     Y     Basin wetland, constricted outlet, has through-flow or is adjacent t	o a stream
2 N N Water flow through wetland is NOT channelized	
3 Y Y Dense, persistent vegetation	
4 N N Evidence of flashy hydrology	
5 N Y Point or non-point source inflow	
6 N N Impervious surfaces cover >10% of land surface within the waters	shed
$7$ N N Within a watershed with $\leq 10\%$ wetland	
N         N         Potential to hold >10% of the runoff from contributing area from a	2-year 24-hour storm event
WQ         Water Quality Protection	
1 N Y Provides substantial storage of storm and floodwater based on pre-	evious section
2 Y Y Basin wetland <u>or</u> 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 macrophy	/te arowth
7 N N Stormwater or surface water from agricultural land is major hydrol	
8 N N Discharge to surface water	
9 N N Natural land cover in 100m buffer area < 50%	
GW Groundwater Processes	
1         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 ac	ditional water inputs
4 N Y Wetland soils are organic	
4     N     Y     Wetland solis are organic       5     N     N     Wetland is within a wellhead protection area	

FA-2: Frog eggs were observed in the wetland.
WH-8: The wetland is part of a larger, relatively intact forest.
WH-6: Wetland has variable microtopography, supporting both hydrophytic and upland-associated flora.
ST-1: The wetland is a somewhat linear depression with tire ruts present.

# 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	Northern parula, white-throated sparrow, other songbirds observed near 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	Y	Frog eggs observed in wetland
	Y	Aquatic invertebrates

#### **SECTION 2: Floristic Integrity**

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

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Acer rubrum			PFO	Rare
Alnus incana			PFO	Rare
Betula alleghaniensis			PFO	Rare
Carex crinita*			PFO	Interrupted
Carex stipata			PFO	Rare
Coptis trifolia			PFO	Barren
Equisetum sylvaticum			PFO	Barren
Fraxinus nigra*			PFO	Patchy
Glyceria cf. canadensis			PFO	Barren
Juncus effusus			PFO	Barren
Maianthemum canadense			PFO	Barren
Scirpus cyperinus			PFO	Rare
Tsuga canadensis			PFO	Barren

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

The wetland has good coverage of native species, multiple strata are present, and no exotic species were observed.

### 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
Х	x		М	С	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
Х	× ×		М	С	Removal of herbaceous stratum – mowing,
~	X				grading, earthworms, etc.
	x		М	С	Removal of tree or shrub strata – logging, unprescribed fire
	Х		М	С	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)

Surrounding uplands have earthworms, which could impact the wetland's herbaceous layer vegetation. The wetland and surrounding forest show evidence of logging.

## SUMMARY OF FUNCTIONAL VALUES

FUNCTION			SIGNIFICANC	E	
	Low	Medium	High	Exceptional	NA
Floristic Integrity			$\checkmark$		
Human Use Values		$\checkmark$			
Wildlife Habitat			$\checkmark$		
Fish and Aquatic Life Habitat			$\checkmark$		
Shoreline Protection					$\checkmark$
Flood and Stormwater Storage		$\checkmark$			
Water Quality Protection			$\checkmark$		
Groundwater Processes		$\checkmark$			

FUNCTION	RATIONALE			
Floristic Integrity	Feature is a relatively intact hardwood swamp, with good covera of native species.			
Human Use Values	The wetland is part of a larger forest that supports species valuable to recreation.			
Wildlife Habitat	The wetland is part of an intact forest that supports a variety of wildlife.			
Fish and Aquatic Life Habitat	Frog eggs were observed in the wetland. The wetland likely supports aquatic invertebrates.			
Shoreline Protection	N/A			
Flood and Stormwater Storage	The feature likely receives stormwater from surrounding uplands.			
Water Quality Protection	Dense and persistent vegetation was observed in the feature.			
Groundwater Processes	The wetland is part of a larger intact forest. 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

Project/Site: Line 5 Relocation Project	City/County:	Sa	ampling Date: <u>2020-05-21</u>
Applicant/Owner: Enbridge		State: Wisconsin	Sampling Point: wira001f xu
Investigator(s): <u>EJO/JSW</u>	Section, Township	, Range: <u>sec 22 T046N F</u>	R001W
Landform (hillslope, terrace, etc.): Talf	Local relief (concave,	convex, none): <u>None</u>	Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.449	733	Long: <u>-90.482468</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Ca	athro complex, 0 to 6	percent slopes NWI classification	on:
Are climatic / hydrologic conditions on the site typical for this time c	f year?Yes <u>√</u> N	lo (If no, explain in Rem	arks.)
Are Vegetation, Soil, or Hydrology significa	ntly disturbed?	Are "Normal Circumstances" pres	sent? Yes _ ✓ No
Are Vegetation, Soil, or Hydrology naturally	problematic? (	If needed, explain any answers in	n Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ing sampling poir	nt locations, transects, ir	nportant features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No∕ No∕	Is the Sampled Area within a Wetland? Yes No∕
Wetland Hydrology Present?	Yes	No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced Feature is in dry upland fo mayflower in ground layer	orest dom		r maple and paper birch in canopy and Canada

# HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 R	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 So	ils (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)
Field Observations:	
Surface Water Present? Yes No _✓ Depth (inches):	
Water Table Present? Yes No ∡ Depth (inches):	
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No∕
Saturation Present?       Yes No _ ✓       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	, , ,
(includes capillary fringe)	, , ,
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	, , ,
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	, , ,
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	, , ,
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(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	, , ,
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	, , ,
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	, , ,

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

Sampling Point: <u>wira001f\_xu</u>

Tree Stratum (Plot size: 30 )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. <u>Betula papyrifera</u>				Number of Dominant Species
Acer saccharum				That Are OBL, FACW, or FAC: (A)
3. <u>Ostrya virginiana</u>				Total Number of Dominant Species Across All Strata: 5 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>20</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	25	= Total Cov	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 )				FACW species x 2 =0
1. <u>Abies balsamea</u>	2	<u>    N     </u>	FAC	FAC species x 3 =27
2. <u>Betula papyrifera</u>			FACU	FACU species <u>39</u> x 4 = <u>156</u>
3				UPL species $0 \times 5 = 0$
4				Column Totals: <u>48</u> (A) <u>183</u> (B)
5				Prevalence Index = B/A = <u>3.8125</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov		2 - Dominance Test is >50%
Herb Stratum (Plot size:5)				$3$ - Prevalence Index is $\leq 3.0^1$
1. <u>Maianthemum canadense</u>	10	Y	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. <u>Trientalis borealis</u>		Y	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Clintonia borealis</u>			FAC	
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Maianthemum racemosum</u>			FACU	be present, unless disturbed or problematic.
5. <u>Dendrolycopodium dendroideum</u>			<u>FACU</u>	Definitions of Vegetation Strata:
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
·	19	= Total Cov		height.
Woody Vine Stratum (Plot size: 30)		- 10101 00		
1				
2				
3				Hydrophytic Vegetation
4				Present? Yes <u>No</u> √
		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate Sample recorded in dry upland forest the second secon	sheet.)	hare to h	o firo d	opendent at sample location, but also
has mesic hardwoods in vicinity. Cano				

ιy γРУ ıy y У 'y season.

	cription: (Describ	pe to the dep	th needed				or confirm	the absence of	f indicators.)		
Depth (inches)	Matrix Color (moist)	%	Color (		x Features %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	F	Remarks	
0-2	10YR 2/2			•	0			 _	· · · ·		
<u> </u>	5YR 3/3				0			SIL			
				1/6	<u> </u>		·	<u> </u>			
	<u>5YR 3/4</u>	90	5YR	4/0	<u>Z</u>	<u> </u>	<u> </u>				
							·				
							·				
							·				
							·				
1							<u> </u>	2	<u> </u>		
Type: C=C Hydric Soil	oncentration, D=D Indicators:	epletion, RM	=Reduced	Matrix, M	S=Masked	Sand Gra	ains.		PL=Pore Linin or Problemation		
Histosol			Polyva	alue Belo	w Surface	(S8) ( <b>LR</b>	R,		ck (A10) ( <b>LRF</b>	•	
Histic E	pipedon (A2)		ML	RA 149B	)			Coast Pr	airie Redox (A	16) ( <b>LRR K</b>	(, L, R)
	istic (A3) en Sulfide (A4)				ace (S9) ( <b>L</b> Vineral (F1		LRA 149B)		cky Peat or Pe face (S7) ( <b>LR</b>		R K, L, R)
	d Layers (A5)				Matrix (F2)		, ⊑)		e Below Surfa		<b>R K, L</b> )
	d Below Dark Surf	ace (A11)		ted Matrix					k Surface (S9		
	ark Surface (A12) Mucky Mineral (S1)	N			rface (F6) Surface (F	7)			iganese Mass it Floodplain S		
	Gleyed Matrix (S4)				sions (F8)	')			podic (TA6) ( <b>N</b>		
Sandy F	Redox (S5)				· · ·			Red Pare	ent Material (F	21)	
	d Matrix (S6)		•						allow Dark Sur		
Dark St	Irface (S7) (LRR R	, WLRA 1491	5)					Other (E	xplain in Rema	arks)	
	of hydrophytic vege		etland hydro	ology mus	st be prese	nt, unless	s disturbed o	or problematic.			
	Layer (if observe	d):									
Туре:								Hydric Soil P	rocont? Vo	<b>c</b>	No /
Depth (in Remarks:	iches):								resent? re	s	NU <u>v</u>
	pled in dry u	ipland S	oils obs	erved	to be lo	oam ov	ver siltv	loam			
e en eam				orrou			, et enty				



wira001f\_xu\_E



wira001f\_xu\_W

Project/Site: Line 5 Relocation	Project	City/County:	on	Sampl	ling Date: <u>2020-06-19</u>
Applicant/Owner: <u>Enbridge</u>			Stat	e: <u>Wisconsin</u> San	npling Point: <u>wira001f_u2</u>
Investigator(s): <u>SBR/DGL</u>		Section, Towns	ship, Range: <u>sec 2</u>	<u>2 T046N R00</u>	)1W
Landform (hillslope, terrace, etc.): Ris	e	Local relief (conca	ve, convex, none): <u>N</u>	lone	Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcenti	ral Forests Lat: <u>46.454</u>	334	Long: <u>-90.48</u>	710	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very st	tony-Pence, very stony-C	athro complex, 0 to	o 6 percent slopes N	IWI classification:	
Are climatic / hydrologic conditions on t	he site typical for this time	of year? Yes 🗹	No (If no,	explain in Remarks	s.)
Are Vegetation, Soil, or	Hydrology significa	antly disturbed?	Are "Normal Circu	mstances" present?	?Yes _✓_No
Are Vegetation, Soil, or	Hydrology naturall	y problematic?	(If needed, explain	any answers in Re	emarks.)
SUMMARY OF FINDINGS - A	ttach site map show	/ing sampling p	oint locations, t	ransects, impo	ortant features, etc.
-	Yes No _∡	within a	ampled Area ı Wetland?		
Wetland Hydrology Present? Remarks: (Explain alternative proced	ures here or in a separate	report.)	ptional Wetland Site I		
The upland is located slig hemlock. The understory					
HYDROLOGY					
Wetland Hydrology Indicators:			<u>Seco</u>	ndary Indicators (m	inimum of two required)
Primary Indicators (minimum of one is					
Surface Water (A1)	Water Stai	nod Logy (PO)	г	vrainago Dattorna (I	P10)

		k ali tilat apply)	
Surface Water (A1)		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)		Crayfish Burrows (C8)	
Sediment Deposits (B2)		Roots (C3) Saturation Visible on Aerial Imagery (C9)	
Drift Deposits (B3)		Stunted or Stressed Plants (D1)	
Algal Mat or Crust (B4)		oils (C6) Geomorphic Position (D2)	
Iron Deposits (B5)		Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aeria	al Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Conca	ave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present?	Yes No _✓	Depth (inches):	
Water Table Present?	Yes No_∡	_ Depth (inches):	
Saturation Present?	Yes No _✓	_ Depth (inches):	Wetland Hydrology Present? Yes No∕
(includes capillary fringe)			
Describe Recorded Data (strea	am gauge, monitoring	well, aerial photos, previous inspec	ctions), if available:
Remarks:			
No indicators of wetla			
	and hvaroloav v	were observed.	
	and hydrology	were observed.	
	and hydrology	were observed.	
	and hydrology	were observed.	
	and hydrology	were observed.	
	and hydrology	were observed.	
	and hydrology	were observed.	
	and hydrology	were observed.	
	and hydrology	were observed.	
	and hydrology	were observed.	

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

Sampling Point: <u>wira001f\_u2</u>

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. <u>Tsuga canadensis</u>				Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
2. <u>Betula papyrifera</u>				
3. <u>Acer rubrum</u>				Total Number of Dominant Species Across All Strata:6(B)
4. <u>Thuja occidentalis</u>			FACW	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>33</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov		OBL species         O         x 1 =         O
Sapling/Shrub Stratum (Plot size:15)				FACW species <u>5</u> x 2 = <u>10</u>
1. <u>Abies balsamea</u>	20	Y	FAC	FAC species <u>60</u> x 3 = <u>180</u>
				FACU species <u>125</u> x 4 = <u>500</u>
2				UPL species x 5 =
3				Column Totals: <u>190</u> (A) <u>690</u> (B)
4				Prevalence Index = B/A = <u>3.6315789473684212</u>
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
		= Total Cov	/er	$3 - Prevalence Index is \leq 3.0^{1}$
Herb Stratum (Plot size: <u>5</u> )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Lonicera canadensis			<u>FACU</u>	data in Remarks or on a separate sheet)
2. <u>Pteridium aquilinum</u>	15	<u>    Y    </u>	<u>FACU</u>	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Dryopteris intermedia	10	<u>     N</u>	_FAC_	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Acer rubrum</u>	10	<u>    Y     </u>	_FAC_	be present, unless disturbed or problematic.
5. <u>Maianthemum racemosum</u>	5	<u>    N     </u>	<u>FACU</u>	Definitions of Vegetation Strata:
6. <u>Cornus canadensis</u>	5	N	FAC	
7. <u>Clintonia borealis</u>			_FAC_	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	70	= Total Cov	/er	
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3				Hydrophytic
4.				Vegetation
		= Total Cov	/er	Present? Yes No
Remarks: (Include photo numbers here or on a separate				1
Cover is not 100% due to areas with or		itter pre	sent.	

Profile Desc	ription: (I	Describe t	o the dep	oth needed to docum	nent the i	indicator o	r confirm	the absence of indicato	ors.)		
Depth		Matrix		Redox	x Feature	S					
(inches)	Color (	(moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-2	5YR	2.5/1	100		0			SIL			
	<u>5YR</u>	4/4	100		_0_						
	5YR	5/1	100		_0_	·		SI			
10-20	5YR	4/4	100		_0			SIL			
						· ·					
						· ·	·				
							·				
						· ·					
<sup>1</sup> Type: C=Co		n. D=Depl	etion. RM	=Reduced Matrix, MS		d Sand Grai	ins.	<sup>2</sup> Location: PL=Pore	Lining, M=Mat	trix.	
Hydric Soil I			,					Indicators for Proble			
<u> </u>	(A1)			Polyvalue Below	v Surface	(S8) ( <b>LRR</b>	R,	2 cm Muck (A10)	(LRR K, L, ML	<b>.RA 149B</b> )	
Histic Ep	pipedon (A2	2)		MLRA 149B)				Coast Prairie Red	ox (A16) ( <b>LRR</b>	R K, L, R)	
Black Hi	· ,			Thin Dark Surfa	. , .		,			LRR K, L, R)	
	n Sulfide (			Loamy Mucky M			L)	Dark Surface (S7)			
	l Layers (A		(11)	Loamy Gleyed M		<u>2</u> )		Polyvalue Below S			
	d Below Da ark Surface		e (A11)	Depleted Matrix Redox Dark Sur				Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R)			
	lucky Mine	. ,		Depleted Dark S	• •			Piedmont Floodpla			
	leyed Mat			Redox Depressi		')					
	edox (S5)	()						Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> ) Red Parent Material (F21)			
	Matrix (S6	6)						Very Shallow Dark Surface (TF12)			
	rface (S7)		ILRA 149	<b>3</b> )				Other (Explain in I			
<sup>3</sup> Indicators of	f hydrophyd	tic voqotati	ion and w	etland hydrology mus	t ha pros	ont unloss	dicturbod	or problematic			
Restrictive L				eliand hydrology mus		ent, uniess					
Туре:	• •	•									
Depth (ind	ches):							Hydric Soil Present?	Yes	No <u>√</u>	
Remarks:								I			
Silty soils	s with n	o obse	rved re	edox.							





wira001f\_u2\_S

Project/Site: Line 5 Relocation Project	_ City/County: <u>Iron</u>	Sampling	Date: <u>2020-05-21</u>
Applicant/Owner: <u>Enbridge</u>		State: Wisconsin Samplir	ng Point: <u>wirc1012e_</u> w
Investigator(s): <u>EJO/JSW</u>	Section, Township, Range:	sec 22 T046N R001V	V
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex,	none): <u>Concave</u>	_ Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.4493</u>	. <u>55</u> Long:	90.482280	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Cat	hro complex, 0 to 6 percent	slopes NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes <u>√</u> No	_ (If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significan	tly disturbed? Are "Non	mal Circumstances" present? Y	′es No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If neede	d, explain any answers in Rema	rks.)
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point loca	tions, transects, importa	ant features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes _ ✓ _ No Yes _ ✓ _ No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes No	If yes, optional Wetland Site ID:
	aturated wet meadow do	minated by fringed sedge. Feature occurs mostly influenced by rutting and compaction along the

## HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 So	oils (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)
Field Observations:	
Surface Water Present? Yes No _ ✓ Depth (inches):	
Water Table Present? Yes <u>✓</u> No Depth (inches): <u>18</u>	
Saturation Present? Yes <u>✓</u> No <u>Depth</u> (inches): <u>16</u> (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Demoster	
Remarks: Feature is seasonally saturated. Water table and saturation	observed at 18 and 16 inches
respectively. Standing water observed in feature but not at	• •
forest trail, and hydrology likely influenced by compaction/r	uts in trail.

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

Sampling Point: wirc1012e\_w

Trac Stratum (Dist size) 20	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Cov	ver	OBL species <u>45</u> x 1 = <u>45</u>
Sapling/Shrub Stratum (Plot size: 15 )				FACW species <u>16</u> x 2 = <u>32</u>
1. <u>Rubus idaeus</u>	4	<u>    N     </u>	FAC	FAC species x 3 =2
2				FACU species x 4 = 8
3				UPL species x 5 =
				Column Totals: <u>67</u> (A) <u>97</u> (B)
4 5				Prevalence Index = B/A = <u>1.4477611940298507</u>
6				Hydrophytic Vegetation Indicators:
				<ul> <li>1 - Rapid Test for Hydrophytic Vegetation</li> </ul>
7				2 - Dominance Test is >50%
_	4	= Total Cov	ver	$\checkmark$ 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: <u>5</u> )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Carex crinita</u>	40	<u>    Y     </u>	<u>OBL</u>	data in Remarks or on a separate sheet)
2. <u>Solidago gigantea</u>	15	<u> </u>	<u>FACW</u>	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Scirpus cf. hattorianus</u>	5	N	OBL	1
4. <u>Anemone quinquefolia</u>	2	N	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Onoclea sensibilis</u>		<u>    N     </u>	<u>FACW</u>	Definitions of Vegetation Strata:
6				_
7				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH
9	·			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.
11				
12				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	<u>    63   </u>	= Total Cov	ver	
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3				Hydrophytic
4				Vegetation
		= Total Cov	/er	Present? Yes <u>√</u> No
Remarks: (Include photo numbers here or on a separate s	sheet.)			1
Feature is a wet meadow dominated by		l sedge.	Sample	e is representative of the feature.
Feature surrounded by mesic hardwood	ds.			
-				

SOIL
------

Profile Desc	cription: (Describe	to the dep	th needed	to docun	nent the i	ndicator o	or confirm	the absence	of indicators	s.)	
Depth	Matrix			Redo	x Features						
(inches)	Color (moist)	%	Color (r	<u>moist)</u>	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
	<u>7.5YR 2.5/1</u>	100			_0_			MMI	<u>silt loar</u>	n	
	<u>7.5YR 2.5/1</u>	70			_0_			SIL			
	<u>5YR 4/4</u>	_20_	5YR	4/6	_10_	_C_	_M_	SIL			
3-20	5YR 4/4	80	5YR	4/6	20	С	M	SIL			
		·									
$\frac{1}{1}$	oncentration, D=Dep	lotion DM		Motrix MC	-Maakad			<sup>2</sup> l continu	n: PL=Pore Li	ining M-Mat	riv.
Hydric Soil			-Reduced I	viatrix, ivic	s=iviaskeu	Sand Gra	uns.		for Problem		
Histosol			Polyva	alue Belov	v Surface	(S8) ( <b>LRR</b>	2 R,	2 cm	Muck (A10) (L	.RR K, L, ML	<b>RA 149B</b> )
· ·	pipedon (A2)			RA 149B)					Coast Prairie Redox (A16) (LRR K, L, R)		
	istic (A3) en Sulfide (A4)			Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) (LRR K, L)					5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L)		
	d Layers (A5)			Loamy Gleyed Matrix (F2)					alue Below Su		RR K, L)
	d Below Dark Surfac	e (A11)		ted Matrix				Thin Dark Surface (S9) (LRR K, L)			
	ark Surface (A12)			k Dark Sui	• •			Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B)			
-	Aucky Mineral (S1) Gleyed Matrix (S4)			ted Dark S Cepress		()					(MLRA 149B) A, 145, 149B)
	Redox (S5)			(Doproco				Red Parent Material (F21)			
	Matrix (S6)								Very Shallow Dark Surface (TF12) Other (Explain in Remarks)		
Dark Su	rface (S7) (LRR R, M	ILRA 149E	<b>3</b> )					Other	(Explain in Re	emarks)	
<sup>3</sup> Indicators o	f hydrophytic vegeta	tion and we	etland hydro	ology mus	t be prese	ent, unless	disturbed	or problemati	с.		
Restrictive	Layer (if observed)	:									
Туре:											
Depth (in	ches):		<u> </u>					Hydric Soi	I Present?	Yes∕	No
Remarks:											
Solis obs	served to be s	lit Ioam	•								



wirc1012e\_w\_NW



wirc1012e\_w\_SE

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	EJO/JSW		
File #:	Date of visit(s):		
wirc1012	2020-05-21		
Location:	Ecological Landsca	ape:	
PLSS: sec 22 T046N R001W	Superior Mineral Range	e	
		5	
Lat: <u>46.449393</u> Long: <u>-90.482302</u>	Watershed:		
	LS11, Potato River		
County: Iron Town/City/Village: Gurney town			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent	Wetland Type(s):		
slopes	PEM-Fresh wet meadow		
Field Verified:		medden	
Series not verified. Soils observed to be loamy	Wetland Size:	Wetland Area Impacted	
mucky mineral over silt loam.	0.0529	0.0529	
	Vegetation:	0.0020	
	Plant Community Description(s):		
Hydrology:			
Feature is seasonally saturated. Water table and saturation observed at	Feature is a wet meadow dominated by		
18 and 16 inches, respectively. Standing water observed in feature but not	fringed sedge. Feature surrounded by mesic		
at sample point. Feature occurs within forest trail, and hydrology likely	hardwoods.		
influenced by compaction/ruts in trail.			

# SITE MAP

## SECTION 1: Functional Value Assessment

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

HU-1: Wetland is within relatively intact forest, which hosts a variety of songbirds and likely other wildlife, all of which offer recreational opportunities. ST-5: Wetland likely receives stormwater from surrounding uplands. FA-2: standing water was observed in wetland.

# 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	White-throated sparrow, hermit thrush heard adjacent to wetland
	Y	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	Aquatic invertebrates, herpetofauna

## **SECTION 2: Floristic Integrity**

### Plant Community Integrity (circle)\*

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Anemone quinquefolia			PEM	Barren
Carex crinita*			PEM	Patchy
Dryopteris intermedia			PEM	Barren
Maianthemum canadense			PEM	Barren
Onoclea sensibilis			PEM	Rare
Osmunda claytoniana			PEM	Barren
Polygonum cilinode			PEM	Barren
Rubus idaeus			PEM	Barren
Scirpus cf. hattorianus			PEM	Rare
Solidago gigantea			PEM	Rare

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

The florisitic integrity is moderate to high as the community is dominated by native species but has relatively 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
Х	x	х	М	С	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
	V	V	N.4	0	Removal of herbaceous stratum – mowing,
	X	X	M	C	grading, earthworms, etc.
Х	x	x	м	С	Removal of tree or shrub strata – logging,
^	^		IVI		unprescribed fire
Х	Х	X	М	С	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 occurs within forest trail and has compaction from heavy equipment. Logging has previously occurred in wetland and surrounding area. Earthworms present in surrounding uplands with potential to impact wetland.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE									
	Low	Medium	High	Exceptional	NA					
Floristic Integrity		$\checkmark$								
Human Use Values	$\checkmark$									
Wildlife Habitat	$\checkmark$									
Fish and Aquatic Life Habitat	$\checkmark$									
Shoreline Protection					$\checkmark$					
Flood and Stormwater Storage	$\checkmark$									
Water Quality Protection		$\checkmark$								
Groundwater Processes		$\checkmark$								

FUNCTION	RATIONALE
Floristic Integrity	Wetland is dominated by native species with low cover of exotic species.
Human Use Values	Wetland itself is small, but is a part of larger forested complex.
Wildlife Habitat	Wetland itself is small, but is part of larger forested complex which provides habitat for a variety of wildlife.
Fish and Aquatic Life Habitat	Wetland is small but may have standing water in spring or following precipitation events.
Shoreline Protection	N/A
Flood and Stormwater Storage	Wetland is relatively small but likely receives stormwater from surrounding uplands.
Water Quality Protection	Wetland occurs in part of larger, intact forest and has dense and persistent vegetation.
Groundwater Processes	Wetland primarily has 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

Project/Site: Line 5 Relocation Project Cit	y/County: Iron Sampling Date: 2020-05-21
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wirc1012</u> u
Investigator(s): <u>JSW/EJO</u> Se	ction, Township, Range: <u>sec 22 T046N R001W</u>
	relief (concave, convex, none): <u>None</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.449297</u>	Long: <u>-90.482328</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Cathro c	omplex, 0 to 6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes <u>√</u> No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly dis	turbed? Are "Normal Circumstances" present? Yes _ ✓ No
Are Vegetation, Soil, or Hydrology naturally proble	ematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes No	within a Wetland? Yes No
Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located in a transition	hal community at the edge of a logging road
Hemlock dominates the immediate area along w	
HYDROLOGY	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 I	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 Sc	ils (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)
Field Observations:	
Surface Water Present? Yes No _ ✓ Depth (inches):	
Water Table Present? Yes No _ ✓ Depth (inches):	
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No∕
Saturation Present?       Yes       No _ ✓       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
(includes capillary fringe)	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	tions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	tions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	tions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	tions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	tions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	tions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	tions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	tions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	tions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	tions), if available:

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

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1. <u>Tsuga canadensis</u>				That Are OBL, FACW, or FAC: (A)
2. <u>Tilia americana</u>				Total Number of Dominant
3. <u>Acer saccharum</u>				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25</u> (A/B)
5				That are OBL, FACW, of FAC: (AVB)
6			·	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	65	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 )				FACW species x 2 =0
1. <u>Acer saccharum</u>	15	<u> </u>	FACU	FAC species x 3 =75
2. <u>Ostrya virginiana</u>				FACU species <u>97</u> x 4 = <u>388</u>
3				UPL species $0 \times 5 = 0$
4				Column Totals: <u>122</u> (A) <u>463</u> (B)
5				Prevalence Index = B/A = <u>3.7950819672131146</u>
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
		= Total Co	ver	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: 5_)	0.5			4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. Dryopteris intermedia				data in Remarks or on a separate sheet)
2. <u>Maianthemum canadense</u>				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Anemone quinquefolia</u>	2	N	<u>FACU</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Polygonum cilinode</u>	2	N		be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
12.		= Total Co	·	height.
20			vei	
Woody Vine Stratum (Plot size: 30)				
1				
2			·	
3			·	Hydrophytic
4			·	Vegetation Present? Yes No✓
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

The ground layer is patchy beneath the hemlocks. The community is transitional between a wet forest and a mesic hardwood forest.

Profile Dese	cription: (Des	cribe to	the dep	th needed to docum	ent the i	ndicator	or confirm	the absence of indicate	ors.)		
Depth		atrix		Redox	Feature						
(inches)	Color (moi	st)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
	<u>10YR 2</u>	2/2	100		0			L			
3-6	<u>7.5YR 4</u>	/2	100		_0_			SIL			
6-15	<u>5YR</u> 3	3/4	100		0			SIL			
		<u> </u>	100								
								·			
								······			
17								21	Lining M. M.		
Hydric Soil		=Deplet	tion, RM=	Reduced Matrix, MS	=Masked	I Sand Gra	ains.	<sup>2</sup> Location: PL=Pore Indicators for Proble			
Histosol				Polyvalue Below	, Surfaco	(S8) (I DE			-		
	pipedon (A2)			MLRA 149B)	Sunace	(30) (LRF	<b>、</b> Γ,	2 cm Muck (A10) ( <b>LRR K, L, MLRA 149B</b> ) Coast Prairie Redox (A16) ( <b>LRR K, L, R</b> )			
	listic (A3)			Thin Dark Surfa	ce (S9) ( <b>I</b>	.RR R, ML	<b>RA 149B</b> )				
	en Sulfide (A4)			Loamy Mucky M				Dark Surface (S7			
Stratifie	d Layers (A5)			Loamy Gleyed N	/latrix (F2	2)		Polyvalue Below		LRR K, L)	
Deplete	d Below Dark S	Surface (	(A11)	Depleted Matrix	(F3)			Thin Dark Surface	e (S9) ( <b>LRR K</b> ,	, L)	
Thick D	ark Surface (A1	12)		Redox Dark Sur	face (F6)			Iron-Manganese I	Masses (F12)	(LRR K, L, R)	
-	Mucky Mineral (			Depleted Dark S		7)		Piedmont Floodpl			
	Gleyed Matrix (	S4)		Redox Depressi	ons (F8)			Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )			
-	Redox (S5)							Red Parent Material (F21)			
	d Matrix (S6)			•				Very Shallow Dark Surface (TF12) Other (Explain in Remarks)			
Dark Su	urface (S7) (LR	RR, ML	.RA 1495	5)				Other (Explain In	Remarks)		
		-	n and we	tland hydrology mus	t be prese	ent, unless	disturbed	or problematic.			
Restrictive	Layer (if obse	rved):									
Туре: <u>С</u>										,	
Depth (in	nches): <u>15</u>							Hydric Soil Present?	Yes	<u>No_√</u>	
Remarks:											
No indica	ators of hy	dric s	soil we	re observed.							



wirc1012\_u\_E



wirc1012\_u\_S

Project/Site: Line 5 Relocation Project City/C	ounty: <u>Iron</u> Sampling Date: <u>2020-05-21</u>
	State: Wisconsin Sampling Point: wirc1011f_w
Investigator(s): EJO/JSW Section	
Landform (hillslope, terrace, etc.): Depression Local reli	
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.454282	
Soil Map Unit Name: <u>Gogebic, very stony-Pence, very stony-Cathro com</u>	
Are climatic / hydrologic conditions on the site typical for this time of year? Ye	
Are Vegetation, Soil, or Hydrology significantly disturb	bed? Are "Normal Circumstances" present? Yes <u>✓</u> No
Are Vegetation, Soil, or Hydrology naturally problema	tic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u></u> No	Is the Sampled Area
Hydric Soil Present? Yes <u>v</u> No	within a Wetland? Yes <u>v</u> No
	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
Feature is a seasonally saturated, red maple-domin	
dominant in the ground layer. Feature likely compa	
causing wetland hydrology to be somewhat artificia	I. Slash and cut stumps are present within
wetland. Surrounding forest is mesic hardwoods.	
L HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Aquate Fadia (BTS) Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odd	
	es on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced	
Algal Mat or Crust (B4) Recent Iron Reduction	
Iron Deposits (B5) Thin Muck Surface (C	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rem	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	<u></u> ( ) (0 ) (00) (00)
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No V Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre-	<i>v</i> ious inspections), if available:
Remarks:	
Hydrologic regime is seasonally saturated, likely with	th surface water and atmospheric inputs.

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

Sampling Point: <u>wirc1011f\_w</u>

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominan Species?	t Indicator Status	Dominance Test worksheet:
1. <u>Acer rubrum</u>				Number of Dominant Species
2. <u>Tsuga canadensis</u>				That Are OBL, FACW, or FAC: (A)
3				Total Number of Dominant Species Across All Strata:3(B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC:67 (A/B)
6				
7				Prevalence Index worksheet:
/·		= Total Co		<u>Total % Cover of:</u> <u>Multiply by:</u> OBL species <u>40</u> x 1 = <u>40</u>
Sapling/Shrub Stratum (Plot size: 15 )		- 10(a) CC	WEI	FACW species $x_1 = 40$
1. <u>Rubus idaeus</u>	2	N	FAC	FAC species $24$ x 3 = $72$
			FAC	FACU species <u>10</u> x 4 = <u>40</u>
				UPL species x 5 =
3				Column Totals: <u>81</u> (A) <u>166</u> (B)
4				Prevalence Index = B/A = 2.049382716049383
5				
6				Hydrophytic Vegetation Indicators:
7				<ul> <li>1 - Rapid Test for Hydrophytic Vegetation</li> <li>2 - Dominance Test is &gt;50%</li> </ul>
	4	= Total Co	over	$\sim$ 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: <u>5</u> )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Carex crinita</u>	35	Y	OBL	data in Remarks or on a separate sheet)
2. <u>Carex cf. intumescens</u>	7	N	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Iris versicolor</u>	5	N	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4			. <u></u>	be present, unless disturbed or problematic.
5			<b>.</b>	Definitions of Vegetation Strata:
6			<u> </u>	_
7				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.			·	Woody vines – All woody vines greater than 3.28 ft in
		= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30 )				
1				
2				
3			·	Hydrophytic Vegetation
4			· ·	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate		= Total Co	ver	
Feature is a red maple-dominated hard	wood s	wamp v	vith fring	ed sedge dominant in ground layer.
Eastern hemlock occurs on hummocks			•	
	5			

SOIL
------

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth		Matrix				x Features						
(inches)	Color (n		<u>%</u>	Color (n	noist)		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
<u> </u>	<u>10YR</u>		100						SICL			
<u> </u>	<u>7.5YR</u>		45	<u>7.5YR</u>	4/6	_5_	<u> </u>	<u>M</u>	SICL	Prominent redox		
3-6	<u>10YR</u>		50			0			SICL			
6-20	<u>7.5YR</u>	4/4	90	<u>7.5YR</u>	4/6	10	<u> </u>	_M_	SIL			
			,									
			·									
·			·									
<sup>1</sup> Type: C=Co		, D=Deple	etion, RM	=Reduced N	/latrix, MS	S=Masked	Sand Gra	ains.		n: PL=Pore Lining, M=Matrix.		
Hydric Soil								_		for Problematic Hydric Soils <sup>3</sup> :		
Histosol	(A1) pipedon (A2)	)		-	ilue Belov RA 149B)	v Surface	(S8) ( <b>LR</b> F	RR,	2 cm Muck (A10) (LRR K, L, MLRA 149B)			
Black Hi		)			,		.RR R, MI	_RA 149B)	<ul> <li>Coast Prairie Redox (A16) (LRR K, L, R)</li> <li>5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</li> </ul>			
Hydroge	en Sulfide (A			Loamy	Mucky M	lineral (F1	I) (LRR K		Dark S	Surface (S7) (LRR K, L)		
	d Layers (A5		(111)			Matrix (F2	)	Polyvalue Below Surface (S8) (LRR K, L)				
	d Below Dar ark Surface		(ATT)		ed Matrix Dark Sur	face (F6)			Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R)			
	lucky Minera					Surface (F			Piedmont Floodplain Soils (F19) (MLRA 149B)			
	Bleyed Matri	x (S4)		Redox	edox Depressions (F8)					Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )		
-	Redox (S5) I Matrix (S6)									'arent Material (F21) Shallow Dark Surface (TF12)		
	rface (S7) ( <b>I</b>		LRA 149	B)						(Explain in Remarks)		
<sup>3</sup> Indicators of Restrictive I		-	on and w	etland hydro	logy mus	t be prese	ent, unless	disturbed	or problemati	с.		
Type:	Layer (If OD	served):										
	ches):								Hvdric Soil	I Present? Yes No		
Remarks:	ches).											
Soils obs	served to	b be si	lty clay	loam o	ver silt	t loam.						
			, ,									



wirc1011f\_w\_N



wirc1011f\_w\_S

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

Evaluator(s):		
EJO/JSW		
Date of visit(s):		
2020-05-21		
Ecological Landsca	ape:	
Superior Mineral Range	s	
Ouperior Mineral Range	5	
Watershed:		
·		
WWI Class:		
N/A		
Wetland Type(s):		
PFO Hardwood swamp		
Wetland Size:	Wetland Area Impacted	
0.0692	0.0692	
Vegetation:	1	
Plant Community Description(s):		
Feature is a red maple-dominated hardwood		
	•	
swamp with fringed sedge dominant in		
groundlayer. Eastern hemlock occurs on		
hummocks within and at edge of wetland.		
	EJO/JSW Date of visit(s): 2020-05-21 Ecological Landsca Superior Mineral Range Watershed: LS11, Potato River WWI Class: N/A Wetland Type(s): PFO Hardwood Wetland Size: 0.0692 Vegetation: Plant Community E Feature is a red swamp with fring groundlayer. Ea	

# SITE MAP

## **SECTION 1: Functional Value Assessment**

HU         YN         Potential         Human Use values: recreation, culture, education, science, natural scenic beauty           1         N         Y         Used for recreation (nuturing, biding, hiking, etc.). List biding, hunting           2         N         Y         Used for educational or scientific purposes           3         N         Y         Visually or physically accessible to public           4         N         Y         Aesthetically pacessible to public           5         N         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           7         N         N         Within or adjacent to habitat corridor or estabilished wildlife habitat area           4         N         Y         Ororers sita a present (1:01% cover)           3         N         N         Within or adjacent to habitat corridor or estabilished wildlife habitat area           4         N         Y         Ororers in a Joint Venture prointy township           6         Y         Interspersion of habitat structure (hem-marsh shruble/mergent, wetland/upland complex etc.)           7         N         Y         plans           8         N         Y				Functional Value Assessment
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           6         N         N         N         Isstemation           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         Withit Habitat         Withit habitat         Supports           2         Y         Y         Or more strata present (10% cover)           3         N         N         Within or adjacent to habitat structure (hemin-marsh, structure)           6         Y         Y         Interspersion of habitat structure (hemin-marsh, structure)           7         N         Q         Diports or provides habitat Structure (hemin-marsh, structure)           7         N         Y         Ephemeral pond with water present >45 days           10         N         Seasonally exposed muditats present         Stading water provides habitat for amphibians and aquatic invertebrates           11         N         N	HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
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           6         N         Y         Supports or provides habitat for endangered, threatened or special concern species           7         N         N         I ist:           6         N         Y         Supports or provides habitat >10 acres           7         N         N         Wildlife Habitat           1         Y         Y         Wetland and contiguous habitat >10 acres           2         Y         Y         Y         Wetland and contiguous habitat >10 forces           3         N         N         Within or adjacent to habitat acridor or established wildlife habitat area           4         N         Y         Otor more strata present (>10% cover)           3         N         N         Cocurs in a Joint Venture priority township           6         Y         Interspersion of habitat structure (hemi-marsh.shrub/emergent, wetland/upland complex,etc.)           7         N         Plans         Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans           8         N         Y         Plans         Suport of all are	1	Ν	Y	
4         N         Y         Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation           5         N         N         List:           6         N         Y         Supports or provides habitat for endangered, threatened or special concern species           7         N         N         In or adjacent it carchaeological or cultural resource site           WH         Wildlife Habitat         N         N           1         Y         Wetland and contiguous habitat >10 acres         2           2         Y         Y         3 or more strata present (>10% cover)         3           3         N         Within or adjacent to habitat corridor or established wildlife habitat area         4           4         N         Y         100 m buffer - natural land cover 250% (south) 75% (north) Intact           5         N         N         Occurs in a Joint Venture priority township           6         Y         Y         Interspection of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex.etc.)           7         N         Y         Establish and augusti for vides habitat for amphibilans and augusti invertebrates           8         N         Y         Part of a large habitat block that supports are asensitive species           9         N	2	Ν	Y	Used for educational or scientific purposes
S         N         List:           6         N         Y         Supports or provides habitat for endangered, threatened or special concern species           7         N         N         N         nor adjacent to achaeological or cultural resource site           1         Y         Y         Wetland and contiguous habitat >10 acres           2         Y         Y         Y         Wetland and contiguous habitat >10 acres           3         N         N         Within or adjacent to habitat corridor or established wildlife habitat area           4         N         Y         Y         Software and the adjacent to habitat corridor or established wildlife habitat area           4         N         Y         Otorus in a Joint Venture priority township           6         Y         Y         Interspersion of habitat structure (nemi-marsh.shrub/emergent, wetland/upland complex.etc.)           7         N         Y         Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other           9         N         N         Petrodo a large habitat block that supports area sensitive species           9         N         N         Standing water provides habitat for amphibians and aquatic invertebrates           11         N         N         Seasonally exposed mudiftas present	3	Ν	Y	Visually or physically accessible to public
S         N         List:           6         N         Y         Supports or provides habitat for endangered, threatened or special concern species           7         N         N         N         nor adjacent to achaeological or cultural resource site           1         Y         Y         Wetland and contiguous habitat >10 acres           2         Y         Y         Y         Wetland and contiguous habitat >10 acres           3         N         N         Within or adjacent to habitat corridor or established wildlife habitat area           4         N         Y         Y         Software and the adjacent to habitat corridor or established wildlife habitat area           4         N         Y         Otorus in a Joint Venture priority township           6         Y         Y         Interspersion of habitat structure (nemi-marsh.shrub/emergent, wetland/upland complex.etc.)           7         N         Y         Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other           9         N         N         Petrodo a large habitat block that supports area sensitive species           9         N         N         Standing water provides habitat for amphibians and aquatic invertebrates           11         N         N         Seasonally exposed mudiftas present	4			Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
Image         Image         Image           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           1         Y         Y         Wetland and contiguous habitat >10 acres           2         Y         Y         Wetland and contiguous habitat >0 acres           3         N         N         Within or adjacent to habitat structure (series/sock/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         Deports or provides habitat for SGCN or bries listed in the WI AI-Bird Cons. Plan, or other plans           8         N         Y         Patr 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         Peotesiat for amplicable           2         N         Y         Standing water	F			In or adjacent to RED FLAG areas
7       N       N       In or adjacent to archaeological or cultural resource site         1       Y       Y       Wetland and contiguous habitat >10 acres         2       Y       Y       3 or more strata present (>19% cover)         3       N       N       Within or adjacent to habitat corridor or established wildlife habitat area         4       N       Y       100 m buffer - natural land cover ≥60%(south) 75% (north) intact         5       N       N       Occurs in a Joint Venture priority township         6       Y       Y       Interspersion of habitat structure (hemi-marsh.shrub/emergent, wetland/upland complex.etc.)         7       N       Y       Part of a large habitat block that supports area sensitive species         9       N       Ephemeral pond with water present ≥45 days         10       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Ephemeral pond with water present ≥45 days         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat       Fish and Aquatic Life Habitat         1       N       N       Natural Hertage Inventory (NH) listed aquatic species within aquatic system         4       N <t< td=""><td>5</td><td>Ν</td><td>N</td><td></td></t<>	5	Ν	N	
7       N       N       In or adjacent to archaeological or cultural resource site         1       Y       Y       Wetland and contiguous habitat >10 acres         2       Y       Y       3 or more strata present (>19% cover)         3       N       N       Within or adjacent to habitat corridor or established wildlife habitat area         4       N       Y       100 m buffer - natural land cover ≥60%(south) 75% (north) intact         5       N       N       Occurs in a Joint Venture priority township         6       Y       Y       Interspersion of habitat structure (hemi-marsh.shrub/emergent, wetland/upland complex.etc.)         7       N       Y       Part of a large habitat block that supports area sensitive species         9       N       Ephemeral pond with water present ≥45 days         10       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Ephemeral pond with water present ≥45 days         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat       Fish and Aquatic Life Habitat         1       N       N       Natural Hertage Inventory (NH) listed aquatic species within aquatic system         4       N <t< td=""><td>6</td><td>N</td><td>Y</td><td>Supports or provides habitat for endangered, threatened or special concern species</td></t<>	6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
WH         Wildlife Habitat           1         Y         Y         Welland 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% (couth) 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         Supports or provides habitat block that supports area sensitive species           9         N         Patri of a large habitat block that supports area sensitive species           10         N         Y         Standing water provides habitat for amphibians and aquatic invertebrates           11         N         Seasonally exposed levelots (HII) listed aquatic species within aquatic system           12         N         Y         Standing water provides habitat for amphibians and aquatic invertebrates           3         N         N         Neural Heritage levelots (HII) listed aquatic species within aquatic system           2         N         Y         Standing water provides habitat f				
1       Y       Y       Wetland and configuous 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       Cocurs in a Joint Venture priority township         6       Y       Y       Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)         7       N       Y       plans       plans         8       N       Y       Part of a large habitat block that supports area sensitive species         9       N       Ephemeral pond with water present >45 days       adjuutral, etc.)         7A       Fish and Aquatic Life Habitat present       10       N       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Vegetation is inundated in spring       Standing water provides habitat for amphibians and aquatic invertebrates         2       N       N       Vegetation is inundated in spring       Storm and Floodwater Storage         2       N       N       Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable	WH			j v
2       Y       Y       3 or more strata present (>10% cover)         3       N       N       Within or adjacent to habitat covider 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       Dians       Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans         8       N       Y       Part of a large habitat block that supports area sensitive species         9       N       N       Ephemeral pond with water present ≥45 days         10       N       Y       Standing water provides habitat for amphiblans and aquatic invertebrates         11       N       N       Standing water provides habitat for amphiblans and aquatic invertebrates         2       N       Y       Standing water provides habitat for amphiblans 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       Shoreline Pro	-	Y	Y	
3         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 brid's 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 care (urban, agricultural, etc.)           Fish and Aquatic Life Habitat         Tesh and Aquatic Life Habitat         Tesh and Aquatic Life Habitat           1         N         N         Wetland is connected or contiguous with perennial stream or lake           2         N         Y         Ystanding water provides habitat lor amphibins and aquatic invertebrates           3         N         N         Natural Heritage Inventory (NHI) listed aquatic species within aquatic system           4         N         V Vegetation is inundated in spring <td></td> <td></td> <td></td> <td></td>				
4       N       Y       100 m buffer – natural land cover ≥60%(south) 75% (north) intact         5       N       N       Occurs in a Joint Venture priority township         6       Y       Y       Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)         7       N       Y       Supports or provides habitat for SG(N 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       Pethemeral pond with water prevesent ≥45 days.         10       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates.         11       N       N       Seasonally exposed mudilats present.         12       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates.         3       N       N       Nettendia is connected or conliguous with perennial stream or lake.         2       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates.         3       N       N       Nettendia is connected or conliguous with perennial stream or lake.         2       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates.         3       N </td <td></td> <td></td> <td></td> <td></td>				
5       N       Occurs in a Joint Venture priority township         6       Y       Y       Interspersion of habitat structure (hemi-mash,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       Pent of a large habitat block that supports area sensitive species         9       N       N       Ephemeral pond with water present ≥ 45 days         10       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Seasonally exposed mudflats present         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Frish and Aquatic Life Habitat         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Frish and Aquatic Life Habitat         14       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       Netural Heritage Inventory (NHI) listed aquatic species within aquatic system         4       N       N       Vegetation is inundated in spring				
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         Beasonally exposed muditats present           12         N         Provides habitat scarce in the area (urban, agricultural, etc.)           FA         Fish and Aquatic Life Habitat           1         N         N         Wetland is connected or condiguous with perennial stream or lake           2         N         Y         Standing water provides habitat for amphibians and aquatic invertebrates           3         N         N         Netural Heritage Inventory (NHI) listed aquatic species within aquatic system           4         N         Vegetation is inundated in spring           SP         Shoreline Protection           1         N         Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable				
7     N     Y       8     N     Y       9     N     N       10     N     Ephemeral pond with water present ≥45 days       10     N     Y       11     N     N       2     N     Provides habitat block that supports area sensitive species       11     N     N       2     N     Provides habitat scarce in the area (urban, agricultural, etc.)       FA     Fish and Aquatic Life Habitat       11     N     N       2     N     Y       2     N     N       2     N     N       3     N     N       4     N     N       4     N     N       4     N     N       5     N     N       6     N     N       7     N     N       7     N     N       7     N     N       8     N     N       9     Shoreline for a stream, lake, pond or open water area (21 acre) - if no, not applicable       9     N     N       9     N     Densely rooted emergent or woody vegetation       11     N     N     Basin wetland, constricted outlet, has through-flow or is adjacent to				
Image: Provides a large habitat block that supports area sensitive species         8       N       Y       Part of a large habitat block that supports area sensitive species         9       N       N       Ephermeral pond with water present ≥ 45 days         10       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Seasonally exposed mudifiats present         12       N       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat       Implementation of the analytic invertebrates         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       Shoreline Protection       Implementation or open water area (≥1 acre) - if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage       Implementation         1       N       N       Basin wetlan				
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 mudifiats present         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         1       N       N         2       N       Y         Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N         4       N       Y         5       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N         4       N       N         4       N       N         4       N       N         9       Shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N         9       N bensely rooted emergent or woody vegetation         3       N       N         10       N       Basin wetland, constricted outlet, h	7	Ν	Y	
9       N       N       Ephemeral pond with water present ≥45 days.         10       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Seasonally exposed mudflats present         12       N       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         1       N       N       Wetland is connected or contiguous with perennial stream or lake         2       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Natural Heritage Inventory (NHI) listed aquatic species within aquatic system         4       N       N       Vegetation is inundated in spring         SP       Shoreline Protection       1         1       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Water levels or high flows - if no, not applicable         3       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       N       Reasin wetland, constricted outlet, has through-flow or is adjacent to a stream         2       N       Y </td <td>8</td> <td>N</td> <td>Y</td> <td></td>	8	N	Y	
10       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Seasonally exposed mudifats present         12       N       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         1       N       W 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       Shoreline Protection          1       N       N       Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable         2       N       N       Along shoreline for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage          1       N       N       Basin wetland, constricted outlet, has through-flow gr is adjacent to a stream         2       N <td< td=""><td></td><td></td><td></td><td></td></td<>				
11       N       N       Seasonally exposed mudifats present         12       N       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         1       N       N       Wetland is connected or contiguous with perennial stream or lake         2       N       Y       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Natural Heritage Inventory (NHI) listed aquatic species within aquatic system         4       N       N       Vegetation is inundated in spring         SP       Shoreline Protection         1       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       W       water levels or high flows - if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage          1       N       Basin wetland, constricted outlet, has through-flow or is adjacent to a stream         2       N       Y       Dense, persistent vegetation         4       N       N       Evidence of flashy hydrology         5       N       Y       Denintor non-point source inflow				
12       N       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat       Fish and Aquatic Life Habitat         1       N       N       Wettand 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       Shoreline Protection         1       N       Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable         2       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable         3       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       N       R         2       N       Y         3       Y       Y         4       N       N         5       N       Pentonito tho on-point source inflow         6       N       N         9       N totifonton-point source inflow <td></td> <td></td> <td></td> <td></td>				
FA       Fish and Aquatic Life Habitat         1       N       N         2       N       Y         3       N       N         4       N       N         5       N       N         6       N       N         7       N       N         8       N       N         9       Shoreline Protection         1       N       N         9       Shoreline Protection         1       N       N         2       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable         3       N       Densely rooted emergent or woody vegetation         5       Storm and Floodwater Storage       N         1       N       Basin wetland, constricted outlet, has through-flow or is adjacent to a stream         2       N       Y       Dense, persistent vegetation         4       N       N       Evidence of flash flydrology         5       N       Y       Dense, persistent vegetation         4       N       N       Evidence of flash flydrology         6       N       N       Impervious s				
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       Shoreline Protection         1       N       N       Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable         2       N       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       N       N       Basin wetland, constricted outlet, has through-flow or is adjacent to a stream         2       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       Impervious sufface cover >10% of land surface within the w	-			
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       Shoreline Protection         1       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       N       Densely rooted emergent or woody vegetation         3       N       N       Densely rooted emergent or woody vegetation         5T       Storm and Floodwater Storage         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       Within a watershed with <10% wetland	-	N	N	
3       N       Natural Heritage Inventory (NHI) listed aquatic species within aquatic system         4       N       N       Vegetation is inundated in spring         SP       Shoreline Protection         1       N       A long shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable         3       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       N       Basin wetland, constricted outlet, has through-flow or is adjacent to a stream         2       N       Y         3       Y       Point or non-point source inflow         6       N       N         7       N       Water flow through wetland is NOT channelized         3       Y       Y         9       Point or non-point source inflow         6       N       N         1       N       N         4       N       N         4       N       N         9       N       Ventials torage of the runoff from contributing area from a 2-year 24-hour storm event         WQ <t< td=""><td></td><td></td><td></td><td></td></t<>				
4       N       V Vegetation is inundated in spring         SP       Shoreline Protection         1       N       N         2       N       N         3       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage       1         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       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				
SP       Shoreline Protection         1       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage       1         1       N       Basin wetland, constricted outlet, has through-flow or is adjacent to a stream         2       N       Y       Dense, persistent vegetation         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       Within a watershed with <10% wetland				
1       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       N       N       Basin wetland, constricted outlet, has through-flow or is adjacent to a stream         2       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				
2         N         N         Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable           3         N         N         Densely rooted emergent or woody vegetation           ST         Storm and Floodwater Storage           1         N         N         Basin wetland, constricted outlet, has through-flow or is adjacent to a stream           2         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		N	N	
2       N       N       water levels or high flows – if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       N       N       Basin wetland, constricted outlet, has through-flow or is adjacent to a stream         2       N       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				
3       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       N       N         2       N       Y         Water flow through wetland is NOT channelized         3       Y       Y         0       N       Evidence of flashy hydrology         5       N       Y         6       N       N         7       N       Within a watershed with <10% or land surface within the watershed	2	Ν	N	
ST       Storm and Floodwater Storage         1       N       N         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         7       N       Within a watershed with <10% wetland	3	N	N	
1       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       Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event         WQ       Water Quality Protection       Water Quality Protection         1       N       N       Provides substantial storage of storm and floodwater based on previous section         2       Y       Y       Basin wetland gr 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				
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	-	N	N	
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       Water Quality Protection       1         1       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       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%	-			
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			-	
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       Water Quality Protection       Water Quality Protection         1       N       N       Provides substantial storage of storm and floodwater based on previous section         2       Y       Y       Basin wetland or constricted outlet         3       Y       Y       Water flow through wetland is NOT channelized         4       N       N       Vegetated wetland associated with a lake or stream         5       Y       Y       Dense, persistent vegetation         6       N       N       Signs of excess nutrients, such as algae blooms, heavy macrophyte growth         7       N       N       Stormwater or surface water from agricultural land is major hydrology source         8       N       N       Discharge to surface water         9       N       N       Natural land cover in 100m buffer area < 50%				
6       N       N       Impervious surfaces cover >10% of land surface within the watershed         7       N       N       Within a watershed with <10% wetland				
7       N       N       Within a watershed with <10% wetland				
8       N       Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event         WQ       Water Quality Protection         1       N       N       Provides substantial storage of storm and floodwater based on previous section         2       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%				
WQWater Quality Protection1NN2YYBasin wetland or constricted outlet3YY3YYWater flow through wetland is NOT channelized4N4N5YYDense, persistent vegetation6NNSigns of excess nutrients, such as algae blooms, heavy macrophyte growth7N7N8N9NNNatural land cover in 100m buffer area < 50%	-			
1       N       N       Provides substantial storage of storm and floodwater based on previous section         2       Y       Y       Basin wetland or constricted outlet         3       Y       Y       Water flow through wetland is NOT channelized         4       N       N       Vegetated wetland associated with a lake or stream         5       Y       Y       Dense, persistent vegetation         6       N       N       Signs of excess nutrients, such as algae blooms, heavy macrophyte growth         7       N       N       Stormwater or surface water from agricultural land is major hydrology source         8       N       N       Discharge to surface water         9       N       N       Natural land cover in 100m buffer area < 50%		IN		
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%		NI	NI	
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%				
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%				
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%				
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%				
7       N       N       Stormwater or surface water from agricultural land is major hydrology source         8       N       N       Discharge to surface water         9       N       N       Natural land cover in 100m buffer area < 50%				
8       N       N       Discharge to surface water         9       N       N       Natural land cover in 100m buffer area < 50%				
9       N       Natural land cover in 100m buffer area < 50%         GW       Groundwater Processes         1       N       N         2       N       N         3       N       N         4       N       Wetland soils are organic	-			
GW       Groundwater Processes         1       N       N       Springs, seeps or indicators of groundwater present         2       N       N       Location near a groundwater divide or a headwater wetland         3       N       N       Wetland remains saturated for an extended time period with no additional water inputs         4       N       N       Wetland soils are organic				
1       N       N       Springs, seeps or indicators of groundwater present         2       N       N       Location near a groundwater divide or a headwater wetland         3       N       N       Wetland remains saturated for an extended time period with no additional water inputs         4       N       N       Wetland soils are organic		N	N N	
2         N         N         Location near a groundwater divide or a headwater wetland           3         N         N         Wetland remains saturated for an extended time period with no additional water inputs           4         N         N         Wetland soils are organic				
3         N         Wetland remains saturated for an extended time period with no additional water inputs           4         N         N         Wetland soils are organic				
4 N N Wetland soils are organic				
· · · · · · · · · · · · · · · · · · ·				
5 N N Wetland is within a wellhead protection area				
	5	Ν	N	Wetland is within a wellhead protection area

WH-7: multiple songbirds observed in wetland, with potential to host SGCN birds; WH-6: wetland has variable microtopography, with interspersed uplands; WH-10: wetland did not have standing water at time of survey, but may be inundated at time 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	Y	-sided warbler, veery, hairy woodpecker, white-throated sparrow heard or observed in or nea
	Y	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	Aquatic invertebrates, herpetofauna
-		

## **SECTION 2: Floristic Integrity**

### Plant Community Integrity (circle)\*

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Acer rubrum*			PFO	Patchy
Arisaema triphyllum			PFO	Barren
Carex cf. intumescens			PFO	Barren
Carex crinita*			PFO	Rare
Dryopteris intermedia			PFO	Barren
Erythronium americanum			PFO	Barren
Gymnocarpium dryopteris			PFO	Barren
Impatiens capensis			PFO	Barren
Iris versicolor			PFO	Barren
Maianthemum canadense			PFO	Barren
Onoclea sensibilis			PFO	Barren
Rubus idaeus			PFO	Rare
Scutellaria lateriflora			PFO	Barren
Tsuga canadensis			PFO	Rare

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

Wetland has moderate to high florisitc integrity with well-developed strata and no non-native species observed.

## 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
Х	Х	Х	М	С	Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
					Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		L	UC	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
х	x	х х м с	С	Removal of herbaceous stratum – mowing,	
^	^	^	IVI	C	grading, earthworms, etc.
Х	х	х	М	С	Removal of tree or shrub strata – logging, unprescribed fire
	Х	Х	М	С	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 has stumps and slash present indicating previous selective harvest; soil may have been compacted from previous logging operations. The wetland is adjacent to a forest trail. Earthworms are present in the forest with potential to remove herbaceous vegetation.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION			SIGNIFICANCE	E	
	Low	Medium	High	Exceptional	NA
Floristic Integrity			<b>v</b>		
Human Use Values		<ul> <li>✓</li> </ul>			
Wildlife Habitat			<b>v</b>		
Fish and Aquatic Life Habitat	<b>v</b>				
Shoreline Protection					<b>v</b>
Flood and Stormwater Storage		<ul> <li>✓</li> </ul>			
Water Quality Protection			~		
Groundwater Processes			~		

FUNCTION	RATIONALE
Floristic Integrity	Feature has good representation of native species, no non-native species were observed, and feature is within relatively intact forest.
Human Use Values	Wetland has potential to host wildlife valuable to recreational activities.
Wildlife Habitat	Forest is relatively intact and has multiple strata. Multiple songbirds observed at time of survey.
Fish and Aquatic Life Habitat	No standing water at time of survey, but wetland may be inundated at times.
Shoreline Protection	N/A
Flood and Stormwater Storage	Wetland likely receives stormwater inputs from surrounding uplands.
Water Quality Protection	Wetland has dense and persistent vegetation.
Groundwater Processes	Wetland has 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

Project/Site: Line 5 Relocation Project	City/County: Iror	ן Sar	mpling Date: <u>2020-05-21</u>
Applicant/Owner: Enbridge		State: Wisconsin S	Sampling Point: <u>wirc1011_u</u>
Investigator(s): <u>JSW/EJO</u>	Section, Township	o, Range: <u>SEC 22 T046N R</u>	001W
Landform (hillslope, terrace, etc.): Talf	Local relief (concave,	convex, none): <u>None</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.454	400	Long: <u>-90.478742</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Ca	athro complex, 0 to 6	percent slopes NWI classification	ו:
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes 🔽 I	No (If no, explain in Rema	rks.)
Are Vegetation, Soil, or Hydrology significa	ntly disturbed?	Are "Normal Circumstances" prese	ent? 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? Hydric Soil Present?	Yes Yes	No <u>r</u> No <u>r</u>	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No 🖌	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced The upland sample point by hemlock.			logging road. The immediate area is dominated

## HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 R	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 So	ils (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)
Field Observations:	
Surface Water Present? Yes <u>No</u> Depth (inches):	
Water Table Present? Yes No <u>v</u> Depth (inches):	
Saturation Present? Yes No 🖌 Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No 🖌 Depth (inches): (includes capillary fringe)	· · · ·
Saturation Present? Yes No 🖌 Depth (inches):	· · · ·
Saturation Present? Yes No 🖌 Depth (inches): (includes capillary fringe)	· · · ·
Saturation Present?       Yes No _ ✓       Depth (inches):         (includes capillary fringe)           Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	· · · ·
Saturation Present?       Yes       No _ ✓       Depth (inches):         (includes capillary fringe)           Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	· · · ·
Saturation Present?       Yes No _ ✓       Depth (inches):         (includes capillary fringe)           Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	· · · ·
Saturation Present?       Yes No _ ✓       Depth (inches):         (includes capillary fringe)           Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	· · · ·
Saturation Present?       Yes No _ ✓       Depth (inches):         (includes capillary fringe)           Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	· · · ·
Saturation Present?       Yes No _ ✓       Depth (inches):         (includes capillary fringe)           Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	· · · ·
Saturation Present?       Yes No _ ✓       Depth (inches):         (includes capillary fringe)           Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	· · · ·
Saturation Present?       Yes No _ ✓       Depth (inches):         (includes capillary fringe)           Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	· · · ·
Saturation Present?       Yes No _ ✓       Depth (inches):         (includes capillary fringe)           Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	· · · ·
Saturation Present?       Yes No _ ✓       Depth (inches):         (includes capillary fringe)           Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	· · · ·
Saturation Present?       Yes No _ ✓       Depth (inches):         (includes capillary fringe)           Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	· · · ·

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

Tree Stratum (Plot size: <u>30</u> )	Absolute	Dominan Species?	t Indicator	Dominance Test worksheet:
1. <u>Tsuga canadensis</u> )			FACU	Number of Dominant Species
-				That Are OBL, FACW, or FAC: (A)
2. Acer rubrum			FAC	Total Number of Dominant
3. <u>Fraxinus pennsylvanica</u>				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>20</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	40	_ = Total Co	over	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 )				FACW species <u>5</u> x 2 = <u>10</u>
1. <u>Acer saccharum</u>	20	Y	FACU	FAC species <u>16</u> x 3 = <u>48</u>
2				FACU species <u>64</u> x 4 = <u>256</u>
3				UPL species x 5 =
4				Column Totals: <u>87</u> (A) <u>316</u> (B)
				Prevalence Index = B/A = <u>3.632183908045977</u>
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
	20	_ = Total Co	over	$3$ - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Erythronium americanum</u>	20	<u>Y</u>		data in Remarks or on a separate sheet)
2. <u>Gymnocarpium dryopteris</u>	10	<u> </u>	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Rubus idaeus</u>	10	<u> </u>	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Carex crinita</u>	2	N	OBL	be present, unless disturbed or problematic.
5. <u>Claytonia caroliniana</u>	2	N	FACU	Definitions of Vegetation Strata:
6. <u>Anemone quinquefolia</u>	2	N	FACU	
7. <u>Trientalis borealis</u>				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				
9				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11	_			Woody vines – All woody vines greater than 3.28 ft in
12				height.
	47	_ = Total Co	over	
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3				Hydrophytic
4	_			Vegetation Present? Yes No ✓
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate				
The sample plot is located at the side of	of a logo	ging roa	d.	

#### SOIL

0-12       5YR 3/4       100       0       SIL	(inches) 0-12	<u>Matrix</u> Color (moist)	%	Redox Color (moist)	<u>Features</u> <u>%</u> Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
ype:       C-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>1</sup> : Indicators for Problematic Hydric Soils <sup>1</sup> : Histosol (A1) Histosol (A2) Black Histo (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Black Histo (A3) Stratified Layers (A5) Depleted Below Dark Surface (S9) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sitriped Matrix (S4) Sandy Redox (S5) Sitriped Matrix (S4) Sandy Redox (S5) Sitriped Matrix (S4) Depleted Dark Surface (F7) Depleted Dark Surface (		· · · · ·						
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         _ Histosol (A1)      Polyvalue Below Surface (S8) (LRR R,      2 cm Muck (A10) (LRR K, L, MLRA 149B)			<u> </u>					
Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         _ Histosol (A1)      Polyvalue Below Surface (S8) (LRR R,      2 cm Muck (A10) (LRR K, L, MLRA 149B)								
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         _ Histosol (A1)      Polyvalue Below Surface (S8) (LRR R,      2 cm Muck (A10) (LRR K, L, MLRA 149B)								
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         _ Histosol (A1)      Polyvalue Below Surface (S8) (LRR R,      2 cm Muck (A10) (LRR K, L, MLRA 149B)								
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         _ Histosol (A1)      Polyvalue Below Surface (S8) (LRR R,      2 cm Muck (A10) (LRR K, L, MLRA 149B)								
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         _ Histosol (A1)      Polyvalue Below Surface (S8) (LRR R,      2 cm Muck (A10) (LRR K, L, MLRA 149B)						<u> </u>		
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         _ Histosol (A1)      Polyvalue Below Surface (S8) (LRR R,      2 cm Muck (A10) (LRR K, L, MLRA 149B)								
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         _ Histosol (A1)      Polyvalue Below Surface (S8) (LRR R,      2 cm Muck (A10) (LRR K, L, MLRA 149B)								
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         _ Histosol (A1)      Polyvalue Below Surface (S8) (LRR R,      2 cm Muck (A10) (LRR K, L, MLRA 149B)								
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         _ Histosol (A1)      Polyvalue Below Surface (S8) (LRR R,      2 cm Muck (A10) (LRR K, L, MLRA 149B)								
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         _ Histosol (A1)      Polyvalue Below Surface (S8) (LRR R,      2 cm Muck (A10) (LRR K, L, MLRA 149B)								
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         _ Histosol (A1)      Polyvalue Below Surface (S8) (LRR R,      2 cm Muck (A10) (LRR K, L, MLRA 149B)								
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         _ Histosol (A1)      Polyvalue Below Surface (S8) (LRR R, MLRA 149B)      2 cm Muck (A10) (LRR K, L, MLRA 149B)						<u> </u>		
Histosol (A1)       Polyvalue Below Surface (S8) (LRR R,       2 cm Muck (A10) (LRR K, L, MLRA 149B)         Histic Epipedon (A2)       MLRA 149B)       Coast Prairie Redox (A16) (LRR K, L, R)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)       5 cm Mucky Peat or Peat (S3) (LRR K, L, R)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (LRR K, L)       Dark Surface (S7) (LRR K, L)         Stratified Layers (A5)       Loamy Gleyed Matrix (F2)       Polyvalue Below Surface (S8) (LRR K, L)         Depleted Below Dark Surface (A12)       Redox Dark Surface (F6)       Thin Dark Surface (S9) (LRR K, L, F)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Piedmont Floodplain Soils (F19) (MLRA 1425, 149)         Sandy Redox (S5)       Redox Depressions (F8)       Mesic Spodic (TA6) (MLRA 144A, 145, 149, 145, 149)         Stripped Matrix (S6)       Very Shallow Dark Surface (TF12)       Other (Explain in Remarks)         Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       Very Shallow Dark Surface (Yes			etion, RM=F	educed Matrix, MS	=Masked Sand G	rains.		
	-							•
Black Histic (A3)			_		Surface (S8) (LR	RR,		
			_	,	ce (S9) (LRR R, N	ILRA 149B)		
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L)     Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, F     Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 145, 149)     Sandy Redox (S5) Redox Depressions (F8) Redox Depressions (F8) Red Parent Material (F21) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Muck 149B) Muck 149B Hydric Soil Present? Yes No marks:			—			<b>(, L</b> )		
Thick Dark Surface (A12)       Redox Dark Surface (F6)       Iron-Manganese Masses (F12) (LRR K, L, F         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Piedmont Floodplain Soils (F19) (MLRA 148         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       Mesic Spodic (TA6) (MLRA 144A, 145, 149)         Sandy Redox (S5)       Red Parent Material (F21)       Very Shallow Dark Surface (TF12)         Dark Surface (S7) (LRR R, MLRA 149B)       Other (Explain in Remarks)         ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         estrictive Layer (if observed):       Type: Cobble         Depth (inches):       12.0         marks:       Hydric Soil Present? Yes No			- (A11)					
Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. estrictive Layer (if observed): Type: <u>Cobble</u> Depth (inches): <u>12.0</u> Hydric Soil Present? Yes <u>No v</u>	_ Sandy N	lucky Mineral (S1)	_	_ Depleted Dark S	Surface (F7)		Piedmo	ont Floodplain Soils (F19) ( <b>MLRA 149</b>
Stripped Matrix (S6)Very Shallow Dark Surface (TF12)Other (Explain in Remarks)Dark Surface (S7) (LRR R, MLRA 149B)Other (Explain in Remarks)Detrictive Layer (if observed):Type: <u>Cobble</u> Depth (inches): <u>12.0</u> NoNo			—	_ Redox Depression	ons (F8)			
_ Dark Surface (S7) (LRR R, MLRA 149B)Other (Explain in Remarks)  ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  estrictive Layer (if observed): Type: Cobble Depth (inches): 12.0 Permarks:								
estrictive Layer (if observed): Type: <u>Cobble</u> Depth (inches): <u>12.0</u> emarks:			ILRA 149B)					
estrictive Layer (if observed): Type: <u>Cobble</u> Depth (inches): <u>12.0</u> emarks:		<b>f</b> han all and the state of th				- distants of -		
Type: <u>Cobble</u> Depth (inches): <u>12.0</u> emarks:				and hydrology must	be present, unles	is disturbed o	or problematic	
Depth (inches):         12.0         Hydric Soil Present?         Yes         No         ✓           emarks:         ••••••••••••••••••••••••••••••••••••		aver (if observed)						
emarks:	estrictive							
	estrictive I Type: <u>Co</u>	obble					Hydric Soil	Present? Yes No 🗸
	estrictive I Type: <u>Co</u> Depth (ind	obble					Hydric Soil	Present? Yes No 🗸
	estrictive I Type: <u>Cr</u> Depth (ind emarks:	bble ches): <u>12.0</u>	nches du	  Je to the pres	sence of cob	ble.	Hydric Soil	Present? Yes No
	estrictive I Type: <u>Cr</u> Depth (ind emarks:	bble ches): <u>12.0</u>	nches du	 ue to the pres	sence of cob	ble.	Hydric Soil	Present? Yes No <u>~</u>
	estrictive I Type: <u>Cr</u> Depth (ind emarks:	bble ches): <u>12.0</u>	nches dı	 ue to the pres	sence of cot	ble.	Hydric Soil	Present? Yes <u>v</u> No <u>v</u>
	estrictive I Type: <u>Cr</u> Depth (ind emarks:	bble ches): <u>12.0</u>	nches di	 ue to the pres	sence of cot	ble.	Hydric Soil	Present? Yes <u>No v</u>
	estrictive I Type: <u>Cr</u> Depth (ind emarks:	bble ches): <u>12.0</u>	nches dı	ue to the pres	sence of cot	ble.	Hydric Soil	Present? Yes <u>No </u>
	estrictive I Type: <u>Cr</u> Depth (ind emarks:	bble ches): <u>12.0</u>	nches di	ue to the pres	sence of cok	oble.	Hydric Soil	Present? Yes <u>v</u> No <u>v</u>
	estrictive I Type: <u>Cr</u> Depth (ind emarks:	bble ches): <u>12.0</u>	nches di	ue to the pres	sence of cot	oble.	Hydric Soil	Present? Yes <u>v</u>
	estrictive I Type: <u>Cr</u> Depth (ind emarks:	bble ches): <u>12.0</u>	nches dı	ue to the pres	sence of cot	oble.	Hydric Soil	Present? Yes <u>No </u>
	estrictive I Type: <u>Cr</u> Depth (ind emarks:	bble ches): <u>12.0</u>	nches di	ue to the pres	sence of cot	ble.	Hydric Soil	Present? Yes <u>v</u>
	estrictive I Type: <u>Cr</u> Depth (ind emarks:	bble ches): <u>12.0</u>	nches dı	ue to the pres	sence of cot	oble.	Hydric Soil	Present? Yes <u>No </u>
	estrictive I Type: <u>Cr</u> Depth (ind emarks:	bble ches): <u>12.0</u>	nches di	Le to the pres	sence of cot	oble.	Hydric Soil	Present? Yes <u>No </u>
	estrictive I Type: <u>Cr</u> Depth (ind emarks:	bble ches): <u>12.0</u>	nches di	ue to the pres	sence of cot	oble.	Hydric Soil	Present? Yes <u>No </u>
	estrictive I Type: <u>Cr</u> Depth (ind emarks:	bble ches): <u>12.0</u>	nches dı	ue to the pres	sence of cot	oble.	Hydric Soil	Present? Yes <u>No </u>



wirc1011\_u\_E



wirc1011\_u\_W

#### WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Pr	roject	City/County: Iron	Sam	oling Date: <u>2020-05-21</u>
Applicant/Owner: Enbridge	-		State: Wisconsin Sa	mpling Point: wira002e_xw
Investigator(s): <u>EJO/JSW</u>				· -
Landform (hillslope, terrace, etc.): Depre	ession La	ocal relief (concave, convex, n	one): Concave	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral F				
Soil Map Unit Name: <u>Gogebic, very stony</u>				
Are climatic / hydrologic conditions on the				
				,
Are Vegetation, Soil, or Hyd				
Are Vegetation, Soil, or Hyd	drology naturally p	roblematic? (If needed,	explain any answers in R	emarks.)
SUMMARY OF FINDINGS – Atta	ch site map showing	g sampling point locati	ons, transects, imp	ortant features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative procedure: Feature is a seasonally satu forest trail and was likely con and potential ruts in wetland	Yes <u>v</u> No <u>ves</u> No <u></u>	within a Wetland? If yes, optional Wetlar ort.) w dominated by Care ous logging operation	Yes <u>v</u> N ad Site ID: ex crinita. Feature hs, as evidenced	e runs along a by stumps, slash,
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators (r	ninimum of two required)
Primary Indicators (minimum of one is rec	quired; check all that apply	)	Surface Soil Cracks	s (B6)
Surface Water (A1)		l Leaves (B9)	Drainage Patterns	
High Water Table (A2)	Aquatic Fauna		Moss Trim Lines (E	
Saturation (A3)	Marl Deposits		Dry-Season Water	
Water Marks (B1)		fide Odor (C1)	Crayfish Burrows (	
Sediment Deposits (B2)		ospheres on Living Roots (C3)		
Drift Deposits (B3)	Presence of R		Stunted or Stresse	
Algal Mat or Crust (B4)	Recent Iron R	eduction in Tilled Soils (C6)	<ul> <li>Geomorphic Position</li> </ul>	on (D2)

Algai Mat or Crust (B4)	Recent Iron Reduction in Tilled Sc	Dis (C6) $\underline{\checkmark}$ 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)
Field Observations:		
Surface Water Present? Yes No _	✓ Depth (inches):	
Water Table Present? Yes No _	✓ Depth (inches):	
Saturation Present? Yes <u>No</u> (includes capillary fringe)	✓ Depth (inches):	Wetland Hydrology Present? Yes
Describe Recorded Data (stream gauge, monito	ring well, aerial photos, previous inspec	tions), if available:

#### Remarks:

Feature in a depression with a seasonally saturated hydrologic regime. Inputs are primarily from surface water and precipitation. Wetland abruptly ends at forest trail and may have been compacted by logging equipment, artificially influencing hydrology.

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

Sampling Point: wira002e\_xw

	Absolute		nt Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		-	? <u>Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6				
				Prevalence Index worksheet:
7	_			Total % Cover of: Multiply by:
	0		over	OBL species $45$ x1 = $45$
Sapling/Shrub Stratum (Plot size: 15 )	_			FACW species $2 \times 2 = 4$
1. <u>Acer rubrum</u>	2	<u>     N</u>	FAC	FAC species $7$ x 3 = $21$
2				FACU species         6         x 4 =         24           UPL species         0         x 5 =         0
3				Column Totals: $60$ (A) $94$ (B)
4				Column rotals. <u><math>50</math></u> (A) <u><math>94</math></u> (B)
5				Prevalence Index = B/A = 1.5666666666666666666666666666666666666
				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				$\sim$ 2 - Dominance Test is >50%
		= Total Co	over	$\sim$ 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: <u>5</u> )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Carex crinita</u>	40	<u> </u>	OBL	data in Remarks or on a separate sheet)
2. <u>Rubus idaeus</u>	5	N	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Scirpus cf. hattorianus</u>	5	N	OBL	1
4. <u>Taraxacum officinale</u>	4	N	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Impatiens capensis			FACW	
6. <u>Gymnocarpium dryopteris</u>				Definitions of Vegetation Strata:
				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	58	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30)				
1				
2				
3				Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate		المحطعة		
Feature is a wet meadow dominated by	y minged	a seage	<del>)</del> .	

SOIL
------

Profile Desc	ription: (I	Describe t	o the dep	oth needed	to docur	nent the i	ndicator	or confirm	n the absence o	f indicators.)
Depth (inches)	Color	Matrix (moist)	%	Color (		<u>x Feature</u> %	s Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
		2.5/2			110131)	0			SICL	Remarks
<u> </u>			<u>   60   </u>		4/0					
0-6	<u>5YR</u>	4/4		5YR		5	<u> </u>	<u>M_</u>	SICL	
6-20	<u>5YR</u>	4/3	90	5YR	4/6	10	<u>C</u>	M	SICL	
<sup>1</sup> Type: C=C		n D=Deple	etion RM	=Reduced	Matrix MS	S=Masked	Sand Gr	ains	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil					indu ng ind					or Problematic Hydric Soils <sup>3</sup> :
Histosol				-		w Surface	(S8) ( <b>LR</b>	RR,		uck (A10) (LRR K, L, MLRA 149B)
	pipedon (A	2)			RA 149B)					rairie Redox (A16) ( <b>LRR K, L, R</b> )
	istic (A3) en Sulfide (	A4)				Ace (59) (L Mineral (F		LRA 149B)		ucky Peat or Peat (S3) ( <b>LRR K, L, R</b> ) rface (S7) ( <b>LRR K, L</b> )
	d Layers (A					Matrix (F2		, _/		ie Below Surface (S8) (LRR K, L)
	d Below Da		(A11)		ted Matrix		,			rk Surface (S9) (LRR K, L)
	ark Surface					rface (F6)				nganese Masses (F12) ( <b>LRR K, L, R</b> )
-	Aucky Mine					Surface (F	7)			nt Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	Bleyed Mat Redox (S5)			Redo	x Depress	ions (F8)				podic (TA6) ( <b>MLRA 144A, 145, 149B</b> ) rent Material (F21)
-	I Matrix (S6									allow Dark Surface (TF12)
	rface (S7)		LRA 149	<b>B</b> )						Explain in Remarks)
3100	f las salar - a la		بالحريم مرم			4 h a				
Restrictive		-	on and w	etiand hydr	ology mus	st be prese	ent, unies	s disturbed	or problematic.	
Type:										
	ches):								Hydric Soil P	Present? Yes <u> </u>
Remarks:	,									
Soils obs	served t	o be si	lty clay	/ loam.						



wira002e\_xw\_N



wira002e\_xw\_S

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	EJO/JSW `´		
File #:	Date of visit(s):		
wira002_x	2020-05-21		
Location:	Ecological Landsca	ape:	
PLSS: sec 22 T046N R001W	Superior Mineral Range	s	
		5	
Lat: <u>46.454558</u> Long: <u>-90.479823</u>	Watershed:		
0	LS11, Potato River		
County: <u>Iron</u> Town/City/Village: Gurney town			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent	Wetland Type(s):		
slopes	PEM - fresh wet meadow		
Field Verified:			
Series not verified. Soils were a silty clay loam	Wetland Size:	Wetland Area Impacted	
that became more reduced lower in the profile.	0.0052	0.0052	
	Vegetation:	•	
	Plant Community D	Description(s):	
Hydrology:		wet meadow dominated by	
Feature in a depression with a seasonally saturated hydrologic			
regime. Inputs are primarily from surface water and precipitation.	fringed sedge, with some other species		
Wetland runs along forest trail and may have been compacted by logging equipment as equipment, artificially influencing hydrology.	present in low q	uanuues.	
logging equipment as equipment, attituding initidencing hydrology.			

## SITE MAP

#### **SECTION 1: Functional Value Assessment**

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

HU-3: The wetland is located alongside a forest trail.
ST-5: Wetland likely receives stormwater runoff from the surrounding area, primarily from the adjacent trail.
WH-7, WH-8: The wetland part of large intact 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	ple songbirds observed in forest surrounding wetland but not directly in wetland due to small
	Y	Avian, 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

#### **SECTION 2: Floristic Integrity**

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

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Acer rubrum			PEM	Barren
Carex crinita*			PEM	Patchy
cf. Erigeron annuus			PEM	Barren
Gymnocarpium dryopteris			PEM	Barren
Impatiens capensis			PEM	Barren
Rubus idaeus			PEM	Barren
Scirpus cf. hattorianus			PEM	Rare
Symphyotrichum cf. ciliolatum			PEM	Barren
Taraxacum officinale			PEM	Rare
Trifolium repens			PEM	Barren
-				

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

The feature has some non-native vegetation, with low to moderate diversity of herbaceous 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
Х	х		н	С	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
Х	x		М	С	Removal of herbaceous stratum – mowing,
X	Χ.		IVI	C	grading, earthworms, etc.
Х	х		М	С	Removal of tree or shrub strata – logging, unprescribed fire
Х	Х		М	С	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
Х	Х		L	С	Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

\* 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 likely influenced by previous logging operations, wherein the adjacent trail was cleared and soils became compacted. Earthworms were present in the surrounding forest, with the potential to impact the wetland's herbaceous stratum.

## SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE								
E E E E E E E E E E E E E E E E E E E	Low	Medium	High	Exceptional	NA				
Floristic Integrity		<b>~</b>							
Human Use Values	<b>v</b>								
Wildlife Habitat	~								
Fish and Aquatic Life Habitat	~								
Shoreline Protection					~				
Flood and Stormwater Storage		<ul> <li>✓</li> </ul>							
Water Quality Protection		<ul> <li>✓</li> </ul>							
Groundwater Processes	~								

FUNCTION	RATIONALE
Floristic Integrity	Some non-natives were present, with lower native diversity.
Human Use Values	Wetland is within an intact forest valuable to recreational activities, but wetland itself is fairly small.
Wildlife Habitat	Wetland is within an intact forest but is a relatively small feature.
Fish and Aquatic Life Habitat	No standing water was observed at the time of survey. The wetland may potentially be inundated for short periods.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature likely receives stormwater from surrounding uplands and the adjacent trail, but is relatively small.
Water Quality Protection	The wetland contains a dense herbaceous layer.
Groundwater Processes	The wetland 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.	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: <u>2020-05-21</u>
Applicant/Owner: Enbridge		State: Wisconsin Samplin	ng Point: <u>wira010e_xw</u>
Investigator(s): <u>JSW/EJO</u>	Section, Township, Range: <u>S</u>	ec 22 T046N R001V	V
Landform (hillslope, terrace, etc.): Depression			_ Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.4544	170 Long: <u>-9(</u>	0.479807	Datum: WGS84
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Ca	thro complex, 0 to 6 percent slo	opes NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes 🖌 No	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significant	ntly disturbed? Are "Norma	al Circumstances" present? Y	′es 🔽 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed,	explain any answers in Remar	rks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes <u> </u>	Is the Sampled Area within a Wetland? Yes <u>v</u> No
Wetland Hydrology Present?	Yes 🖌 No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced The feature is an artificial	ures here or in a separate report.) wet meadow located in a	a depression near a logging road.

## HYDROLOGY

I

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 F	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 So	ils (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)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No 🖌 Depth (inches):	Wetland Hydrology Present? Yes <u>v</u> No
	· · · · · · · · · · · · · · · · · · ·
(includes capillary fringe)	· · · · · · · · · · · · · · · · · · ·
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	· · · · · · · · · · · · · · · · · · ·
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(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	

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

Sampling Point: wira010e\_xw

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )	% Cover	Species?	<u>Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC: $2$ (A)
2				Tatal Number of Dansis and
3				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
5		·		
6		·		Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
	0	= Total Co	over	OBL species 40 x 1 = 40
Sapling/Shrub Stratum (Plot size:15)				FACW species 25 x 2 = 50
				FAC species <u>12</u> x 3 = <u>36</u>
1				FACU species <u>1</u> x 4 = <u>4</u>
2		·		UPL species x 5 =
3		·		Column Totals: <u>78</u> (A) <u>130</u> (B)
4				
5				Prevalence Index = B/A = <u>1.666666666666666666666666666666666666</u>
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
_	0	= Total Co	over	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: <u>5</u> )				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Carex crinita</u>	30	Y	OBL	data in Remarks or on a separate sheet)
2. <u>Solidago gigantea</u>	25	Y	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Juncus effusus</u>		Ν	OBL	
4. <u>Equisetum arvense</u>			FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Euthamia graminifolia</u>			FAC	
6. <u>Rubus idaeus</u>			FAC	Definitions of Vegetation Strata:
7. <u>Taraxacum officinale</u>				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9		·		and greater than or equal to 3.28 ft (1 m) tall.
10		·		Herb – All herbaceous (non-woody) plants, regardless
11	_	·		of size, and woody plants less than 3.28 ft tall.
12	_			Woody vines – All woody vines greater than 3.28 ft in
	78	= Total Co	over	height.
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes ✔ No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate				
The sample plot is representative of the	e wetlan	ıd.		

## SOIL

Profile Desc	ription: (D	escribe t	to the dep	th needed	to docun	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth		Matrix		<u> </u>		x Features		. 2	- ·	
(inches)	Color (n		%	Color (r					Texture	Remarks
0-20	5YR	3/3	90	5YR	4/6	10	_ <u>C</u>	M	SICL	
						·				
						·				
<sup>1</sup> Type: C=Co		D=Dool	otion DM	-Deduced	Motrix MC		Sand Cr		<sup>2</sup> L coation	: PL=Pore Lining, M=Matrix.
Hydric Soil		i, D-Depi			vialită, ivic		Sanu Gi	dil 15.		for Problematic Hydric Soils <sup>3</sup> :
Histosol				Polyva	alue Belov	v Surface	(S8) (L <b>R</b> I	R R.		Auck (A10) ( <b>LRR K, L, MLRA 149B</b> )
	oipedon (A2)	)			RA 149B)		() (	,		Prairie Redox (A16) ( <b>LRR K, L, R</b> )
Black Hi	stic (A3)							LRA 149B)	5 cm N	Aucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A				-	/lineral (F1		K, L)		Surface (S7) (LRR K, L)
	d Layers (A5		( ( ) ( ) ( )	-	-	Matrix (F2)	)		-	lue Below Surface (S8) (LRR K, L)
	d Below Dar ark Surface		e (A11)		ted Matrix	face (F6)				ark Surface (S9) (LRR K, L) anganese Masses (F12) (LRR K, L, R)
	lucky Minera					Surface (F	7)			ont Floodplain Soils (F19) (MLRA 149B)
-	Bleyed Matrix				Depress		.,			Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	ledox (S5)	. ,								arent Material (F21)
	Matrix (S6)									hallow Dark Surface (TF12)
Dark Su	rface (S7) ( <b>I</b>	_RR R, N	ILRA 149	<b>3</b> )					Other	(Explain in Remarks)
<sup>3</sup> Indicators of	f hydronhyti	c voqetat	ion and w	atland bydro		t ha nrasa	nt unles	e dieturbed	or problematio	<b>、</b>
Restrictive I	• • •	-			logy mus	t be plese	int, unies	s distuibed		
Type:										
	abaa);								Hydric Soil	Present? Yes <u>~</u> No
	ches):									
Remarks: The soils	wore o	hearva	d to b	a silty cl		m with	rodov	through	out	
		036176		5 Silty Ci	ay ioai	III WILII	IEUUX	unougi	iout.	



wira010e\_xw\_N



wira010e\_xw\_W

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	EJO/JSW ŚŚ			
File #:	Date of visit(s):			
wira010_x	2020-05-21			
Location:	Ecological Landsca	ape:		
PLSS: sec 22 T046N R001W	Superior Mineral Range	S		
	Capener milerar tange	-		
Lat: <u>46.454470</u> Long: <u>-90.479807</u>	Watershed:			
	LS11, Potato River			
County: <u>Iron</u> Town/City/Village: Gurney town				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent	Wetland Type(s):			
slopes	PEM - fresh wet meadow			
Field Verified:				
Series not verified. Soils were observed to be	Wetland Size:	Wetland Area Impacted		
silty clay loam with prominent redox.	0.0017	0.0017		
	Vegetation:			
	Plant Community Description(s):			
Hydrology:		a fresh wet meadow		
Wetland is located in linear depression near	dominated by fringed sedge.			
forest trail. The hydrologic regime is seasonally	dominated by m	ngeu seuge.		
saturated.				

## SITE MAP

#### **SECTION 1: Functional Value Assessment**

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

HU-1, WH-7: Wetland is part of larger intact forest which provides recreational opportunities and hosts a variety of wildlife, potentially threatened species. ST-5: The wetland likely receives stormwater runoff from surrounding uplands and the associated logging trail.

> 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	/eery, chestnut-sided warbler, Black-throated blue warbler heard in forest adjacent to wetland
		Other avian species, 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

#### **SECTION 2: Floristic Integrity**

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

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Carex crinita*			PEM	Patchy
Equisetum arvense			PEM	Rare
Euthamia graminifolia			PEM	Rare
Juncus effusus			PEM	Rare
Matteuccia struthiopteris			PEM	Barren
Osmunda claytoniana			PEM	Barren
Rubus idaeus			PEM	Barren
Solidago gigantea*			PEM	Patchy
Taraxacum officinale			PEM	Barren

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

The wetland plant community has good coverage of native species, with 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
Х	х		М	С	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
V	V	X		0	Removal of herbaceous stratum – mowing,
Х	X	Х	М	C	grading, earthworms, etc.
Х	Х	Х	М	С	Removal of tree or shrub strata – logging, unprescribed fire
	Х	Х	М	С	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 likely impacted by previous logging operations, as evidenced by stumps and slash present in the wetland. The wetland is a part of a larger forest that contains earthworms.

## SUMMARY OF FUNCTIONAL VALUES

FUNCTION			SIGNIFICANC	E	
	Low	Medium	High	Exceptional	NA
Floristic Integrity		<ul> <li>✓</li> </ul>			
Human Use Values		<ul> <li>✓</li> </ul>			
Wildlife Habitat		<ul> <li>✓</li> </ul>			
Fish and Aquatic Life Habitat	~				
Shoreline Protection					~
Flood and Stormwater Storage		<ul> <li>✓</li> </ul>			
Water Quality Protection		<ul> <li>✓</li> </ul>			
Groundwater Processes	<b>/</b>				

FUNCTION	RATIONALE
Floristic Integrity	Wetland has good coverage of native species, with lower diversity
Human Use Values	Wetland is a part of larger forest which provides recreational opportunities
Wildlife Habitat	The wetland is part of a large forested area that provides habitat for various wildlife species.
Fish and Aquatic Life Habitat	No standing water was observed at time of survey, and the feature likely is not inundated for sufficient durations to support aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature receives stormwater from surrounding uplands and the intersecting logging road.
Water Quality Protection	The wetland has dense and persistent vegetation.
Groundwater Processes	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.	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	on Project	City/County: Iror	<b>۱</b> ــــــــــــــــــــــــــــــــــــ	ampling Date: <u>2020-05-21</u>
Applicant/Owner: Enbridge			State: Wisconsin	Sampling Point: wira010_xu
Investigator(s): <u>JSW/EJO</u>		Section, Township	, Range: <u>sec 22 T046N F</u>	<u>2001W</u>
Landform (hillslope, terrace, etc.): S	•		convex, none): <u>None</u>	
Subregion (LRR or MLRA): Northce	entral Forests Lat: 46.4	54460	Long: <u>-90.479753</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very	y stony-Pence, very stony	-Cathro complex, 0 to 6	percent slopes NWI classification	วท:
Are climatic / hydrologic conditions c	on the site typical for this tin	ne of year? Yes <u></u> I	No (If no, explain in Rem	arks.)
Are Vegetation, Soil,	, or Hydrology signi	ificantly disturbed?	Are "Normal Circumstances" pres	sent? Yes 🖌 No
Are Vegetation, Soil,	, or Hydrology natu	rally problematic?	(If needed, explain any answers i	n Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No <u> </u>	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced The upland sample point			a logging road.

## HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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	g 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 S	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)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No _	
Saturation Present? Yes No V Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No 🖌 Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No 🖌 Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _       ✓       Depth (inches):         (includes capillary fringe)	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _       ✓       Depth (inches):         (includes capillary fringe)	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _       ✓       Depth (inches):         (includes capillary fringe)	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _       ✓       Depth (inches):         (includes capillary fringe)	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _       ✓       Depth (inches):         (includes capillary fringe)	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _       ✓       Depth (inches):         (includes capillary fringe)	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _       ✓       Depth (inches):         (includes capillary fringe)	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _       ✓       Depth (inches):         (includes capillary fringe)	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _       ✓       Depth (inches):         (includes capillary fringe)	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _       ✓       Depth (inches):         (includes capillary fringe)	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _       ✓       Depth (inches):         (includes capillary fringe)	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _       ✓       Depth (inches):         (includes capillary fringe)	Wetland Hydrology Present? Yes No

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

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. <u>Acer saccharum</u>				Number of Dominant Species
				That Are OBL, FACW, or FAC: (A)
2. <u>Tilia americana</u>				Total Number of Dominant
3				Species Across All Strata:6(B)
4			·	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>33</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov		OBL species x 1 =
Sapling/Shrub Stratum (Plot size:15)				FACW species <u>30</u> x 2 = <u>60</u>
1. <u>Rubus idaeus</u>	20	Y	FAC	FAC species <u>30</u> x 3 = <u>90</u>
2. <u>Acer saccharum</u>			FACU	FACU species <u>52</u> x 4 = <u>208</u>
				UPL species x 5 =
3				Column Totals: <u>112</u> (A) <u>358</u> (B)
4				Prevalence Index = B/A = 3.1964285714285716
5				
6			·	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	30	= Total Cov	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5 )				3 - Prevalence Index is $\leq 3.0^1$
1. <u>Agrostis gigantea</u>	30	Y	FACW	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2. <u>Poa pratensis</u>			FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Rubus idaeus</u>			FAC	
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Maianthemum canadense</u>		<u>N</u>	FACU	be present, unless disturbed or problematic.
5. <u>Taraxacum officinale</u>		<u> </u>	FACU	Definitions of Vegetation Strata:
6. <u>Erigeron annuus</u>		N	<u>FACU</u>	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Veronica officinalis</u>	5	N	<u>FACU</u>	at breast height (DBH), regardless of height.
8. <u>Aralia nudicaulis</u>	2	N	<u>FACU</u>	Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
	72	= Total Cov		height.
Weader Vine Charter (Dist size: 20)	12			
Woody Vine Stratum (Plot size: 30)				
1				
2				
3			·	Hydrophytic
4				Vegetation Present? Yes <u>No v</u>
	0	= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate				
The sample plot is located at the egde	or a logo	ging roa	a.	

## SOIL

Depth       Matrix       Redox Features         (aches)       Color (moist)       %       Type       Loc <sup>2</sup> Texture       Remarks         0-10       5YR       3/4       100       0       SIL
10-20       5YR       3/3       100       0       SICL
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.       *Location: PL=Pore Lining, M=Matrix.         'Hydric Soil Indicators:       Indicators for Problematic Hydric Soils':         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, MLRA 149B)         Histosol (A2)       MLRA 149B)         Histosol (A2)       MLRA 149B)         Histosol (A2)       MLRA 149B)         Histosol (A2)       Thin Dark Surface (S9) (LRR R, MLRA 149B)         Coast Prairie Redox (A16) (LRR K, L, R)         Black Histic (A3)
Image:
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :
Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)       5 cm Mucky Peat or Peat (S3) (LRR K, L, R)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (LRR K, L)       Dark Surface (S7) (LRR K, L)         Stratified Layers (A5)       Loamy Gleyed Matrix (F2)       Polyvalue Below Surface (S9) (LRR K, L)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Thin Dark Surface (S9) (LRR K, L)         Thick Dark Surface (A12)       Redox Dark Surface (F6)       Iron-Manganese Masses (F12) (LRR K, L, R)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Piedmont Floodplain Soils (F19) (MLRA 149B)         Sandy Redox (S5)       Redox Depressions (F8)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Stripped Matrix (S6)       Very Shallow Dark Surface (TF12)       Other (Explain in Remarks)         3 <sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       Restrictive Layer (if observed):         Type:
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)   3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.   Restrictive Layer (if observed):   Type:   Depth (inches):   Remarks:
Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)   3 <sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.   Restrictive Layer (if observed):   Type:   Depth (inches):   Remarks:
Dark Surface (S7) (LRR R, MLRA 149B) 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): No _ ✓ Remarks:
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.          Restrictive Layer (if observed):
Restrictive Layer (if observed):         Type:         Depth (inches):         Remarks:
Type:
Depth (inches):       Hydric Soil Present?       Yes       No       ✓         Remarks:       Image: Soil Present in the second sec
Remarks:



wira010\_xu\_E



wira010\_xu\_N

### WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site:       Line 5 Relocation Project       City/County:       Iron       Sampling Date: 202         Applicant/Owner:       Enbridge       State:       Wisconsin       Sampling Point:       wi         Investigator(s):       EJO/JSW       Section, Township, Range:       Sec 22 T046N R001W       Solope (%         Landform (hillslope, terrace, etc.):       Depression       Local relief (concave, convex, none):       Concave       Slope (%         Subregion (LRR or MLRA):       Northcentral Forests       Lat:       46.454425       Long: -90.477447       Datum:       M         Soil Map Unit Name:       Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes       NWI classification:	No
Investigator(s):       EJO/JSW       Section, Township, Range:       Sec 22 T046N R001W         Landform (hillslope, terrace, etc.):       Depression       Local relief (concave, convex, none):       Concave       Slope (%         Subregion (LRR or MLRA):       Northcentral Forests       Lat:       46.454425       Long:       -90.477447       Datum:       M         Soil Map Unit Name:       Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes       NWI classification:	»): <u>0-29</u> /GS84 No
Landform (hillslope, terrace, etc.):       Depression       Local relief (concave, convex, none):       Concave       Slope (%         Subregion (LRR or MLRA):       Northcentral Forests       Lat:       46.454425       Long:       -90.477447       Datum:       M         Soil Map Unit Name:       Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes       NWI classification:	/GS84 No
Subregion (LRR or MLRA):       Northcentral Forests       Lat:       46.454425       Long:       -90.477447       Datum:       Mathematical Mathmatical Matexited Matexited Mathematical Mathematical Mathematical	/GS84 No
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         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 feature         Hydrophytic Vegetation Present?       Yes No         Yes No       Is the Sampled Area         within a Wetland?       Yes No         If yes, optional Wetland Site ID:	No
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         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 feature         Hydrophytic Vegetation Present?       Yes No         Yes No       Is the Sampled Area         within a Wetland?       Yes No         If yes, optional Wetland Site ID:	No
Are Vegetation, Soil, or Hydrologysignificantly disturbed?       Are "Normal Circumstances" present? Yes         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 feature         Hydrophytic Vegetation Present?       Yes No         Hydrophytic Vegetation Present?       Yes No         Wetland Hydrology Present?       Yes No         If yes, optional Wetland Site ID:	
wre 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 feature         Hydrophytic Vegetation Present?       Yes v       No         Hydric Soil Present?       Yes v       No         Wetland Hydrology Present?       Yes v       No         Yes v       No       If yes, optional Wetland Site ID:	
BUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important feature         Hydrophytic Vegetation Present?       Yes v       No       Is the Sampled Area         Hydric Soil Present?       Yes v       No       Is the Sampled Area         Wetland Hydrology Present?       Yes v       No       If yes, optional Wetland Site ID:	res, etc
Hydrophytic Vegetation Present?       Yes	res, etc
Hydrophytic Vegetation Present?       Yes	,
Hydric Soil Present?         Yes _          No         within a Wetland?         Yes _          No           Wetland Hydrology Present?         Yes _          No         If yes, optional Wetland Site ID:	
Remarks: (Explain alternative procedures here or in a separate report.)	
HYDROLOGY	
Wetland Hydrology Indicators: Secondary Indicators (minimum of two n	equired)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)	
Primary Indicators (minimum of one is required; check all that apply)	
Primary Indicators (minimum of one is required; check all that apply)	
Primary Indicators (minimum of one is required; check all that apply)	
Primary Indicators (minimum of one is required; check all that apply)	γ (C9)
Primary Indicators (minimum of one is required; check all that apply)	y (C9)
Primary Indicators (minimum of one is required; check all that apply)       Surface Soil Cracks (B6)         Surface Water (A1)       V       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         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)       V	y (C9)
Primary Indicators (minimum of one is required; check all that apply)       Surface Soil Cracks (B6)         Surface Water (A1)       Water-Stained Leaves (B9)       Drainage Patterns (B10)         High Water Table (A2)       Aquatic Fauna (B13)       Moss Trim Lines (B16)         Saturation (A3)       Marl Deposits (B15)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery         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)	y (C9)
Primary Indicators (minimum of one is required; check all that apply)       Surface Soil Cracks (B6)         Surface Water (A1)       ✓       Water-Stained Leaves (B9)       Drainage Patterns (B10)         ✓       High Water Table (A2)       Aquatic Fauna (B13)       Moss Trim Lines (B16)         ✓       Saturation (A3)       Marl Deposits (B15)       Dry-Season Water Table (C2)         ✓       Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery         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)	y (C9)
Primary Indicators (minimum of one is required; check all that apply)       Surface Soil Cracks (B6)         Surface Water (A1)       ✓       Water-Stained Leaves (B9)       Drainage Patterns (B10)         ✓       High Water Table (A2)       Aquatic Fauna (B13)       Moss Trim Lines (B16)         ✓       Saturation (A3)       Marl Deposits (B15)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery         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)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Microtopographic Relief (D4)         Sparsely Vegetated Concave Surface (B8)       ✓       FAC-Neutral Test (D5)	/ (C9)
Primary Indicators (minimum of one is required; check all that apply)       Surface Soil Cracks (B6)         Surface Water (A1)       ✓       Water-Stained Leaves (B9)       Drainage Patterns (B10)         ✓       High Water Table (A2)       Aquatic Fauna (B13)       Moss Trim Lines (B16)         ✓       Saturation (A3)       Marl Deposits (B15)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery         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)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Microtopographic Relief (D4)         Sparsely Vegetated Concave Surface (B8)       ✓       FAC-Neutral Test (D5)	y (C9)
Primary Indicators (minimum of one is required; check all that apply)       Surface Soil Cracks (B6)         Surface Water (A1)       ✓       Water-Stained Leaves (B9)       Drainage Patterns (B10)         ✓       High Water Table (A2)       Aquatic Fauna (B13)       Moss Trim Lines (B16)         ✓       Saturation (A3)       Marl Deposits (B15)       Dry-Season Water Table (C2)         ✓       Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery         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)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Microtopographic Relief (D4)         Sparsely Vegetated Concave Surface (B8)       ✓       FAC-Neutral Test (D5)	y (C9)

Remarks: Hydrologic regime is seasonally saturated, with surface water and atmospheric inputs. Feature adjacent to a forest trail, and was likely rutted by heavy equipment.

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

Sampling Point: wirc1009e\_w

Tree Stratum       (Plot size:       30       )       % Cover       Species?       Status       Dominance rest worksheet.         1.
2.
3.
4.
5
5
7.
Sapling/Shrub Stratum (Plot size:)       0 = Total Cover       OBL species X1 =         1         FAC species X2 =         FAC species       0 = X4 =       0 = X4 =
Sapling/Shrub Stratum (Plot size: 15 )       FACW species 1 x 2 = 2         1.       FAC species 0 x 3 = 0         FACU species 0 x 4 = 0
1.     FAC species     0 $x = 0$ EACI species     0 $x = 0$
$FACU species \_ 0 x 4 = 0$
3.
4
5 Prevalence Index = B/A = 1.0714285714285714
6. Hydrophytic Vegetation Indicators:
7.        1 - Rapid Test for Hydrophytic Vegetation
0 = Total Cover 2 - Dominance Test is >50%
Horb Stratum (Distaire: 5 ) $\frac{1}{2}$ 3 - Prevalence Index is $\leq 3.0^{1}$
1. Juncus effusus       5       Y       OBL       4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
1. Juncus enusus       3       1       OBL       Internation of a separate sheet)         2. Scirpus cf. hattorianus       3       Y       OBL       Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Eleocharis cf. obtusa</u> <u>2</u> <u>N</u> <u>OBL</u> <sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Scirpus cyperinus</u> 2 N OBL be present, unless disturbed or problematic.
5. <u>Juncus alpinoarticulatus</u> <u>1</u> <u>N</u> <u>OBL</u> Definitions of Vegetation Strata:
6. <u>Solidago gigantea</u> <u>1</u> <u>N</u> FACW <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7 at breast height (DBH), regardless of height.
8 Sapling/shrub – Woody plants less than 3 in. DBH
9 and greater than or equal to 3.28 ft (1 m) tall.
10.        Herb – All herbaceous (non-woody) plants, regardless
11.          of size, and woody plants less than 3.28 ft tall.
12 Woody vines – All woody vines greater than 3.28 ft in
<u>14</u> = Total Cover height.
Woody Vine Stratum (Plot size: 30)
1
2
3 Hydrophytic
Vegetation
0 = Total Cover Present? Yes <u>✓</u> No
Remarks: (Include photo numbers here or on a separate sheet.)
Feature is a wet meadow dominated by lamp rush and mosquito bulrush. Sample is representative
of the wetland.

## SOIL

Profile Desc	ription: (I	Describe t	o the dep	th needed	to docur	nent the i	ndicator	or confirm	the absence	of indicators.)		
Depth		Matrix		Redox Features								
(inches)	Color (	moist)	%				Loc <sup>2</sup>	Texture	Remarks			
0-10	5YR	3/3	90	<u>5YR 4/6 10 C M</u>			M	SIL	Prominent redox			
10-14	<u>5YR</u>	3/3	90	5YR	4/6	10	C	M	C	Prominent redox		
						·						
								<u> </u>				
		<u> </u>										
1 <del></del>								<u> </u>	21 11			
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators:								n: PL=Pore Lining, M=Matrix.				
Histosol (A1) Polyvalue Below Surface (S8) (LRR R,						2 cm Muck (A10) ( <b>LRR K, L, MLRA 149B</b> )						
Polyvalue Below Surface (So) (LKK K,       Histic Epipedon (A2)       MLRA 149B)						,	Coast Prairie Redox (A16) ( <b>LRR K, L, R</b> )					
Black Histic (A3) Thin Dark Surface (S9) (LRR R, ML					RA 149B)	5 cm M	Mucky Peat or Peat (S3) (LRR K, L, R)					
	n Sulfide (/					Mineral (F1		, L)		Surface (S7) (LRR K, L)		
	d Layers (A d Below Da		(411)		ted Matrix	Matrix (F2	)		Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)			
	ark Surface		; (ATT)			rface (F6)				langanese Masses (F12) (LRR K, L, R)		
	lucky Mine					Surface (F				iont Floodplain Soils (F19) ( <b>MLRA 149B</b> )		
-	Bleyed Matr	ix (S4)		Redox	<pre>     Cepress </pre>	ions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)		
-	edox (S5)								Red Parent Material (F21)			
	Matrix (S6 rface (S7) (			2)					Very Shallow Dark Surface (TF12) Other (Explain in Remarks)			
				<b>)</b>								
<sup>3</sup> Indicators of	f hydrophyt	ic vegetati	ion and we	etland hydro	ology mus	st be prese	ent, unless	disturbed	or problemati	с.		
Restrictive I	_ayer (if ol	oserved):										
Туре: <u>Сс</u>	obble											
Depth (ind	ches): <u>14</u>	.0							Hydric Soil	Present? Yes <u>&lt;</u> No		
Depth (inches):     14.0       Remarks:     Yes												
Soils obs	served t	o be si	lt loam	over cl	ay ove	er cobb	le.					



wirc1009e\_w\_NW



wirc1009e\_w\_SE

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	EJO/JSW			
File #:	Date of visit(s):			
wirc1009	2020-05-20			
Location:	Ecological Landsca	ape:		
PLSS: sec 22 T046N R001W	Superior Mineral Range	S		
		-		
Lat: <u>46.454425</u> Long: <u>-90.477447</u>	Watershed: LS11, Potato River			
	,			
County: <u>Iron</u> Town/City/Village: Gurney town				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent	Wetland Type(s):			
slopes	PEM - fresh wet meadow			
Field Verified:				
Series not verified. Soils were a silt loam over	Wetland Size:	Wetland Area Impacted		
clay.	0.0097	0.0097		
	Vegetation:			
	Plant Community E	Description(s):		
Hydrology:	The feature is a	wet meadow dominated by		
Hydrologic regime is seasonally saturated, with surface	soft rush and mosquito bulrush, and vegetation shows that this wetland is			
water and atmospheric inputs. Feature adjacent to forest				
trail, and was potentially rutted from heavy equipment.				
	somewhat distu	rbea.		

## SITE MAP

#### **SECTION 1: Functional Value Assessment**

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

HU-1: The feature is located within a forest that offers recreational opportunities. ST-5: The feature likely receives stormwater runoff from surrounding uplands and the adjacent logging trail. WH-8: The feature is part of a larger, mostly intact forest, save for logging roads intersecting the 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	Y	Least flycatcher, Songbirds heard in vicinity of wetland
	Y	Mammals, other avian species, 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%	20-50%	10-20%	<10%
Strata	Missing stratum(a) or bare due to invasive species	All strata present but reduced native species	All strata present and good assemblage of native species	All strata present, Conservative species represented
NHI plant community ranking	S4	S3	S2	S1-S2 (S2 high quality)
Relative frequency of plant community in watershed	Abundant 🖌	Common	Uncommon	Rare
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Eleocharis cf. obtusa			PEM	Barren
Juncus alpinoarticulatus			PEM	Barren
Juncus effusus*			PEM	Rare
Scirpus cf. hattorianus			PEM	Barren
Scirpus cyperinus*			PEM	Barren
Solidago gigantea			PEM	Barren

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

Vegetation is native, with no non-native species observed. Only one stratum was observed in wetland, and the vegetation appears to be largely disturbance-favoring 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
Х	х		М	С	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
Х	х		мс	Removal of herbaceous stratum – mowing,	
^	^		IVI	C	grading, earthworms, etc.
Х	x		М	С	Removal of tree or shrub strata – logging, unprescribed fire
Х	Х		М	С	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 feature is adjacent to a forest trail and likely has been impacted by previous logging operations. The wetland is also adjacent to uplands with earthworm presence.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE										
	Low	Medium	High	Exceptional	NA						
Floristic Integrity		<b>~</b>									
Human Use Values	<b>v</b>										
Wildlife Habitat		<ul> <li>✓</li> </ul>									
Fish and Aquatic Life Habitat	<b>~</b>										
Shoreline Protection					~						
Flood and Stormwater Storage		<ul> <li>✓</li> </ul>									
Water Quality Protection	~										
Groundwater Processes	~										

FUNCTION	RATIONALE							
Floristic Integrity	The feature is filled with native species, but only contains an herbaceous stratum and has low species diversity.							
Human Use Values	The feature is relatively small, but adjacent to a larger forested habitat.							
Wildlife Habitat	The feature is adjacent to a large, fairly intact forest with multiple strata present.							
Fish and Aquatic Life Habitat	No standing water was observed during the time of survey, but the wetland may become inundated at times, with the potential to provide aquatic life habitat.							
Shoreline Protection	N/A							
Flood and Stormwater Storage	The feature likely receives stormwater runoff from surrounding uplands and the adjacent logging road.							
Water Quality Protection	The feature is relatively small, but is a closed vegetated basin that receives runoff from the adjacent uplands and logging road.							
Groundwater Processes	The feature exhibits groundwater recharge.							

# Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

# **Expected Project Impacts**

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

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: <u>Iron</u> Sampling Date: <u>2020-05-20</u>
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wirc1008e_w</u>
C C	Section, Township, Range: <u>sec 22 T046N R001W</u>
	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
	528 Long: -90.477078 Datum: WGS84
	athro complex, 0 to 6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	
	antly disturbed? Are "Normal Circumstances" present? Yes No
	y problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ring sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes <u>v</u> No	within Wether 10 Vee / Ne
Wetland Hydrology Present? Yes 🖌 No	
Remarks: (Explain alternative procedures here or in a separate	
HYDROLOGY Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that ap	
	ned Leaves (B9) Drainage Patterns (B10)
High Water Table (A2)     Aquatic Fa	
Saturation (A3) Marl Depos	
	Sulfide Odor (C1) Crayfish Burrows (C8)
	hizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
	of Reduced Iron (C4) Stunted or Stressed Plants (D1)
	n Reduction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck	
	lain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inc	
Water Table Present?     Yes No Depth (inclusion Present?       Saturation Present?     Yes No Depth (inclusion Present?)	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial p	hotos, previous inspections), if available:

Remarks:

Feature is seasonally saturated with surface water and atmospheric inputs. Standing water present in wetland at time of survey but not at sample point. Hydrology likely influenced by the forest trail that intersects the wetland.

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

Sampling Point: wirc1008e\_w

	Absolute	Dominan	t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species <u>18</u> x 1 = <u>18</u>
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $3 \times 2 = 6$
1				FAC species $1 \times 3 = 3$
2		. <u> </u>		FACU species $4 \times 4 = 16$
3				UPL species $0 \times 5 = 0$
4				Column Totals: <u>26</u> (A) <u>43</u> (B)
5				Prevalence Index = B/A = <u>1.6538461538461537</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	-	= Total Co		_∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u> )	<b>-</b> _			3 - Prevalence Index is ≤3.0 <sup>1</sup>
1. <u>Scirpus hattorianus</u>	15	Y	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. <u>Trifolium repens</u>			FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
-			FACU	
3. <u>Taraxacum officinale</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Solidago gigantea</u>			FACW	be present, unless disturbed or problematic.
5. <u>Juncus effusus</u>			OBL	Definitions of Vegetation Strata:
6. <u>Rubus idaeus</u>			FAC	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Eleocharis sp.</u>				at breast height (DBH), regardless of height.
8. <u>Ranunculus recurvatus</u>				Sapling/shrub – Woody plants less than 3 in. DBH
9			·	and greater than or equal to 3.28 ft (1 m) tall.
10			·	Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12			<u> </u>	Woody vines – All woody vines greater than 3.28 ft in
	26	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1,				
2				
			·	
3			. <u> </u>	Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate s Feature is a wet meadow dominated by		iito bulr	ush. Sar	mple plot appears representative of the
wetland.				

Profile Des	cription: (Describe t	o the dep	th needed	to docur	nent the i	ndicator	or confirm	the absence	e of indicators.)	
Depth	Matrix				x Feature				,	
(inches)	Color (moist)	%	Color (r	moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-6	<u>7.5YR 3/3</u>	85	5YR	3/4	15	_C_	_M_	SICL	Prominent redox	
6-12	<u>7.5YR 4/3</u>	50			0			SIL		
6-12	7.5YR 4/2	50			0			SIL		
					<u> </u>					
<sup>1</sup> Type: C=C	concentration, D=Deple	etion RM	=Reduced I	Matrix MS	S=Masker	Sand Gra	ains		n: PL=Pore Lining, M=Matrix.	
Hydric Soil			110000001						for Problematic Hydric Soils <sup>3</sup> :	
Histoso	l (A1)		Polyva	alue Belov	w Surface	(S8) ( <b>LRF</b>	RR,	2 cm l	Muck (A10) ( <b>LRR K, L, MLRA 149B</b> )	
	pipedon (A2)			RA 149B)				Coast Prairie Redox (A16) (LRR K, L, R)		
	listic (A3)						LRA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)	
	en Sulfide (A4) d Layers (A5)				/lineral (F <sup>.</sup> Matrix (F2		, L)		Surface (S7) ( <b>LRR K, L</b> ) alue Below Surface (S8) ( <b>LRR K, L</b> )	
	d Below Dark Surface	(A11)		ted Matrix		/			Dark Surface (S9) ( <b>LRR K, L</b> )	
Thick D	ark Surface (A12)		Redox	k Dark Su	rface (F6)			Iron-N	langanese Masses (F12) (LRR K, L, R)	
-	Mucky Mineral (S1)				Surface (F	7)			nont Floodplain Soils (F19) ( <b>MLRA 149B</b> )	
	Gleyed Matrix (S4) Redox (S5)		Redox	Contraction Depress	ions (F8)				Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> ) Parent Material (F21)	
-	d Matrix (S6)								Shallow Dark Surface (TF12)	
	urface (S7) (LRR R, M	LRA 1498	3)						(Explain in Remarks)	
3										
	of hydrophytic vegetati	on and we	etland hydro	ology mus	st be prese	ent, unless	s disturbed	or problemati	С.	
	Layer (if observed): ravel									
	nches): <u>12.0</u>							Hydric Soi	I Present? Yes _ ✔_ No	
Remarks:	iches). <u>12.0</u>									
	served to be si	ltv clav	loam o	over sil	t loam					
		ity olay	louin e		t louini.					



wirc1008e\_w\_N



wirc1008e\_w\_S

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: <u>Iron</u> Sampling Date: <u>2020-05-20</u>
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wirc1008f_w
Investigator(s): EJO/JSW	Section, Township, Range: Sec 22 T046N R001W
	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
	625 Long: -90.477135 Datum: WGS84
	athro complex, 0 to 6 percent slopes NWI classification: PEM1C
Are climatic / hydrologic conditions on the site typical for this time c	
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ing sampling point locations, transects, important features, etc.
Liveranty tip Vegetation Present? Veg. 4 No.	Is the Sampled Area
Hydrophytic Vegetation Present?       Yes _ ✓       No         Hydric Soil Present?       Yes _ ✓       No	
Wetland Hydrology Present? Yes <u>v</u> No	
Remarks: (Explain alternative procedures here or in a separate n	
Feature is a black ash swamp with fringed s	edge dominant in the ground layer. Feature is
· · ·	underlain by slash) with predominantly fringed sedge
	nd complex which includes a wet meadow component.
present. Community is part of a larger wetta	nu complex which includes a wel meadow component.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	bly) Surface Soil Cracks (B6)
Surface Water (A1) Water-Stair	ned Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fat	una (B13) Moss Trim Lines (B16)
Saturation (A3) Marl Depos	bits (B15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen S	Sulfide Odor (C1) Crayfish Burrows (C8)
	hizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
	f Reduced Iron (C4) Stunted or Stressed Plants (D1)
	Reduction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck S	
	ain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)

Field Observations:

Saturation Present? (includes capillary fringe)

Remarks:

Surface Water Present? Water Table Present?

Water Table Present?

Yes \_\_\_\_\_ No \_\_\_ Depth (inches): \_

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

Surface water present at time of survey, but not at sample point.

Yes \_\_\_\_\_ No \_\_\_ Depth (inches): \_\_\_\_\_

Yes \_\_\_\_ No \_\_\_ Depth (inches): \_\_\_\_\_

Hydrologic regime is seasonally saturated, with inputs primarily from surface water and precipitation.

Wetland Hydrology Present? Yes <u>v</u> No

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

Sampling Point: <u>wirc1008f\_w</u>

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1. <u>Fraxinus nigra</u>				That Are OBL, FACW, or FAC: (A)
2. <u>Tsuga canadensis</u>	5	<u>     N     </u>	<u>FACU</u>	Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5			<u> </u>	That Are OBL, FACW, or FAC: (A/B)
6			<u> </u>	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	30	= Total Co	ver	OBL species         40         x 1 =         40
Sapling/Shrub Stratum (Plot size:15)				FACW species x 2 =58
1. <u>Rubus idaeus</u>	2	N	FAC	FAC species x 3 =2
2. Acer rubrum				FACU species <u>6</u> x 4 = <u>24</u>
				UPL species x 5 =0
3				Column Totals: <u>79</u> (A) <u>134</u> (B)
4				Prevalence Index = B/A = <u>1.70</u>
5			<u> </u>	
6			<b>.</b>	Hydrophytic Vegetation Indicators:
7				✓ 1 - Rapid Test for Hydrophytic Vegetation
	4	= Total Co	ver	$\sim$ 2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u> )				$\sim$ 3 - Prevalence Index is $\leq 3.0^{1}$
1. <u>Carex crinita</u>	30	Y	OBL	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2. <u>Scirpus cyperinus</u>			OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Iris versicolor</u>			OBL	
4. <u>Onoclea sensibilis</u>			FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Erythronium americanum			<u>17.011</u>	
				Definitions of Vegetation Strata:
6. <u>Impatiens capensis</u>				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Carex tuckermanii</u>			OBL	at breast height (DBH), regardless of height.
8. <u>Scutellaria lateriflora</u>			OBL	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Maianthemum canadense</u>	1	<u>N</u>	FACU	and greater than or equal to 3.28 ft (1 m) tall.
10			<u> </u>	Herb – All herbaceous (non-woody) plants, regardless
11			<u> </u>	of size, and woody plants less than 3.28 ft tall.
12			. <u></u>	Woody vines – All woody vines greater than 3.28 ft in
	47	= Total Co	ver	height.
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2				
3				Undraubudia
				Hydrophytic Vegetation
4			·	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate		= Total Co	ver	
Feature is a hardwood swamp dominat	ted by bl nada ma	ayflowe		canopy and fringed sedge in the esent on hummocks within the wetland.

SOIL
------

Profile Desc	cription: (Des	cribe to th	e deptł	n needed to docum	nent the	indicator	or confirm	the absence	e of indicato	rs.)	
Depth		atrix		Redox	k Feature	s	0				
(inches)	Color (moi		<u>%                                    </u>	Color (moist)		Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	<u> </u>
0-6	<u>10YR 2</u>	2/2 1	00		0			MMI	silt		
6-12	<u>10YR 4</u>	/21	00		0			SIL			<u>.</u>
12-20	<u>5YR</u> 4	/41	00		0	<u> </u>		SIL			<u> </u>
		·				·					<u> </u>
						·					
						·					
						<u></u> .					
						. <u></u>					
						·					
<sup>1</sup> Type: C=C	oncentration D		BM=F	Reduced Matrix, MS			aine		n: Pl =Pore l	Lining, M=Mati	riv
Hydric Soil			1, 1 XIVI-1		-masket		unio.			natic Hydric S	
Histosol			_	Polyvalue Below	v Surface	(S8) ( <b>LRF</b>	RR,	2 cm I	Muck (A10) (	LRR K, L, ML	RA 149B)
	pipedon (A2)			MLRA 149B)						ox (A16) ( <b>LRR</b>	
	istic (A3) en Sulfide (A4)		-	Thin Dark Surface Loamy Mucky N						or Peat (S3) (L (LRR K. L)	.RR K, L, R)
	d Layers (A5)		_	Loamy Gleyed N			, _,		Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L)		
	d Below Dark S		1) _	Depleted Matrix				Thin Dark Surface (S9) (LRR K, L)			
	ark Surface (A1		_	Redox Dark Sur	. ,			Iron-Manganese Masses (F12) (LRR K, L, R)			
-	/lucky Mineral ( Gleyed Matrix (ଶ		-	Depleted Dark S Redox Depressi		-7)		<ul> <li>Piedmont Floodplain Soils (F19) (MLRA 149B)</li> <li>Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</li> </ul>			
	Redox (S5)	.,	_		0.10 (1.0)			Red Parent Material (F21)			.,e,e_ <i>)</i>
	d Matrix (S6)							Very Shallow Dark Surface (TF12)			
Dark Su	Irface (S7) (LRI	R R, MLRA	<b>A 149B</b> )					Other	(Explain in F	Remarks)	
<sup>3</sup> Indicators o	f hydrophytic v	egetation a	and wet	and hydrology mus	t be pres	ent, unless	disturbed	or problemati	c.		
Restrictive	Layer (if obser	rved):						-			
Туре:											
	ches):							Hydric Soi	I Present?	Yes <u>~</u>	No
Remarks:		مالك	مبرمان		ما الدام						
2011 0026		e siity n	писку	/ mineral ove	r siit ic	bam.					



wirc1008f\_w\_N



 $wirc1008f\_w\_S$ 

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	EJO/JSW		
File #:	Date of visit(s):		
wirc1008	2020-05-20		
Location:	Ecological Landsca	ape:	
PLSS: sec 22 T046N R001W	Superior Mineral Ranges	8	
		-	
Lat: <u>46.454625</u> Long: <u>-90.477135</u>	Watershed:		
	LS11, Potato River		
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent	Wetland Type(s): PFO/PEM - hardwood swamp/fresh wet meadow complex		
slopes			
Field Verified:			
Series not verified. In the forested component soils were a	Wetland Size:	Wetland Area Impacted	
silty mucky mineral over silt loam, and in the emergent component soils were a reduced silty clay loam over silt loam,	0.1111	0.1111	
with a gravel restrictive layer.	Vegetation:		
	Plant Community Description(s):		
Hydrology:	The hardwood swamp component is dominated by black ash in the canopy, with fringed sedge and mosquito		
The hydrology regime is seasonally saturated, with inputs primarily			
from surface water and precipitation. Surface water was present at	bulrush dominant in the herbaceous layer. Eastern		
the time of survey. In the emergent component, hydrology is likely influenced by the forest trail that intersects the wetland.	hemlock and Canada mayflower are present on		
	hummocks within the wetland.		

# SITE MAP

## **SECTION 1: Functional Value Assessment**

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

HU-6: Multiple strata are present, with the potential to support a variety of wildlife, and potentially threatened or endangered species. WH-10: surface water is present in the hardwood swamp at the time of survey. WH-6: The wetland complex has variable microtopography, supporting both hydrophytic and upland-associated species. GW-4: The A horizon soil layer is a mucky mineral.

> 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	ack-throated green warbler, chestnut-sided warbler, least flycatcher all heard in or near wetla
	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

## **SECTION 2: Floristic Integrity**

## Plant Community Integrity (circle)\*

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Eleocharis sp.			PEM	Barren
Juncus effusus			PEM	Barren
Ranunculus recurvatus			PEM	Barren
Rubus idaeus			PEM	Barren
Scirpus hattorianus*			PEM	Rare
Solidago gigantea			PEM	Barren
Taraxacum officinale			PEM	Barren
Trifolium repens			PEM	Barren
Acer rubrum			PFO	Barren
Carex crinita*			PFO	Patchy
Carex tuckermanii			PFO	Barren
Erythronium americanum			PFO	Barren
Fraxinus nigra*			PFO	Rare
Impatiens capensis			PFO	Barren
Iris versicolor			PFO	Barren
Maianthemum canadense			PFO	Barren
Onoclea sensibilis			PFO	Barren
Rubus idaeus			PFO	Barren
Scirpus cyperinus			PFO	Rare
Scutellaria lateriflora			PFO	Barren
Tsuga canadensis			PFO	Barren

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

The wetland has a good overall coverage of native species, with minimal presence of non-native species, and contains multiple strata.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
					Drainage – tiles, ditches
Х	х		М	С	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.
Х	х		М	С	Removal of tree or shrub strata – logging, unprescribed fire
Х	Х		М	С	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 parts of wetland, the the emergent component's wetland hydrology is likely influenced by the forest trail that intersects wetland. Earthworms are present in the surrounding upland forest, with the potential to impact the wetland herbaceous layer.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION			SIGNIFICANC	E	
	Low	Medium	High	Exceptional	NA
Floristic Integrity			<b>v</b>		
Human Use Values		<ul> <li>✓</li> </ul>			
Wildlife Habitat		<ul> <li>✓</li> </ul>			
Fish and Aquatic Life Habitat		<ul> <li>✓</li> </ul>			
Shoreline Protection					~
Flood and Stormwater Storage		~			
Water Quality Protection		<ul> <li>✓</li> </ul>			
Groundwater Processes	~				

FUNCTION	RATIONALE
Floristic Integrity	Overall the wetland has high coverage of native species and minimal coverage of exotic species.
Human Use Values	The wetland is a part of a larger intact forest, which likely hosts wildlife valuable for recreational purposes.
Wildlife Habitat	The wetland is a part of a larger intact forest, and contains multiple strata.
Fish and Aquatic Life Habitat	Parts of the wetland contained standing water with the potential to host aquatic life at time of survey .
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely receives stormwater from surrounding uplands, as well as from the intersecting unpaved logging road.
Water Quality Protection	The wetland has dense and persistent vegetation, and is part of a larger intact forest.
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: <u>2020-05-20</u>
Applicant/Owner: Enbridge		State: Wisconsin Sampling	g Point: <u>wirc1008_u</u>
Investigator(s): <u>JSW/EJO</u>	Section, Township, Range:	sec 22 T046N R001W	/
Landform (hillslope, terrace, etc.): Side Slope			
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.454	422 Long: - <u>-</u>	0.477241	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Ca	athro complex, 0 to 6 percent s	lopes NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes 🖌 No	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significa	antly disturbed? Are "Norm	al Circumstances" present? Ye	es 🔽 No
Are Vegetation, Soil, or Hydrology naturally	y problematic? (If needed	, explain any answers in Remar	ks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No <u>v</u> No <u>v</u>	Is the Sampled Area within a Wetland? Yes No			
Wetland Hydrology Present?	Yes	No 🖌	If yes, optional Wetland Site ID:			
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located at the edge of a logging road and a mesic hardwood forest. Hemlock dominates the immediate area.						

## HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 F	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 So	ils (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)
Field Observations:	
Surface Water Present? Yes <u>No</u> Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Water Table Present? res No Deptir (incres).	
Saturation Present? Yes No V Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No 🖌 Depth (inches):	· · · · · · · · · · · · · · · · · · ·
Saturation Present? Yes No 🖌 Depth (inches): (includes capillary fringe)	· · · · · · · · · · · · · · · · · · ·
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	· · · · · · · · · · · · · · · · · · ·
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	tions), if available:
Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       The sample point is located on a side slope at the edge of a	tions), if available:
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	tions), if available:
Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       The sample point is located on a side slope at the edge of a	tions), if available:
Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       The sample point is located on a side slope at the edge of a	tions), if available:
Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       The sample point is located on a side slope at the edge of a	tions), if available:
Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       The sample point is located on a side slope at the edge of a	tions), if available:
Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       The sample point is located on a side slope at the edge of a	tions), if available:
Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       The sample point is located on a side slope at the edge of a	tions), if available:
Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       The sample point is located on a side slope at the edge of a	tions), if available:

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

Sampling Point: wirc1008\_u

	Absolute		nt Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )	-		<u>? Status</u>	Number of Dominant Species
1. <u>Tsuga canadensis</u>			<u>FACU</u>	That Are OBL, FACW, or FAC: (A)
2. Acer saccharum				Total Number of Dominant
3. <u>Betula papyrifera</u>	5	<u>     N</u>	FACU	Species Across All Strata: (B)
4		. <u> </u>		Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>14</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Co		OBL species         O         x 1 =         O
Sanling/Chrub Stratum (Distaire) 15			0.00	FACW species $2 \times 2 = 4$
Sapling/Shrub Stratum (Plot size: 15 )	~	V		FAC species $5$ $x_3 = 15$
1. <u>Ostrya virginiana</u>				FACU species $75 \times 4 = 300$
2. <u>Acer saccharum</u>				UPL species $0 \times 5 = 0$
3		<u></u>		Column Totals: <u>82</u> (A) <u>319</u> (B)
4				
5				Prevalence Index = $B/A = \frac{3.8902439024390243}{2}$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Co		2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)		10101-01		$\_$ 3 - Prevalence Index is $\leq 3.0^1$
1. <u>Carex gracillima</u>	10	V	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
-			FAC	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Rubus idaeus</u>				
3. <u>Trifolium pratense</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Maianthemum canadense</u>			<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Veronica officinalis</u>	5	<u>Y</u>	<u>FACU</u>	Definitions of Vegetation Strata:
6. <u>Solidago gigantea</u>	2	N	FACW	Tree Wordy plants 2 in (7.6 cm) or more in diameter
7	<u> </u>	<u> </u>		<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
				Woody vines – All woody vines greater than 3.28 ft in
12				height.
		= Total Co	over	
Woody Vine Stratum (Plot size: <u>30</u> )				
1				
2		<u> </u>		
3				Hydrophytic
4				Vegetation Present? Yes No v
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)	_	_	
The sample plot is located at the edge	of a log	ging ro	ad.	

## SOIL

(inches)       Color (moist)       %       Color (moist)       %         0-14       5YR       3/3       100       0       0         0-14       5YR       3/3       100       0       0         0       0       0       0       0       0         0       0       0       0       0       0         0       0       0       0       0       0         0       0       0       0       0       0         0       0       0       0       0       0         0       0       0       0       0       0         0       0       0       0       0       0         0       0       0       0       0       0       0         0       0       0       0       0       0       0       0       0         0 <th>Indicators for Problematic Hydric Soils<sup>3</sup>:</th>	Indicators for Problematic Hydric Soils <sup>3</sup> :
Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked S         Indicators:	Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :
ydric Soil Indicators:       Polyvalue Below Surface (S         Histosol (A1)       Polyvalue Below Surface (S         Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LF         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         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 Redox (S5)       Redox Depressions (F8)         Stripped Matrix (S6)       Dark Surface (S7) (LRR R, MLRA 149B)	Indicators for Problematic Hydric Soils <sup>3</sup> :
ydric Soil Indicators:       Polyvalue Below Surface (S         Histosol (A1)       Polyvalue Below Surface (S         Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LF         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         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 Redox (S5)       Redox Depressions (F8)         Stripped Matrix (S6)       Dark Surface (S7) (LRR R, MLRA 149B)	Indicators for Problematic Hydric Soils <sup>3</sup> :
vdric Soil Indicators:       Polyvalue Below Surface (S         Histosol (A1)       Polyvalue Below Surface (S         Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LF         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         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 Redox (S5)       Redox Depressions (F8)         Stripped Matrix (S6)       Dark Surface (S7) (LRR R, MLRA 149B)	Indicators for Problematic Hydric Soils <sup>3</sup> :
ydric Soil Indicators:       Polyvalue Below Surface (S         Histosol (A1)       Polyvalue Below Surface (S         Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LF         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         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 Redox (S5)       Redox Depressions (F8)         Stripped Matrix (S6)       Dark Surface (S7) (LRR R, MLRA 149B)	Indicators for Problematic Hydric Soils <sup>3</sup> :
ydric Soil Indicators:       Polyvalue Below Surface (S         Histosol (A1)       Polyvalue Below Surface (S         Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LF         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         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 Redox (S5)       Redox Depressions (F8)         Stripped Matrix (S6)       Dark Surface (S7) (LRR R, MLRA 149B)	Indicators for Problematic Hydric Soils <sup>3</sup> :
ydric Soil Indicators:       Polyvalue Below Surface (S         Histosol (A1)       Polyvalue Below Surface (S         Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LF         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         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 Redox (S5)       Redox Depressions (F8)         Stripped Matrix (S6)       Dark Surface (S7) (LRR R, MLRA 149B)	Indicators for Problematic Hydric Soils <sup>3</sup> :
ydric Soil Indicators:       Polyvalue Below Surface (S         Histosol (A1)       Polyvalue Below Surface (S         Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LF         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         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 Redox (S5)       Redox Depressions (F8)         Stripped Matrix (S6)       Dark Surface (S7) (LRR R, MLRA 149B)	Indicators for Problematic Hydric Soils <sup>3</sup> :
ydric Soil Indicators:       Polyvalue Below Surface (S         Histosol (A1)       Polyvalue Below Surface (S         Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LF         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         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 Redox (S5)       Redox Depressions (F8)         Stripped Matrix (S6)       Dark Surface (S7) (LRR R, MLRA 149B)	Indicators for Problematic Hydric Soils <sup>3</sup> :
ydric Soil Indicators:       Polyvalue Below Surface (S         Histosol (A1)       Polyvalue Below Surface (S         Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LF         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         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 Redox (S5)       Redox Depressions (F8)         Stripped Matrix (S6)       Dark Surface (S7) (LRR R, MLRA 149B)	Indicators for Problematic Hydric Soils <sup>3</sup> :
ydric Soil Indicators:       Polyvalue Below Surface (S         Histosol (A1)       Polyvalue Below Surface (S         Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LF         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         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 Redox (S5)       Redox Depressions (F8)         Stripped Matrix (S6)       Dark Surface (S7) (LRR R, MLRA 149B)	Indicators for Problematic Hydric Soils <sup>3</sup> :
ydric Soil Indicators:       Polyvalue Below Surface (S         Histosol (A1)       Polyvalue Below Surface (S         Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LF         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         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 Redox (S5)       Redox Depressions (F8)         Stripped Matrix (S6)       Dark Surface (S7) (LRR R, MLRA 149B)	Indicators for Problematic Hydric Soils <sup>3</sup> :
ydric Soil Indicators:       Polyvalue Below Surface (S         Histosol (A1)       Polyvalue Below Surface (S         Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LF         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         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 Redox (S5)       Redox Depressions (F8)         Stripped Matrix (S6)       Dark Surface (S7) (LRR R, MLRA 149B)	Indicators for Problematic Hydric Soils <sup>3</sup> :
ydric Soil Indicators:       Polyvalue Below Surface (S         Histosol (A1)       Polyvalue Below Surface (S         Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LF         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         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 Redox (S5)       Redox Depressions (F8)         Stripped Matrix (S6)       Dark Surface (S7) (LRR R, MLRA 149B)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<ul> <li>Histosol (A1)</li> <li>Histic Epipedon (A2)</li> <li>Black Histic (A3)</li> <li>Hydrogen Sulfide (A4)</li> <li>Stratified Layers (A5)</li> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> <li>Thick Dark Surface (A12)</li> <li>Sandy Mucky Mineral (S1)</li> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Dark Surface (S7) (LRR R, MLRA 149B)</li> </ul>	-
<ul> <li>Histic Epipedon (A2)</li> <li>Black Histic (A3)</li> <li>Hydrogen Sulfide (A4)</li> <li>Stratified Layers (A5)</li> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> <li>Sandy Mucky Mineral (S1)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Dark Surface (S7) (LRR R, MLRA 149B)</li> </ul>	(S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)
<ul> <li>Hydrogen Sulfide (A4)</li> <li>Stratified Layers (A5)</li> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> <li>Sandy Mucky Mineral (S1)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Dark Surface (S7) (LRR R, MLRA 149B)</li> <li>Loamy Mucky Mineral (F1)</li> <li>Loamy Gleyed Matrix (F2)</li> <li>Loamy Gleyed Matrix (F3)</li> <li>Redox Dark Surface (F6)</li> <li>Depleted Dark Surface (F7)</li> <li>Redox Depressions (F8)</li> <li>Stripped Matrix (S6)</li> <li>Dark Surface (S7) (LRR R, MLRA 149B)</li> </ul>	Coast Prairie Redox (A16) (LRR K, L, R)
<ul> <li>Stratified Layers (A5)</li> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> <li>Sandy Mucky Mineral (S1)</li> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Dark Surface (S7) (LRR R, MLRA 149B)</li> </ul>	
<ul> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> <li>Sandy Mucky Mineral (S1)</li> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Dark Surface (S7) (LRR R, MLRA 149B)</li> </ul>	
<ul> <li>Sandy Mucky Mineral (S1)</li> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Dark Surface (S7) (LRR R, MLRA 149B)</li> </ul>	Thin Dark Surface (S9) (LRR K, L)
<ul> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Dark Surface (S7) (LRR R, MLRA 149B)</li> <li>ndicators of hydrophytic vegetation and wetland hydrology must be preser</li> </ul>	Iron-Manganese Masses (F12) ( <b>LRR K, L, R</b>
<ul> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Dark Surface (S7) (LRR R, MLRA 149B)</li> <li>ndicators of hydrophytic vegetation and wetland hydrology must be preser</li> </ul>	7) Piedmont Floodplain Soils (F19) (MLRA 149 Mesic Spodic (TA6) (MLRA 144A, 145, 149B
_ Dark Surface (S7) (LRR R, MLRA 149B) ndicators of hydrophytic vegetation and wetland hydrology must be preser	Red Parent Material (F21)
Indicators of hydrophytic vegetation and wetland hydrology must be preser	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)
a stal still still strenge (if share and shi)	nt, unless disturbed or problematic.
estrictive Layer (if observed):	
Type: <u>Cobble</u>	Hydric Soil Present? Yes No
Depth (inches): <u>14.0</u> emarks:	Hydric Soil Present? Yes No



wirc1008\_u\_NW



wirc1008\_u\_S

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling Date: <u>2020-05-20</u>		
Applicant/Owner: Enbridge		_ State: <u>Wisconsin</u> Sampling Point: <u>wirc1010f_w</u>		
Investigator(s): <u>EJO/JSW</u>	Section, Township, Range: <u>Se</u>	ec 22 T046N R001W		
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, nor	ne): <u>Concave</u> Slope (%): <u>0-2%</u>		
Subregion (LRR or MLRA): Northcentral Forests Lat: 4	<b>16.454562</b> Long: <u>-90</u>	0.478530 Datum: WGS84		
Soil Map Unit Name: Gogebic, very stony-Pence, very	stony-Cathro complex, 0 to 6 percent slop	pes NWI classification:		
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes <u> </u> No (	(If no, explain in Remarks.)		
Are Vegetation, Soil, or Hydrology	_ significantly disturbed? Are "Normal	Circumstances" present? Yes <u>v</u> No		
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site ma	p showing sampling point locatio	ns, transects, important features, etc.		
Hydrophytic Vegetation Present? Yes	No Is the Sampled Area			
Hydric Soil Present? Yes 🗸	No within a Wetland?	Yes 🖌 No		
Wetland Hydrology Present? Yes	No If yes, optional Wetland	Site ID:		
Remarks: (Explain alternative procedures here or in a s Feature is a seasonally flooded hardw		ce water at time of survey. Black		

ash is dominant in canopy with short-awn foxtail dominant in ground layer. Slash from logging present on south side of wetland near forest trail.

## HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves	(B9) Drainage Patterns (B10)
High Water Table (A2)	Moss Trim Lines (B16)
✓ Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odo	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced	ron (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 Rem	arks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>&lt;</u> No <u>Depth</u> (inches): <u>6</u>	
Water Table Present? Yes <u>v</u> No <u>Depth</u> (inches): <u>0</u>	
Saturation Present? Yes <u>v</u> No <u>Depth</u> (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>✓</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, prev	ous inspections), if available:
Remarks: Hydrologic regime appears to be seasonally flooded	d, with surface water and atmospheric inputs.
Feature has surface water at time of survey.	
,	

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

Sampling Point: <u>wirc1010f\_w</u>

Tara Chatum (Distring 20 )	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		<u>Species?</u>		Number of Dominant Species
1. <u>Fraxinus nigra</u>				That Are OBL, FACW, or FAC: (A)
2. <u>Betula alleghaniensis</u>				Total Number of Dominant
3. <u>Ulmus americana</u>	5	N	FACW	Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
	30	= Total Co	ver	OBL species <u>42</u> x 1 = <u>42</u>
Sapling/Shrub Stratum (Plot size:15)				FACW species <u>25</u> x 2 = <u>50</u>
1. <u>Acer rubrum</u>	2	Ν	FAC	FAC species x 3 =1
2				FACU species x 4 =0
				UPL species x 5 =
3				Column Totals: <u>74</u> (A) <u>113</u> (B)
4				Prevalence Index = B/A = <u>1.53</u>
5				Hydrophytic Vegetation Indicators:
				<ul> <li>1 - Rapid Test for Hydrophytic Vegetation</li> </ul>
7				$\sim$ 2 - Dominance Test is >50%
_	<u> </u>	= Total Co	ver	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
1. <u>Alopecurus aequalis</u>			OBL	data in Remarks or on a separate sheet)
2. <u>Carex crinita</u>	2	<u>    N</u>	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6			·	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10			·	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12			·	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	42	= Total Co	ver	
Woody Vine Stratum (Plot size: 30)				
1				
2				
3				Hydrophytic
4				Vegetation
	_	= Total Co	Ver	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate			VEI	
Feature has standing water at time of s black ash dominant in canopy. Fringed overhangs into wetland but does not ap	survey w sedge j	oresent	along w	vetland edge. Eastern hemlock

SOIL
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Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix				x Features	S1		_		
(inches)	Color (moist)	%	Color (n	noist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-6	<u>7.5YR 2.5/2</u>	100			0			MMI	silt	
6-12	<u>7.5YR 2.5/1</u>	98	<u>7.5YR</u>	4/3	2	_C	M	CL		
12-20	<u>7.5YR 4/3</u>	85	<u>7.5YR</u>	4/6	15	С	M	CL		
					·					
					·					
·										
					·					
			·							
	oncentration, D=Depl	etion, RM	Reduced N	/latrix, MS	S=Masked	I Sand Gra	ains.		n: PL=Pore Lining, M=Matrix.	
Hydric Soil			Dahara	har Dalar	0				s for Problematic Hydric Soils <sup>3</sup> :	
Histoso Histic F	pipedon (A2)		-	RA 149B)		(S8) ( <b>LRF</b>	КК,		Muck (A10) ( <b>LRR K, L, MLRA 149B</b> ) t Prairie Redox (A16) ( <b>LRR K, L, R</b> )	
	listic (A3)			,		.RR R, ML	_RA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)	
	en Sulfide (A4)					1) ( <b>LRR K</b>			Surface (S7) (LRR K, L)	
	d Layers (A5)			-	Matrix (F2	)		Polyvalue Below Surface (S8) (LRR K, L)		
	d Below Dark Surface	e (A11)		ed Matrix					Dark Surface (S9) (LRR K, L)	
	Thick Dark Surface (A12)       Redox Dark Surface (F6)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)								Manganese Masses (F12) (LRR K, L, R) nont Floodplain Soils (F19) (MLRA 149B)	
Sandy Gleyed Matrix (S4) Redox Depressions (F8)							Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )			
Sandy Redox (S5)							Parent Material (F21)			
	Stripped Matrix (S6)							Shallow Dark Surface (TF12)		
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)							(Explain in Remarks)			
<sup>3</sup> Indicators o	of hydrophytic vegetati	on and w	etland hydro	logy mus	t be prese	ent, unless	disturbed	or problemat	ic.	
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):										
Туре:										
Depth (in	nches):							Hydric Soi	il Present? Yes 🖌 No	
Remarks:										
Soil obse	erved to be silt	y muc	ky miner	al ove	r clay l	loam.				



wirc1010f\_w\_N



wirc1010f\_w\_S

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project C		y/County: <u>Iron</u>	Sampling Date: <u>2020-05-20</u>		
Applicant/Owner: Enbridge			_ State: Wisconsin Sa	mpling Point: <u>wirc1010e_w</u>	
Investigator(s): <u>EJO/JSW</u>					
Landform (hillslope, terrace, etc.): Depres					
Subregion (LRR or MLRA):	rests Lat: <u>46.454423</u>	Long: <u>-9(</u>	).477450	Datum: <u>WGS84</u>	
Soil Map Unit Name: Gogebic, very stony-F	ence, very stony-Cathro c	omplex, 0 to 6 percent slo	ppes NWI classification:		
Are climatic / hydrologic conditions on the site	e typical for this time of year?	Yes _ ✔_ No	(If no, explain in Remark	s.)	
Are Vegetation, Soil, or Hydro	logy significantly dis	sturbed? Are "Norma	I Circumstances" present	? Yes 🖌 No	
Are Vegetation, Soil, or Hydro	logy naturally proble	ematic? (If needed, e	explain any answers in R	emarks.)	
SUMMARY OF FINDINGS – Attack	n site map showing s	ampling point location	ons, transects, imp	ortant features, etc.	
Hydrophytic Vegetation Present?YeHydric Soil Present?YeWetland Hydrology Present?Ye	es 🖌 No		Yes _ ✓ _ N d Site ID:		
Remarks: (Explain alternative procedures h Feature appears to be an artif equipment. Mosquito bulrush	icial wet meadow r	esulting from ruttir		on by logging	
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indicators (n	ninimum of two required)	
Primary Indicators (minimum of one is require	red; check all that apply)		Surface Soil Cracks	s (B6)	
Surface Water (A1)	Water-Stained Lea		Drainage Patterns		
High Water Table (A2)	Aquatic Fauna (B		Moss Trim Lines (B		
Saturation (A3)	Marl Deposits (B1		Dry-Season Water		
Water Marks (B1)		Odor (C1)	Crayfish Burrows (C		
Sediment Deposits (B2)		neres on Living Roots (C3)			
Drift Deposits (B3)	Presence of Redu		Stunted or Stressed		
Algal Mat or Crust (B4)	Recent Iron Reduce	ction in Tilled Soils (C6)	Geomorphic Positio	on (D2)	

#### Remarks:

Iron Deposits (B5)

Field Observations: Surface Water Present?

Water Table Present? Saturation Present?

(includes capillary fringe)

\_\_\_\_ Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

Hydrologic regime is seasonally saturated, with surface water and atmospheric inputs. Standing water is present in portions of wetland at time of survey, but not at the sample point. Hydrology likely influenced by compaction and rutting from previous heavy equipment activity.

\_\_\_\_ Thin Muck Surface (C7)

Yes \_\_\_\_\_ No \_\_\_\_ Depth (inches): \_\_\_\_

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

Yes \_\_\_\_\_ No \_\_\_\_ Depth (inches): \_\_\_\_\_

Yes \_\_\_\_ No \_\_\_ Depth (inches): \_\_\_\_\_

Other (Explain in Remarks)

\_\_\_\_ Shallow Aquitard (D3)

FAC-Neutral Test (D5)

Wetland Hydrology Present? Yes \_ < No

\_\_\_\_ Microtopographic Relief (D4)

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

Sampling Point: wirc1010e\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute		Indicator	Dominance Test worksheet:
1)		<u>Species?</u>		Number of Dominant Species
2				That Are OBL, FACW, or FAC: (A)
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6 7				Prevalence Index worksheet:
/·		= Total Co		Total % Cover of:         Multiply by:           OBL species         22         x 1 = 22
Sapling/Shrub Stratum (Plot size:15)			vei	FACW species $x_1 =  x_2 = A$
				FAC species $3 \times 3 = 9$
1				FACU species <u>3</u> x 4 = <u>12</u>
2				UPL species x 5 =
3				Column Totals: <u>30</u> (A) <u>47</u> (B)
45				Prevalence Index = B/A = <u>1.5666666666666666666666666666666666666</u>
5				Hydrophytic Vegetation Indicators:
7				<ul> <li>1 - Rapid Test for Hydrophytic Vegetation</li> </ul>
·		= Total Co		∠ 2 - Dominance Test is >50%
Light Stratum (Distring)			vei	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: <u>5</u> ) 1. <u>Carex crinita</u>	10	Y	OBL	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
2. <u>Scirpus hattorianus</u>		Ŷ	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Carex bromoides</u>			FACW	
4. <u>Anemone quinquefolia</u>			FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Juncus effusus			OBL	
6. <u>Athyrium angustum</u>			FAC	Definitions of Vegetation Strata:
7. Erythronium americanum				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8. <u>Equisetum cf. arvense</u>			FAC	
9. <u>Taraxacum officinale</u>				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
		= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1				
2				
3				Hydrophytic
4.				Vegetation
		= Total Co	ver	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate			-	<u> </u>
Feature is a fresh wet meadow domina	ated by r	nosquite	o bulrus	h and fringed sedge. Sample is
representative of the wetland.				

## SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth		Matrix			Redox	k Features	\$				
(inches)	Color (		%	Color (r		<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-10	<u>7.5YR</u>	4/3	90	5YR	4/6	10	C	_M	SIL	Prominent redox	
10-14	5YR	4/4	90	5YR	4/6	10	С	М	CL	Prominent redox	
Black Hi	oncentration Indicators: (A1) pipedon (A2 stic (A3)	n, D=Depl		Polyva ML	alue Belov <b>RA 149B</b> ) )ark Surfa	     	(S8) (LRR .RR R, ML		<sup>2</sup> Location Indicators 2 cm M Coast 5 cm M	Prominent redox	
Stratified	en Sulfide (A d Layers (A	5)		Loam	y Mucky N y Gleyed N	Matrix (F2		, L)	Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L)		
	d Below Da		(A11)		ted Matrix				<ul> <li>Thin Dark Surface (S9) (LRR K, L)</li> <li>Iron-Manganese Masses (F12) (LRR K, L, R)</li> <li>Piedmont Floodplain Soils (F19) (MLRA 149B)</li> </ul>		
	ark Surface /lucky Minei				CDark Sur ted Dark S	• •	7)				
-	Bleyed Matr				C Depressi		,,		Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )		
	Redox (S5)								Red Parent Material (F21)		
	Matrix (S6								Very Shallow Dark Surface (TF12)		
Dark Su	rface (S7) (	LRR R, M	LRA 1498	3)					Other	(Explain in Remarks)	
<sup>3</sup> Indicators o	f hydrophyt	ic vegetati	on and we	etland hydro	ology mus	t be prese	ent, unless	disturbed o	or problematio	C.	
Restrictive		served):									
Туре: <u>Со</u>	obble										
	ches): <u>14</u>	.0							Hydric Soil	Present? Yes <u>~</u> No	
Remarks: Soils obs	served t	o be si	lt loam	over cl	ay loar	n over	restric	tive cob	ble.		



wirc1010e\_w\_N



wirc1010e\_w\_S

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	EJO/JSW			
File #:	Date of visit(s):			
wirc1010	2020-05-20			
Location:	Ecological Landsca	Ecological Landscape:		
PLSS: sec 22 T046N R001W	Superior Mineral Ranges	3		
	· · ·			
Lat: <u>46.454562</u> Long: <u>-90.478530</u>	Watershed: LS11, Potato River			
	,			
County: <u>Iron</u> Town/City/Village: Gurney town				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes	Wetland Type(s): PFO/PEM - hardwood swamp/fresh wet meadow complex			
Field Verified:				
Series not verified. In the forested component, soils were				
observed to be an organic silty mucky mineral over clay loam.	Wetland Size:	Wetland Area Impacted		
In the emergent component, soils were observed to be silt	0.0738	0.0738		
loam over clay loam.	Vegetation:			
	Plant Community Description(s): Feature has standing water at time of survey with shortawn foxtail dominant in the herbaceous stratum and black ash dominant in the canopy. Fringed sedge is present along the wetland edge. Eastern hemlock overhangs into the wetland, but does not appear to be present within wetland itself. The emergent fresh wet meadow component is dominated by mosquito bulrush and fringed sedge.			
Hydrology: In the hardwood swamp component, the hydrologic regime appears to be seasonally flooded,				
with surface water and atmospheric inputs. In the emergent component the hydrologic				
regime is seasonally saturated, with surface water and atmospheric inputs. Standing water was present in both communities in the wetland at the time of survey. Hydrology is likely				
influenced by compaction and rutting from previous heavy machinery movement in the area.				
	component is dominated	by mosquito bulrush and tringed sedge.		

# SITE MAP

## **SECTION 1: Functional Value Assessment**

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

HU-6: Both the forested and emergent components contain multiple strata, with the potential to support a variety of wildlife. WH-6: The feature is a wetland complex with variable microtopography. WQ-3: Tire ruts may cause water flow to become somewhat channelized in the wetland, but this likely has little impact on water flow.

GW-4: The top layer of soils in the hardwood swamp were observed to be a mucky mineral.

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	Song sparrow, ovenbird, least flycatcher heard in or in vicinity of wetland
	Y	Mammals, other avian species, 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%	20-50%	10-20%	<10%
Strata	Missing stratum(a) or bare due to invasive species	All strata present but reduced native species	All strata present and good assemblage of native species	All strata present, Conservative species represented
NHI plant community ranking	S4	S3	S2	S1-S2 (S2 high quality)
Relative frequency of plant community in watershed	Abundant 🗌	Common	Uncommon	Rare
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Anemone quinquefolia			PEM	Barren
Athyrium filix-femina			PEM	Barren
Carex bromoides			PEM	Barren
Carex crinita*			PEM	Rare
Equisetum cf. arvense			PEM	Barren
Erythronium americanum			PEM	Barren
Juncus effusus			PEM	Barren
Scirpus hattorianus*			PEM	Rare
Taraxacum officinale			PEM	Barren
Acer rubrum			PFO	Barren
Alopecurus aequalis*			PFO	Patchy
Betula alleghaniensis*			PFO	Rare
Carex crinita			PFO	Barren
Carex tuckermanii			PFO	Barren
Fraxinus nigra*			PFO	Rare
Ribes glandulosum			PFO	Barren
Scutellaria lateriflora			PFO	Barren
Ulmus americana			PFO	Barren

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

The hardwood swamp is an intact hardwood swamp that contains a typical assemblage of species found in this plant community. The emergent component is likely an artificial wetland resulting from previous logging activity; however, it is largely comprised of disturbance-favoring but 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
					Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
Х	х		М	0	Removal of herbaceous stratum – mowing,
X	^		IVI	C	grading, earthworms, etc.
Х	х		н	UC	Removal of tree or shrub strata – logging,
^	^		П	00	unprescribed fire
	Х		L	С	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 activity is visible in surrounding upland forests, with the potential to impact the feature. The hardwood swamp and fresh wet meadow communities are both adjacent to a forest trail and previously logged areas. The fresh wet meadow is likely the result of past logging operations.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE										
	Low	Medium	High	Exceptional	NA						
Floristic Integrity			~								
Human Use Values		<ul> <li>✓</li> </ul>									
Wildlife Habitat			<b>v</b>								
Fish and Aquatic Life Habitat			<b>~</b>								
Shoreline Protection					~						
Flood and Stormwater Storage		<ul> <li>✓</li> </ul>									
Water Quality Protection		<ul> <li>✓</li> </ul>									
Groundwater Processes		<ul> <li>✓</li> </ul>									

FUNCTION	RATIONALE
Floristic Integrity	The feature has a good overall representation of native species, minimal to no non-native species, and multiple strata present.
Human Use Values	The feature has the potential to host wildlife valuable to recreation purposes.
Wildlife Habitat	The feature is located within, and surrounded by, relatively intact forest, save for intersection of a forest trail.
Fish and Aquatic Life Habitat	Standing water present at the time of survey may host a variety of aquatic invertebrates.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature has the potential to hold stormwater drainage from surrounding uplands and the forest trail.
Water Quality Protection	The feature is an intact forest and contains multiple strata and variety of dense vegetation.
Groundwater Processes	The feature exhibits recharge hydrology, with relatively intact 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	Sam	pling Date: <u>2020-05-20</u>
Applicant/Owner: Enbridge		State: Wisconsin Sa	mpling Point: <u>wirc1010_u</u>
Investigator(s): <u>JSW/EJO</u>	Section, Township, F	Range: <u>sec 22 T046N R0</u>	01W
		onvex, none): <u>None</u>	
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.454	5 <b>03</b> L	.ong: <u>-90.478285</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Ca	athro complex, 0 to 6 pe	ercent slopes NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time o	of year? Yes 🖌 No		(S.)
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? Ar	e "Normal Circumstances" presen	t? Yes No
Are Vegetation, Soil, or Hydrology naturally	v problematic? (If	needed, explain any answers in F	Remarks.)

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

Hydrophytic Vegetation Present?	Yes 🖌	No	Is the Sampled Area
Hydric Soil Present?		No	within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No 🖌	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedu	res here or in a	separate report.)	dwood forest near a logging road.
The upland sample point is	S located ir	n a mesic hard	

## HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 F	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 So	ils (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)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes <u>No</u> Depth (inches): <u>(includes capillary fringe)</u>	Wetland Hydrology Present? Yes No _
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	ions), if available:
Remarks: The sample point is located in a flat upland.	
The sample point is located in a flat upland.	

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

Sampling Point: wirc1010\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute	Dominan Species?	t Indicator	Dominance Test worksheet:
				Number of Dominant Species
1. <u>Abies balsamea</u>				That Are OBL, FACW, or FAC: $4$ (A)
2. <u>Acer saccharum</u>				Total Number of Dominant Species Across All Strata: <b>7</b> (B)
3. <u>Acer rubrum</u>				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	40	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $5 \times 2 = 10$
1. <u>Rubus idaeus</u>				FAC species $58 \times 3 = 174$
2. <u>Acer rubrum</u>	5	<u> </u>	FAC	FACU species         32         x 4 =         128           UPL species         0         x 5 =         0
3			<u> </u>	Column Totals: <u>95</u> (A) <u>312</u> (B)
4			. <u> </u>	
5		·	<u> </u>	Prevalence Index = B/A = <u>3.2842105263157895</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Co		∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u> )		-		3 - Prevalence Index is ≤3.0 <sup>1</sup>
1. <u>Erythronium americanum</u>	10	Y		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. <u>Maianthemum canadense</u>		Ý	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Rubus idaeus</u>		Y	FAC	
4. <u>Matteuccia struthiopteris</u>		·•	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Maianthemum racemosum</u>			FACU	
6. <u>Carex pensylvanica</u>		 N	1700	Definitions of Vegetation Strata:
			FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Solidago gigantea</u>				at breast height (DBH), regardless of height.
8. <u>Anemone quinquefolia</u>			FACU	<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9. <u>Ranunculus acris</u>			FAC	
10. <u>Ranunculus abortivus</u>			FAC	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11		·	<u> </u>	
12		·		<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
	55	= Total Co	ver	
Woody Vine Stratum (Plot size: <u>30</u> )				
1		·	<u> </u>	
2				
3				Hydrophytic
4		·	<u> </u>	Vegetation Present? Yes <u>v</u> No
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			na rood
The upland is located in a mesic hardw		estnea	r a loggi	ng road.

Profile Desc	ription: (E	Describe	to the dep				the absence of indicato	rs.)
Depth		Matrix		Redox Features		Touturo		
(inches)	Color (		%	Color (moist)	%	Type <sup>1</sup> Loc <sup>2</sup>	Texture	Remarks
0-18	5YR	3/3	100		0	·	SIL	
18-20	5YR	3/4	100		0		SIL	
							·	
						· ·	<u> </u>	
						·		
						- <u> </u>		
<sup>1</sup> Type: C=Co	oncentratio	n, D=Dep	letion, RM	=Reduced Matrix, MS	S=Masked	d Sand Grains.	<sup>2</sup> Location: PL=Pore L	_ining, M=Matrix.
Hydric Soil I							Indicators for Problem	
<u> </u>	• •			Polyvalue Below		e (S8) ( <b>LRR R,</b>		LRR K, L, MLRA 149B)
	pipedon (A2	2)		MLRA 149B)				ox (A16) ( <b>LRR K, L, R</b> )
Black His	stic (A3) n Sulfide (A	<b>N A N</b>		Thin Dark Surfa Loamy Mucky M			-	or Peat (S3) ( <b>LRR K, L, R</b> )
	I Layers (A			Loamy Gleyed I			Dark Surface (S7)	urface (S8) (LRR K, L)
	Below Da		e (A11)	Depleted Matrix		-)	Thin Dark Surface	
	rk Surface			Redox Dark Su		)		lasses (F12) (LRR K, L, R)
Sandy M	lucky Mine	ral (S1)		Depleted Dark S	Surface (F	=7)	Piedmont Floodpla	in Soils (F19) ( <b>MLRA 149B</b> )
	leyed Matr	ix (S4)		Redox Depress	ions (F8)			6) (MLRA 144A, 145, 149B)
	edox (S5)						Red Parent Materia	
	Matrix (S6			2)			Very Shallow Dark Other (Explain in R	
	face (S7) (		ILKA 1491	<b>)</b>				emarks)
<sup>3</sup> Indicators of	hydrophyt	ic vegetat	ion and we	etland hydrology mus	t be pres	ent, unless disturbed	or problematic.	
Restrictive L				,		·	•	
Туре:								
Depth (inc	:hes):						Hydric Soil Present?	Yes No 🖌
Remarks:								
	ators of	hvdric	soils w	vere observed.				
		,						



wirc1010\_u\_NW



wirc1010\_u\_S

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

-	County: <u>Iron</u> Sampling Date: <u>2020-05-20</u>
	State: Wisconsin Sampling Point: wirc1007f_w
Investigator(s): EJO/JSW Section	ion, Township, Range: <u>sec 22 T046N R001W</u>
Landform (hillslope, terrace, etc.): Depression Local re	lief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.455105	Long: <u>-90.476677</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Cathro com	
Are climatic / hydrologic conditions on the site typical for this time of year?	
	rbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally problem	
SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes 🖌 No	within a Wetland? Yes <u>v</u> No
Wetland Hydrology Present? Yes <u>v</u> No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.) Feature is a black ash swamp with minimal vegeta	ation present within seasonal pool: however.
outside of the pool, ground layer appears dominate	
Fringed sedge and cf. S. hattorianus present on ris	
within a scraped area adjacent to forest road, which	
continues beyond the scrape area and outside of s	
continues beyond the scrape area and outside of a	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	es (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 Oc	dor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospher	res on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduce	d Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction	
Iron Deposits (B5) Thin Muck Surface (	C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Re	marks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>v</u> No Depth (inches): <u>0.</u>	5
Water Table Present? Yes <u>v</u> No Depth (inches): <u>0</u>	
Saturation Present? Yes <u>v</u> No Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>v</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	avious inspections), if available:
Remarks:	
	of the feature is within a scraped area adjacent to
a forest trail, which likely has influenced hydrology	
survey, but edges are saturated and wetland is sa	

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

Sampling Point: <u>wirc1007f\_w</u>

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1. <u>Fraxinus nigra</u>				That Are OBL, FACW, or FAC: (A)
2. <u>Acer rubrum</u>	5	N	FAC	Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5			·	That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co		OBL species         32         x 1 =32
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $26 \times 2 = 52$
	2	NI		FAC species $7 \times 3 = 21$
1. <u>Rubus idaeus</u>				FACU species $0 \times 4 = 0$
2				UPL species x 5 =
3			·	Column Totals: <u>65</u> (A) <u>105</u> (B)
4				
5				Prevalence Index = B/A = <u>1.62</u>
6			·	Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
	2	= Total Co	ver	∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u> )				3 - Prevalence Index is ≤3.0 <sup>1</sup>
1. <u>Scirpus cf. hattorianus</u>	10	Y	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
		 	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Juncus effusus</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
4. <u>Scirpus cyperinus</u>		<u>     N                               </u>	OBL	be present, unless disturbed or problematic.
5. <u>Typha sp.</u>		<u>    N</u>	OBL	Definitions of Vegetation Strata:
6. <u>Eleocharis sp.</u>	1	<u>    N     </u>	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Cardamine pensylvanica</u>	1	N	FACW	at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9			·	and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.			·	Woody vines – All woody vines greater than 3.28 ft in
· <u>·</u> ·	33	= Total Co	vor	height.
Woody Vine Stratum (Plot size: <u>30</u> )			VEI	
1				
2			·	
3				Hydrophytic
4				Vegetation Present? Yes ✔ No
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate			+ 10 +	oppony and magginite hubble and
Feature is a hardwood swamp with black				
fringed sedge dominant in the ground la	ayer, pri	manly o	on numn	nocks and along the edges of the
wetland.				

SOIL
------

Profile Des	cription: (I	Describe t	o the dep	th needed	to docun	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth		Matrix				x Features					
(inches)	Color (	moist)	%	Color (I	moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks	
	<u>7.5YR</u>	2.5/3	100						SIL		
	<u>5YR</u>	3/4	90	5YR	4/6	10	_C_	_M_	SL	Prominent redox	
10-20	5YR	4/4	95	5YR	4/6	5	C	M	SL	Prominent redox	
						·					
						·					
						·					
						·					
						·					
						·					
<sup>1</sup> Type: C=C			etion, RM	=Reduced	Matrix, MS	S=Masked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix.	
Hydric Soil				Dob <i>a</i> "	alua Palav	v Surface				for Problematic Hydric Soils <sup>3</sup> :	
Histosol	pipedon (A2	2)			RA 149B)		(30) ( <b>LR</b> F	К.К.,		/luck (A10) ( <b>LRR K, L, MLRA 149B</b> ) Prairie Redox (A16) ( <b>LRR K, L, R</b> )	
	istic (A3)	-,			,		RR R, MI	RA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)	
	en Sulfide (/					lineral (F1		, L)		Surface (S7) (LRR K, L)	
	d Layers (A					Matrix (F2)	1		-	alue Below Surface (S8) (LRR K, L)	
	d Below Da		e (A11)		ted Matrix					park Surface (S9) (LRR K, L)	
	ark Surface /lucky Mine				Cork Sui	fface (F6) Surface (F	7)			anganese Masses (F12) ( <b>LRR K, L, R</b> ) ont Floodplain Soils (F19) ( <b>MLRA 149B</b> )	
-	Gleyed Matr				Corress		()			Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )	
-	Redox (S5)	IX (04)			CDepiess					arent Material (F21)	
-	d Matrix (S6	i)							Very Shallow Dark Surface (TF12)		
Dark Su	irface (S7) (	(LRR R, M	LRA 149	B) Other (Explain in Remarks)					(Explain in Remarks)		
3 maile atoms a	f ha almana ha at			مغاميه والعبيما و		4 h a 19 19 a a		ما ما سام م		_	
Restrictive		-	on and we	etiano nyoro	blogy mus	t be prese	nt, uniess	saisturbea	or problemation	2.	
Type:	Luyer (ii oi										
	ches):								Hydric Soil	Present? Yes <u>~</u> No	
Remarks:	cnes)								,		
Soils are	silt loa	m over	sandv	loam.							
	ontroa		canay	loann							



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wirc1007f\_w\_SE

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	EJO/JSW		
File #:	Date of visit(s):		
wirc1007	2020-05-20		
Location:	Ecological Landsca	ape:	
PLSS: sec 22 T046N R001W	Superior Mineral Range	s	
	Superior Milleral Kange	5	
Lat: <u>46.455105</u> Long: <u>-90.476677</u>	Watershed:		
	LS11, Potato River		
County: <u>Iron</u> Town/City/Village: Gurney town			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 18 percent slopes.	Wetland Type(s):		
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent slopes.	PFO - hardwood swamp		
Field Verified:		•	
Series not verified. Soils were a silty loam over	Wetland Size:	Wetland Area Impacted	
sandy loam.	0.0543	0.0543	
	Vegetation:	•	
	Plant Community D	Description(s):	
Hydrology:		black ash swamp with	
The hydrologic regime is seasonally inundated. The	minimal vegetation present in a small pool,		
wetland feature is within a scraped area adjacent to			
a forest trail, which has likely influenced hydrology.		dominated by fringed sedge	
	on hummocks a	nd along the wetland edge.	

# SITE MAP

## **SECTION 1: Functional Value Assessment**

HU         YN         Potential         Human Use values: recreation, culture, education, science, natural scenic beauty           1         N         Y         Used for recreation (huming, binding, hiking, etc.). List: huming, binding           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 habital types, lack of pollution or degradation           5         N         N         N         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           7         N         N         Within or adjacent to habitat corridor or estabilished wildlife habitat area           4         Y         Y         Oto more strata present (1:01% cover)           7         N         Y         Intersperison of habitat storucture (nem-marsh shrub/emergent, wetland/upland complex etc.)           6         N         Y         Intersperison of habitat storucture (nem-marsh shrub/emergent, wetland/upland cons, etc.)           7         N         Y         plans <td< th=""><th></th><th></th><th></th><th>Functional Value Assessment</th></td<>				Functional Value Assessment
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           6         N         N         List:           7         N         N         In or adjacent to archaeological or cultural resource site           7         N         N         In or adjacent to archaeological or cultural resource site           7         N         N         In or adjacent to habitat for order arestabilished wildlife habitat area           1         Y         Y         Wetland and configuous habitat 10% corder or established wildlife habitat area           3         N         N         Within or adjacent to habitat scruture (normin sites in the WI All-Bird Cons. Plan. or other plans           3         N         N         Occurs in a Joint Venture priority township           6         N         Y         Ephemeral pond with water present > 45 days           10         Y         Standing water provides habitat 10% amplitations and aquatic invertebrates           11         N         Seasonally exposed multitatior amplibilans and aquatic invertebrates           12         N         Y         Standi	HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
3         N         Y         Visually or physically accessible to public           4         N         Y         Aesthetically pleasing due to diversity of habital types, lack of pollution or degradation           6         N         Y         Supports or provides habitat for endangered, threatened or special concern species           7         N         N         I for adjacent to archaeological or cultural resource site           8         N         N         Witaline Habitat           1         Y         Y         Wetland and contiguous habitat >10 acres           2         Y         Y         Y         Wetland and contiguous habitat >10 forces           3         N         N         Within or adjacent to habitat accrifdor or established wildlife habitat area           4         Y         Y         TOO more strata present >10% (over)           3         N         N         Within or adjacent to habitat corridor or established wildlife habitat area           4         Y         Y         TOO more strata present >10% (over)         Totand           5         N         N         Coccurs in a Joint Venture priority township           6         N         Y         Interpresent of habitat for SGCN to birds listed in the WI All-Bird Cons. Plan, or other plans           8         N	1	N	Y	
4         N         Y         Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation           5         N         N         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         Witeline Habitat         N         N           1         Y         Wetland and contiguous habitat >10 acres         2           2         Y         Y         3 or more strata present (>10% cover)           3         N         Within or adjacent to habitat corrigours of restablished 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-mash, shrub/emergent, wetland/upland complex.etc.)           7         N         Y         Ephemeral pond with water present >45 days           10         Y         Y         Standing water provides habitat for amphibians and aquatic invertebrates           11         N         N         Seadonaly exposed muditats present (ac.)<	2	Ν	Y	Used for educational or scientific purposes
S         N         List:           6         N         Y         Supports or provides habitat for endangered, threatened or special concern species           7         N         N         N         N           1         Y         Y         Weltide Habitat           1         Y         Y         Weltide and contiguous habitat >10 acres           2         Y         Y         Y         Weltide and contiguous habitat >10 acres           3         N         N         Within or adjacent to habitat corridor or established wildlife habitat area           4         Y         Y         Too more strata present (>10% cover)           3         N         N         Within or adjacent to habitat corridor or established wildlife habitat area           4         Y         Y         Too more strata present (>10% cover)         Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans           6         N         Y         Plans         Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans           8         N         Y         Standing water provides habitat for amphibians and aquatic invertebrates           11         N         N         Standing water provides habitat for amphibians and aquatic invertebrates	3	Ν	Y	Visually or physically accessible to public
S         N         List:           6         N         Y         Supports or provides habitat for endangered, threatened or special concern species           7         N         N         N         N           1         Y         Y         Weltide Habitat           1         Y         Y         Weltide and contiguous habitat >10 acres           2         Y         Y         Y         Weltide and contiguous habitat >10 acres           3         N         N         Within or adjacent to habitat corridor or established wildlife habitat area           4         Y         Y         Too more strata present (>10% cover)           3         N         N         Within or adjacent to habitat corridor or established wildlife habitat area           4         Y         Y         Too more strata present (>10% cover)         Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans           6         N         Y         Plans         Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans           8         N         Y         Standing water provides habitat for amphibians and aquatic invertebrates           11         N         N         Standing water provides habitat for amphibians and aquatic invertebrates	4			Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
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           1         Y         Y         Wetland and contiguous habitat >10 acres           2         Y         Y         Wetland and contiguous habitat >0 acres           3         N         N         Within or adjacent to habitat structure (hemi-marsh.shrub/emergent, wetland/upland complex.etc.)           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         Deports or provides habitat for SGCN or bries listed in the WI All-Bird Cons. Plan, or other plans           8         N         Y         Patt of a large habitat block that supports area sensitive species           9         N         Y         Ephemeral pond with water present ≥45 days           10         Y         Y         Standing water provides habitat for amphibians and aquatic invertebrates           11         N         N         Peotensiat for ampital straam or lake           2         Y         Y         Standing water provides habitat anor ampital straam or lake	F			In or adjacent to RED FLAG areas
7       N       In or adjacent to archaeological or cultural resource site         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       Norcurs in a Joint Venture priority township         6       N       Y       Interspersion of habitat structure (hemi-marsh.shrub/merrgent, wetland/upland complex.etc.)         7       N       Y       Patro al arge habitat block that supports area sensitive species         9       N       Y       Ephemeral pond with water present >45 days         10       Y       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Resonally exposed mudflats present         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         12       N       N       Natural Heritage inventory (NH) listed aquatic species within aqualic system         4       N       Y       Vegetation is inundated in sprin	5	N	N	
7       N       In or adjacent to archaeological or cultural resource site         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       Norcurs in a Joint Venture priority township         6       N       Y       Interspersion of habitat structure (hemi-marsh.shrub/merrgent, wetland/upland complex.etc.)         7       N       Y       Patro al arge habitat block that supports area sensitive species         9       N       Y       Ephemeral pond with water present >45 days         10       Y       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Resonally exposed mudflats present         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         12       N       N       Natural Heritage inventory (NH) listed aquatic species within aqualic system         4       N       Y       Vegetation is inundated in sprin	6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
WH         Wildlife Habitat           1         Y         Y         Wildlife Habitat           2         Y         Y         3 or more strala present (>10% cover)           3         N         N         Within or adjacent to habitat >10 acres           4         Y         Y         0 or more strala present (>10% cover)           3         N         N         Within or adjacent to habitat structure = 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         plans         Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans           8         N         Y         Ephemeral pond with water present >45 days           10         Y         Standing water provides habitat for amphibians and aquatic invertebrates           11         N         Seasonally exposed habitat for amphibians and aquatic invertebrates           2         Y         Standing water provides habitat for amphibians and aquatic invertebrates           3         N         N         Natural Heritage Inventory (HIII) listed aqualic species within aquatic system				
1       Y       Y       Wetland and configuous 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       N Cocurs in a Joint Venture priority township         6       N       Y       Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex,etc.)         7       N       Y       Plans 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       Y       Standing water provides habitat present         11       N       N       Vestandia water provides habitat present         12       N       Prish and Aquatic Life Habitat       Prish and Aquatic Life Habitat         11       N       N       Wetland is connected or configuous with perennial stream or lake         2       Y       Y       Standing water provides habitat for amphibibans and aquatic invertebrates <tr< td=""><td></td><td></td><td></td><td>j v</td></tr<>				j v
2       Y       Y       3 or more strata present (>10% cover)         3       N       N       Within or adjacent to habitat coridor or estabilished wildlife habitat area         4       Y       Y       100 m buffer – natural land cover ≥50%(south) 75% (north) intact         5       N       N       Occurs na Joint Venture priority township         6       N       Y       Interspersion of habitat structure (hemi-marsh.shrub/emergent, wetland/upland complex,etc.)         7       N       Y       Dians       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       Y       Y       Standing water provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat       Fish and Aquatic Life Habitat         1       N       N       Vettand is concelted or contiguous with prennial stream or lake         2       Y       Y       Standing water provides habitat for amphibans and aquatic invertebrates         3       N       N       Natural Heritage Inventory (NHI) listed aquatic species within aquatic system         4       Y	-	Y	Y	
3         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         Eptemeral 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         Provides habitat bitat         Fils had Aquatic Life Habitat           14         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         N         Y         Vegetation is inundated in spring				
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         8       N       Y       Patr of a large habitat block that supports area sensitive species         9       N       Y       Ephemeral poor with water prevent ≥45 days         10       Y       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Seasonally exposed mudflats present         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         1       N       N       Nettand 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       N       Y       Vegetation is inundated in spring         SP				
5       N       Occurs in a Joint Venture priority township         6       N       Y       Interspersion of habitat structure (hemi-mash,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       Ephemeral pond with water present ≥ 45 days         9       N       Y       Ephemeral pond with water present ≥ 45 days         10       Y       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       Seasonally exposed mudifats present       245 days         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)       FFA         FA       Ffish and Aquatic Life Habitat       Flathat       Flathat         1       N       Wetland is connected or contiguous with perennial stream or lake       Pointebrates         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       N       Y       Vegetation is inundated in spring       Spreline of a stream, lake, pond or open water area (21 acre) - if no, not applicable         3				
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         Y         Ephemeral pond with water present >45 days           10         Y         Y         Standing water provides habitat for amphibians and aquatic invertebrates           11         N         N         Seasonally exposed muditats present           12         N         Provides habitat scarce in the area (urban, agricultural, etc.)           FA         Fish and Aquatic Life Habitat           1         N         Wetland is connected or condiguous 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         N         Y         Vegetation is inundated in spring           5P         Shoreline Protection         1           1         N         Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicab				
7     N     Y       8     N     Y       9     N     Y       9     N     Y       10     Y     Part of a large habitat block that supports area sensitive species       9     N     Y       10     Y     Y       11     N     N       12     N     N       13     N     Provides habitat scarce in the area (urban, agricultural, etc.)       FA     Fish and Aquatic Life Habitat       14     N     N       15     X     Standing water provides habitat scarce in the area (urban, agricultural, etc.)       FA     Fish and Aquatic Life Habitat       1     N     N       2     Y     Y       2     Standing water provides habitat for amphibians and aquatic invertebrates       3     N     N       4     N     Y       Vegetation is inundated in spring       SP     Shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable       1     N     Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable       3     N     Densely rooted emergent or woody vegetation       3     N     Densely rooted emergent or woody vegetation       3     N     Dense, persiste				
1       N       Y       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       Y       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Seasonally exposed mudifiest present         12       N       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat       Intervention         1       N       N       Weltand is connected or contiguous with perennial stream or lake         2       Y       Y       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Natural Heritage Inventory (NHI) listed aquatic species within aquatic system         4       N       Y       Vegetation is inundated in spring         SP       Shoreline Protection       Inventory (NHI)         1       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Bensely not not mode to woody vegetation         ST       Storm and Floodwater Storage       Storm and Floodwater Storage </td <td>0</td> <td>IN</td> <td>I</td> <td></td>	0	IN	I	
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       Y       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Seasonally exposed mudflats present         12       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         1       N       N       Weltand is connected or contiguous with perennial stream or lake         2       Y       Y       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Natural Heritage Inventory (NHI) listed aquatic species within aquatic system         4       N       Y       Vegetation is inundated in spring         SP       Shoreline Protection       In         1       N       Along shoreline of a stream, take, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Water levels or high flows – if no, not applicable         3       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       Y       W       Basin wetland,	7	Ν	Y	
9     N     Y     Ephemeral pond with water present ≥45 days.       10     Y     Y     Standing water provides habitat for amphibians and aquatic invertebrates       11     N     N     Seasonally exposed mudflats present       12     N     N     Provides habitat scarce in the area (urban, agricultural, etc.)       FA     Fish and Aquatic Life Habitat       1     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     Nutural Heritage Inventory (NHI) listed aquatic species within aquatic system       4     N     Y     Vegetation is inundated in spring       SP     Shoreline Protection     1       1     N     N     Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable       2     N     N     Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable       3     N     N     Densely rooted emergent or woody vegetation       ST     Storm and Floodwater Storage     1       3     N     N     Dense, persistent vegetation       4     N     N     Evidence of flashy hydrology       5     N	Q			
10       Y       Y       Standing water provides habitat for amphibians and aquatic invertebrates         11       N       N       Seasonally exposed mudflats present         12       N       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         1       N       N       Wetland is connected or contiguous with perennial stream or lake         2       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       N       Y       Vegetation is inundated in spring         SP       Shoreline Protection          1       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage          1       Y       Y       Basin wetland, is NOT channelized         3       N       N       Dense, persistent vegetation         4				
11       N       N       Seasonally exposed mudflats present         12       N       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         1       N       N       Wetland is connected or contiguous with perennial stream or lake         2       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       N       Y       Vegetation is inundated in spring         SP       Shoreline Protection				
12       N       N       Provides habitat scarce in the area (urban, agricultural, etc.)         FA       Fish and Aquatic Life Habitat         1       N       N       Wetland is connected or contiguous with perennial stream or lake         2       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       N       Y       Vegetation is inundated in spring         SP       Shoreline Protection         1       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage       Imperious surfaces cover >10% of tand surface within the watershed         4       N       N       Exidence of flashy hydrology         5       N       Y       Point or no-point source inflow         6       N       N       Impervious surfaces cover >10% of land surface within the watershed         7       N       N       W				
FA       Fish and Aquatic Life Habitat         1       N       N         2       Y       Standing water provides habitat for amphibians and aquatic invertebrates         3       N       N       Natural Heritage Inventory (NHI) listed aquatic species within aquatic system         4       N       Y       Vegetation is inundated in spring         SP       Shoreline Protection         1       N       N       Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable         2       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage       Storage         1       Y       Basin welland, constricted outlet, has through-flow or is adjacent to a stream         2       Y       Y       Basin welland, dividogy         5       N       N       Dense, persistent vegetation         4       N       N       Evidence of flash flydrology         5       N       Y       Point or non-point source inflow         6       N       N       Impervious surfaces cover > 10% of fland surface within the watershed				
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       N       Y       Vegetation is inundated in spring         5P       Shoreline Protection         1       N       A long shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable         3       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       Y       Y       Basin wetland, constricted outlet, has through-flow or is adjacent to a stream         2       Y       Y       Water flow through wetland is NOT channelized         3       N       Dense, persistent vegetation         4       N       N       Evidence of flashy hydrology         5       N       Y       Point or non-point source inflow         6       N       Impervious surfaces cover >10% of land surface within the watershed         7 <td></td> <td>N</td> <td>N</td> <td></td>		N	N	
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       N       Y       Vegetation is inundated in spring         SP       Shoreline Protection         1       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       Y       Y       Basin wetland, constricted outlet, has through-flow or is adjacent to a stream         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 waters	-			
3       N       N       Natural Heritage Inventory (NHI) listed aquatic species within aquatic system         4       N       Y       Vegetation is inundated in spring         SP       Shoreline Protection         1       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         3       N       N       Densely rooted emergent or woody vegetation         3       N       N       Densely rooted emergent or woody vegetation         3       N       N       Dense, persistent vegetation         4       N       N       Evidence of flashy hydrology         5       N       Y       Point or non-point source inflow         6       N       Impervious surfaces cover >10% of land surface within the watershed         7       N       N       Water Quality Protection         8       N       Potential storage of storm and floodwater based on previous section         2       Y       Y       Basin wetland or constricted outlet         3       Y       Y       Basin wetland so				
4       N       Y       Vegetation is inundated in spring         SP       Shoreline Protection         1       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage       1         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       Dense, persistent vegetation         4       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       W       Within a watershed with <10% wetland				
SP       Shoreline Protection         1       N       N         2       N       N         3       N       N         2       N       N         3       N       N         2       N       N         3       N       N         4       N       N         5       Storm and Floodwater Storage         1       Y       Y         4       N       N         5       Storm and Floodwater Storage         1       Y       Y         8       Sitor Bin wetland, constricted outlet, has through-flow or is adjacent to a stream         2       Y       Y         4       N       N         5       N       Y         6       N       N         1       N       N         1       N       N         1       N       N         1       N       N         2       Y       Y         3       N       N         4       N       N         1       N       N         1       N       N </td <td></td> <td></td> <td></td> <td></td>				
1       N       N       Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable         2       N       N       Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows - if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       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       Water Quality Protection         8       N       N       Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event         WQ       Water Quality Protection       Water Quality Protection         1       N       N       Provides substantial storage of storm and floodwater based on previous section         2       Y		N	Y	
2         N         N         Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable           3         N         N         Densely rooted emergent or woody vegetation           ST         Storm and Floodwater Storage           1         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				
2       N       N       water levels or high flows – if no, not applicable         3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       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	1	N	N	
3       N       N       Densely rooted emergent or woody vegetation         ST       Storm and Floodwater Storage         1       Y       Y       Basin wetland, constricted outlet, has through-flow or is adjacent to a stream         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	2	N	N	
ST       Storm and Floodwater Storage         1       Y       Y       Basin wetland, constricted outlet, has through-flow or is adjacent to a stream         2       Y       Y       Water flow through wetland is NOT channelized         3       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		IN		
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		N	N	
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	-			
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			Y	
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		Y	Y	Water flow through wetland is NOT channelized
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	3	Ν	N	
6       N       N       Impervious surfaces cover >10% of land surface within the watershed         7       N       N       Within a watershed with <10% wetland	4	Ν	Ν	Evidence of flashy hydrology
7       N       N       Within a watershed with <10% wetland		N	Y	
8         N         Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event           WQ         Water Quality Protection           1         N         N         Provides substantial storage of storm and floodwater based on previous section           2         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         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%	6	Ν	Ν	Impervious surfaces cover >10% of land surface within the watershed
8       N       Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event         WQ       Water Quality Protection         1       N       N       Provides substantial storage of storm and floodwater based on previous section         2       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%	7	N	Ν	
WQWater Quality Protection1NN2YYBasin wetland or constricted outlet3YY3YYWater flow through wetland is NOT channelized4NN4NVegetated wetland associated with a lake or stream5NN6NN7NSigns of excess nutrients, such as algae blooms, heavy macrophyte growth7NN8NN9NNNatural land cover in 100m buffer area < 50%	8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
1NProvides substantial storage of storm and floodwater based on previous section2YYBasin wetland or constricted outlet3YYWater flow through wetland is NOT channelized4NNVegetated wetland associated with a lake or stream5NNDense, persistent vegetation6NNSigns of excess nutrients, such as algae blooms, heavy macrophyte growth7NNStormwater or surface water from agricultural land is major hydrology source8NNDischarge to surface water9NNNatural land cover in 100m buffer area < 50%	WQ			
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%		Ν	Ν	Provides substantial storage of storm and floodwater based on previous section
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%	2			
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%				
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%		-		
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%				
7       N       N       Stormwater or surface water from agricultural land is major hydrology source         8       N       N       Discharge to surface water         9       N       N       Natural land cover in 100m buffer area < 50%				
8       N       N       Discharge to surface water         9       N       N       Natural land cover in 100m buffer area < 50%				
9       N       Natural land cover in 100m buffer area < 50%         GW       Groundwater Processes         1       N       N         2       N       N         3       N       N         4       N       Wetland soils are organic				
GW       Groundwater Processes         1       N       N       Springs, seeps or indicators of groundwater present         2       N       N       Location near a groundwater divide or a headwater wetland         3       N       N       Wetland remains saturated for an extended time period with no additional water inputs         4       N       N       Wetland soils are organic				
1       N       N       Springs, seeps or indicators of groundwater present         2       N       N       Location near a groundwater divide or a headwater wetland         3       N       N       Wetland remains saturated for an extended time period with no additional water inputs         4       N       N       Wetland soils are organic	-			
2         N         N         Location near a groundwater divide or a headwater wetland           3         N         N         Wetland remains saturated for an extended time period with no additional water inputs           4         N         N         Wetland soils are organic		N I	N I	
3         N         N         Wetland remains saturated for an extended time period with no additional water inputs           4         N         N         Wetland soils are organic				
4 N N Wetland soils are organic	-			
	-			
5   N   N   Wetland is within a wellhead protection area				
	5	N	N	Wetland is within a wellhead protection area

HU-6, WH-7: The wetland is a part of larger forested complex. ST-5: The wetland likely receives surface water from surrounding uplands, and past logging in the surround areas may exacerbate this. FA-2: Tadpoles and frogs were observed in the standing water.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Chestnut-sided warbler, white-throated sparrow, and other songbirds hear near or in wetland
Y	Y	Frogs observed in pool

### 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 observed in pool
Y	Y	Tadpoles

## **SECTION 2: Floristic Integrity**

### Plant Community Integrity (circle)\*

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Acer rubrum			PFO	Barren
Betula alleghaniensis			PFO	Barren
Cardamine pensylvanica			PFO	Barren
Carex crinita*			PFO	Rare
Eleocharis sp.			PFO	Barren
Fraxinus nigra*			PFO	Rare
Juncus effusus			PFO	Barren
Ranunculus cf. hispidus			PFO	Barren
Rubus idaeus			PFO	Barren
Scirpus cf. hattorianus			PFO	Barren
Scirpus cyperinus			PFO	Barren
Typha sp.			PFO	Barren
Ulmus americana*			PFO	Barren

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

The wetland overall was observed to have a good coverage of native species, with 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
Х	х		Н	С	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
V	Х		М	0	Removal of herbaceous stratum – mowing,
Х			IVI	C	grading, earthworms, etc.
	х		М	С	Removal of tree or shrub strata – logging, unprescribed fire
Х	Х		Н	С	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 adjacent to (and partially located on) a forest trail that appears to have been scraped. This likely has influenced wetland hydrology. The surrounding forest has been previously harvested in places. The surrounding forest was observed to contain earthworms, which could potentially impact wetland vegetation.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION			SIGNIFICANC	E	
	Low	Medium	High	Exceptional	NA
Floristic Integrity			<b>v</b>		
Human Use Values		<ul> <li>✓</li> </ul>			
Wildlife Habitat		<ul> <li>✓</li> </ul>			
Fish and Aquatic Life Habitat		<b>v</b>			
Shoreline Protection					<b>/</b>
Flood and Stormwater Storage		<ul> <li>✓</li> </ul>			
Water Quality Protection		~			
Groundwater Processes	~				

FUNCTION	RATIONALE
Floristic Integrity	The wetland has a high coverage of native species, with few to no exotic species.
Human Use Values	The wetland occurs within a larger forested complex that hosts wildlife valuable to recreational purposes.
Wildlife Habitat	The wetland contains multiple strata and is within a larger forested complex.
Fish and Aquatic Life Habitat	Frogs and aquatic invertebrates were observed in standing water within wetland.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely receives stormwater from surrounding uplands.
Water Quality Protection	The wetland has intact vegetation and is located within a larger intact forest.
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: <u>2020-05-20</u>
Applicant/Owner: Enbridge		State: Wisconsin Samplin	ng Point: <u>wirc1007_u</u>
Investigator(s): <u>JSW/EJO</u>	Section, Township, Rang	ge: <u>sec 22 T046N R001V</u>	V
Landform (hillslope, terrace, etc.): Talf		ex, none): <u>None</u>	
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.4548	310 Long	p: <u>-90.476571</u>	Datum: WGS84
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Ca	athro complex, 0 to 6 perce	ent slopes NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time o	of year? Yes <u></u> ∧ No	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? Are "N	Normal Circumstances" present? Y	′es No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If nee	eded, explain any answers in Remar	rks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes 🖌 🖌	No No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No 🖌	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed The upland sample point	dures here or in a is located ir	separate report.) a mesic haro	dwood forest near a logging road.

## HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained 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 So	oils (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)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No V Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes <u>No</u> Depth (inches): (includes capillary fringe)	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec         Remarks:	
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec         Remarks:	

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

	Absolute		t Indicator	Dominance Test worksheet:			
Tree Stratum (Plot size: <u>30</u> )			<u>Status</u>	Number of Dominant Species			
1. <u>Tilia americana</u>				That Are OBL, FACW, or FAC: (A)			
2. Acer saccharum				Total Number of Dominant			
3. <u>Acer rubrum</u>	5	<u> </u>	FAC	Species Across All Strata: (B)			
4				Percent of Dominant Species			
5				That Are OBL, FACW, or FAC: (A/B)			
6		- <u> </u>		Prevalence Index worksheet:			
7				Total % Cover of: Multiply by:			
	25	= Total Co	over	OBL species x 1 =			
Sapling/Shrub Stratum (Plot size:15)				FACW species x 2 =			
1. <u>Acer saccharum</u>	10	Y	FACU	FAC species x 3 =41			
2. <u>Dirca palustris</u>				FACU species <u>55</u> x 4 = <u>220</u>			
3. <u>Abies balsamea</u>				UPL species x 5 =			
				Column Totals: <u>102</u> (A) <u>361</u> (B)			
4				Prevalence Index = B/A = 3.5392156862745097			
5							
6				Hydrophytic Vegetation Indicators:			
7				1 - Rapid Test for Hydrophytic Vegetation			
	20	= Total Co	over	$\checkmark$ 2 - Dominance Test is >50% $\_$ 3 - Prevalence Index is ≤3.0 <sup>1</sup>			
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations <sup>1</sup> (Provide supporting			
1. <u>Carex pedunculata</u>	30	Y	FAC	data in Remarks or on a separate sheet)			
2. <u>Anemone quinquefolia</u>			FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
3. <u>Tsuga canadensis</u>			FACU				
4. <u>Maianthemum canadense</u>	_		FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
5. <u>Osmunda claytoniana</u>			FAC				
6. <u>Uvularia sessilifolia</u>			FACU	Definitions of Vegetation Strata:			
				Tree – Woody plants 3 in. (7.6 cm) or more in diameter			
7. <u>Carex gracillima</u>				at breast height (DBH), regardless of height.			
8. <u>Mitchella repens</u>				Sapling/shrub – Woody plants less than 3 in. DBH			
9				and greater than or equal to 3.28 ft (1 m) tall.			
10				Herb – All herbaceous (non-woody) plants, regardless			
11				of size, and woody plants less than 3.28 ft tall.			
12				Woody vines – All woody vines greater than 3.28 ft in			
	57	= Total Co	over	height.			
Woody Vine Stratum (Plot size: <u>30</u> )							
1							
2			_				
3				Hudronbutio			
				Hydrophytic Vegetation			
4	_			Present? Yes <u>v</u> No			
= Total Cover Remarks: (Include photo numbers here or on a separate sheet.)							
The vegetation in the sample plot is typ		a mesic	hardwo	od forest.			

Profile Desc	cription: (Describe t	o the dept	h needed to docun	nent the	indicator	or confirm	the absence of indicators	.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6	<u>7.5YR 2.5/2</u>	100		0			SIL	
6-20	<u>5YR 3/4</u>	100		0			SIL	
					·			
					·		······································	
					·		·	
·								
					·			
					·		·	
					·			
	oncentration, D=Depl	etion, RM=I	Reduced Matrix, MS	S=Masked	d Sand Gra	ains.	<sup>2</sup> Location: PL=Pore Lir	
Hydric Soil							Indicators for Problema	•
Histosol		-	Polyvalue Below		(S8) ( <b>LRF</b>	R,		RR K, L, MLRA 149B)
	pipedon (A2)		MLRA 149B)			DA 440B	Coast Prairie Redox	
	istic (A3) en Sulfide (A4)	-	Thin Dark Surfa Loamy Mucky M	. , .		,	Dark Surface (S7) (L	Peat (S3) ( <b>LRR K, L, R</b> )
	d Layers (A5)	-	Loamy Gleyed I			, ⊑)		face (S8) ( <b>LRR K, L</b> )
	d Below Dark Surface	- (A11)	Depleted Matrix		-)		Thin Dark Surface (S	
	ark Surface (A12)		Redox Dark Su					sses (F12) (LRR K, L, R)
Sandy M	lucky Mineral (S1)	_	Depleted Dark S	Surface (F	-7)		-	Soils (F19) (MLRA 149B)
Sandy G	Bleyed Matrix (S4)	-	Redox Depress	ions (F8)			Mesic Spodic (TA6)	(MLRA 144A, 145, 149B)
-	Redox (S5)						Red Parent Material	
	I Matrix (S6)						Very Shallow Dark S	
Dark Su	rface (S7) (LRR R, M	LRA 149B)					Other (Explain in Rei	marks)
<sup>3</sup> Indicators of	f hydrophytic vegetati	on and wet	land hydrology mus	t ha nras	ont unloca	e disturbad	or problematic	
	Layer (if observed):		and hydrology mus	t be pres		sustaibea		
Type:								
	).						Hydric Soil Present?	Ves No V
	ches):							
Remarks:	store of hydrig	ooil obc	anvad					
	ators of hydric	5011 005	erveu.					



wirc1007\_u\_SE



wirc1007\_u\_SW

# 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: wirc1006f_w
Investigator(s): <u>EJO/JSW</u>	Section, Township, Range: <u>sec 22 T046N R001W</u>
	cal relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.45541	0Long: <u>-90.476685</u> Datum: <u>WGS84</u>
	o complex, 0 to 18 percent slopes NWI classification: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes _        No         Hydric Soil Present?       Yes _        No         Wetland Hydrology Present?       Yes _        No	within a Wetland? Yes <u>&lt;</u> No
	wamp dominated by fringed sedge in ground layer. ing operations. Wetland is in depression surrounded
HYDROLOGY Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)

<u></u>
Surface Soil Cracks (B6)
Drainage Patterns (B10)
Moss Trim Lines (B16)
Dry-Season Water Table (C2)
Crayfish Burrows (C8)
Roots (C3) Saturation Visible on Aerial Imagery (C9)
Stunted or Stressed Plants (D1)
pils (C6) Geomorphic Position (D2)
Shallow Aquitard (D3)
Microtopographic Relief (D4)
FAC-Neutral Test (D5)
Wetland Hydrology Present? Yes <u>v</u> No
tions), if available:
lions), il avallable.
er and atmospheric inputs.

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

Sampling Point: wirc1006f\_w

1. Fraxinus nigra       25       Y       FACW       Number of Dominant Species         2. Acer rubrum       5       N       FAC         3.		Absolute % Cover	Dominant Species?		Dominance Test worksheet:
2. Acer rubrum       5       N       FAC         3.					
3.	C C				
4.					
5.					
6.					
7.					
30       = Total Cover       OBL species       17       x 1 =       17         Sabling/Shrub Stratum       (Plot size:       15       )       FAC weeks       30       x 2 =       60         2					
Sabing/Shrub Stratum (Plot size:15)       5       Y       FACW species30X 2 =60         1. Ribes glandulosum5					
1. Ribes glandulosum       5       Y       FAC species       5       x 3 =       15         2.		30	= Total Cov	/er	
1. Dubus glandulosan		_			
2.	<u>Ribes glandulosum</u>	5	<u>     Y     </u>	<u>FACW</u>	
3.	·				
4.	·				
0.	·=-				
6.					Prevalence Index = B/A = <u>1.77</u>
7.					Hydrophytic Vegetation Indicators:
					1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:5_)         1. Carex crinita       _10       Y       OBL         2. Carex tuckermanii       _5       Y       OBL         3. Caltha palustris       _2       N       OBL         4.		_			∠ 2 - Dominance Test is >50%
1. Carex crinita       10       Y       OBL         2. Carex tuckermanii       5       Y       OBL         3. Caltha palustris       2       N       OBL         4.					
2. Carex tuckermanii       5       Y       OBL       Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)         3. Caltha palustris       2       N       OBL       Indicators of hydric soil and wetland hydrology mus be present, unless disturbed or problematic.         5.		10	V		4 - Morphological Adaptations <sup>1</sup> (Provide supportin
3. Caltha palustris       2       N       OBL         4.					
4.					
5.	-				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
6.					be present, unless disturbed or problematic.
7.	·				Definitions of Vegetation Strata:
7.				. <u> </u>	<b>Tree</b> – Woody plants 3 in (7.6 cm) or more in diameter
9.	·				
9.	·				Sapling/shrub – Woody plants less than 3 in. DBH
10.	·				
11.					Herb – All herbaceous (non-woody) plants, regardless
12.					of size, and woody plants less than 3.28 ft tall.
					Woody vines – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30)         1.         2.         3.         4.         Present?         Yes         Void Vine Stratum (Plot size: 30)		17	= Total Co	/er	height.
1.	/oody //ine Stratum (Plot size: 30)	<u> </u>			
2.					
3         Hydrophytic         4         Vegetation         Present?       Yes       No					
4 Vegetation Present? Yes <u>v</u> No				·	
4 Present? Yes <u>v</u> No				. <u></u>	
O = Total Cover	·	_			
			= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate sheet.) Feature is a black ash swamp with primarily fringed sedge in the ground layer at time of survey.	emarks: (Include photo numbers here or on a separate she	neet.) Arily frir	naed se	dae in t	be around layer at time of survey
	catare is a shack ach swarip with prind	, ing ini	.900.00	Sec in t	

SOIL
------

Profile Des	cription: (Desci	ribe to the dep	th needed	to docur	nent the i	indicator	or confirm	the absence	e of indicato	rs.)	
Depth	Matr				x Feature						
(inches)	Color (moist		Color (	moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
	<u>10YR 2/</u>				0			MMI	<u>silt</u>		<u> </u>
6-10	<u>10YR 3/</u>	<u>2 98</u>	5YR	3/4	2	<u>C_</u>	_PL_	SICL	Disting	ct redox	
10-20	<u>10YR 3/</u>	1 50			0			CL			
10-20	<u>10YR 4/</u>	<u>′3    50  </u>			0	. <u> </u>		CL			
					·	·					
					·	·					
						·					
											<u> </u>
	oncentration, D=	Depletion, RM	Reduced	Matrix, MS	S=Masked	d Sand Gra	ains.			Lining, M=Mat	
Hydric Soil			<b>.</b>		o (					natic Hydric	
Histosol Histic F	(A1) pipedon (A2)		-	alue Belov RA 149B)		(S8) ( <b>LRF</b>	κR,			LRR K, L, ML ox (A16) (LRR	
	istic (A3)			,		_RR R, MI	LRA 149B)			or Peat (S3) ( <b>L</b>	
Hydroge	en Sulfide (A4)		🖌 Loam	y Mucky N	/lineral (F	1) ( <b>LRR K</b>		Dark \$	Surface (S7)	(LRR K, L)	
	d Layers (A5)	5 (A 4 4)		y Gleyed I		2)				Surface (S8) (L	
·	d Below Dark Su ark Surface (A12	• •		ted Matrix Cark Su						(S9) ( <b>LRR K,</b> lasses (F12) (	
	Aucky Mineral (S	,		ted Dark Su	• • •				-		(MLRA 149B)
	Gleyed Matrix (S4			x Depress		.,					A, 145, 149B)
-	Redox (S5)				. ,				Parent Materi		
	d Matrix (S6)									Surface (TF1	2)
Dark Su	Irface (S7) (LRR	R, MLRA 1498	3)					Other	(Explain in F	Remarks)	
<sup>3</sup> Indicators c	f hydrophytic ve	getation and we	etland hydro	ology mus	t be prese	ent, unless	s disturbed	or problemati	c.		
Restrictive	Layer (if observ	ved):									
Туре:										<b>X</b>	
Depth (in	ches):							Hydric Soi	Present?	Yes 🖌	NO
Remarks: Soils silt	y mucky mi	ineral over	silty cl	av loar	n and	mixed	clay loa	m			
	y maony mi		Sitty Of	ay loai	in and	mixeu					



wirc1006f\_w\_N



wirc1006f\_w\_SW

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

WETLAND IDENTIFICATION					
Project name:	Evaluator(s):				
Line 5 Relocation Project	EJO/JSW				
File #:	Date of visit(s):				
wirc1006	2020-05-20				
Location:	Ecological Landsca	ipe:			
PLSS: sec 22 T046N R001W	Superior Mineral Ranges	、 、			
	Superior Mineral Ranges	5			
Lat: <u>46.455335</u> Long: <u>-90.476617</u>	Watershed:				
	LS11, Potato River				
County: <u>Iron</u> Town/City/Village: Gurney town					
SITE DESCRIPTION					
Soils:	WWI Class:				
Mapped Type(s):	N/A				
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 18 percent	Wetland Type(s):				
slopes	PFO - hardwood swamp				
Field Verified:					
Series not verified. Soils were observed to be	Wetland Size:	Wetland Area Impacted			
loamy mucky mineral over clay loam.	0.0134	0.0134			
	Vegetation:				
	Plant Community Description(s):				
Hydrology:	The feature is a black ash swamp with				
The feature is seasonally inundated, with	•				
primarily surface water and atmospheric inputs.	primarily fringed sedge and Tuckerman's sedge dominant in the herbaceous layer at				
	the time of survey.				
		-			

SITE MAP

## **SECTION 1: Functional Value Assessment**

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

HU-6, WH-7: The wetland contains multiple strata and is part of larger forested habitat with the potential to support sensitive species. WH-6: The wetland has variable microtography, supporting both hydrophytic and upland-associated plant. 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, chestnut-sided warbler, least flycatcher hear in or near 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		
-				

## **SECTION 2: Floristic Integrity**

### Plant Community Integrity (circle)\*

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

\*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Abies balsamea			PFO	Barren
Acer rubrum			PFO	Rare
Caltha palustris			PFO	Barren
Carex crinita			PFO	Rare
Carex tuckermanii*			PFO	Rare
Dryopteris intermedia			PFO	Barren
Epilobium cf. coloratum			PFO	Barren
Fraxinus nigra*			PFO	Rare
Lemna sp.			PFO	Barren
Osmundastrum cinnamomeum			PFO	Barren
Ribes glandulosum			PFO	Barren
Rubus idaeus			PFO	Barren
Tsuga canadensis			PFO	Barren

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

Floristic quality is high, with a good assemblage of native species, multiple strata, and no exotic species observed.

## 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
Х	х		М	С	Removal of herbaceous stratum – mowing,
^	^		IVI	C	grading, earthworms, etc.
х	x		м	С	Removal of tree or shrub strata – logging,
^			IVI	C	unprescribed fire
	Х		М	С	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 located within a forested area that has been previously harvest, and is adjacent to a forest trail. Earthworms are present in surrounding uplands, with the potential to impact wetland vegetation.

# SUMMARY OF FUNCTIONAL VALUES

FUNCTION			SIGNIFICANC	E	
	Low	Medium	High	Exceptional	NA
Floristic Integrity			<b>v</b>		
Human Use Values		<ul> <li>✓</li> </ul>			
Wildlife Habitat			<b>v</b>		
Fish and Aquatic Life Habitat		<ul> <li>✓</li> </ul>			
Shoreline Protection					<b>v</b>
Flood and Stormwater Storage		<ul> <li>✓</li> </ul>			
Water Quality Protection			<b>v</b>		
Groundwater Processes			~		

FUNCTION	RATIONALE		
Floristic Integrity	The wetland has a good assemblage of native species, multiple strata present, and no exotic species observed.		
Human Use Values	The wetland is a part of larger forested habitat which hosts a variety of wildlife valuable to recreation.		
Wildlife Habitat	The wetland has multiple strata present and is a part of larger intact forested community.		
Fish and Aquatic Life Habitat	Standing water was observed in wetland at time of survey, which has the potential to host 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 is an isolated depression with 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