APPENDIX D

Part 22 of 22

Wetland Delineation Data Sheets and Site Photographs

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iro	onS	ampling Date: <u>2019-09-21</u>
Applicant/Owner: Enbridge		State: WI	Sampling Point: wirb031e_w
Investigator(s): <u>SAM/MAL</u>	Section, Townshi	ip, Range: <u>046N-001W-04</u>	
Landform (hillslope, terrace, etc.): Side slope			
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.48	8890	Long: <u>-90.488962</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Denomie silt loam, 30 to 60 p	ercent slopes	NWI classificati	on:
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes	No (If no, explain in Rem	arks.)
Are Vegetation, Soil, or Hydrology signific	cantly disturbed?	Are "Normal Circumstances" pres	sent? Yes _ ✓ No
Are Vegetation, Soil, or Hydrology natura	lly problematic?	(If needed, explain any answers i	n Remarks.)
SUMMARY OF FINDINGS – Attach site map show	wing sampling po	pint locations, transects, in	mportant features, etc.
	ls the Sa	mplod Aroa	

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:
Remarks: (Explain alternative procedu Side hill seep that leads to	res here or in a separate report.) the associated perennia	al waterbody (sirb011p).

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	Goils (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>✓</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 inspe	ctions), if available:
Remarks:	
Strong seepage/discharge.	

VEGETATION – Use scientific names of plants.

Sampling Point: wirb031e_w

Tree Stratum (Plot size: <u>30'</u>)	Absolute		t Indicator	Dominance Test worksheet:
1)		<u>Species?</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>3.0</u> (A)
2				
3				Total Number of Dominant Species Across All Strata: <u>3.0</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>100.0</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co		$\frac{1}{0} \frac{1}{0} \frac{1}$
Sapling/Shrub Stratum (Plot size:15')				FACW species 20.0 x 2 = 40.0
1. <u>Fraxinus pennsylvanica</u>	10.0	Y	FACW	FAC species <u>5.0</u> x 3 = <u>15.0</u>
2. <u>Ulmus americana</u>			FACW	FACU species <u>0.0</u> x 4 = <u>0.0</u>
				UPL species <u>0.0</u> x 5 = <u>0.0</u>
3				Column Totals: <u>75.0</u> (A) <u>105.0</u> (B)
4				Prevalence Index = B/A =1.4
5				Hydrophytic Vegetation Indicators:
6			·	1 - Rapid Test for Hydrophytic Vegetation
7			·	2 - Commance Test is >50%
	20.0	= Total Co	ver	\checkmark 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5')				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Carex scabrata</u>	50.0	Y	OBL	data in Remarks or on a separate sheet)
2. <u>Athyrium angustum</u>			FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3	<u> </u>		<u> </u>	
4				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
		= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30')				
1.				
2				
3				I hadron ha địa
				Hydrophytic Vegetation
4		= Total Co		Present? Yes <u>√</u> No
Remarks: (Include photo numbers here or on a separate			ver	
Open seepage primarily dominated by		cabrata	ι.	

SOIL

Profile Desc	ription: (D	escribe t	o the dep	th needed	to docun	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth		Matrix				x Features		2			
(inches)	<u>Color (</u> r		%	Color (r		%	Type'	Loc ²	Texture	Remarks	
0-12	<u>10YR</u>	2/2	90	<u>7.5YR</u>	5/6	10	C	M		Prominent redox	
12-18	<u>10YR</u>	2/2	85	<u>7.5YR</u>	5/6	15	C	M	SIL	Prominent redox	
,											
						·					
,						·					
	. <u> </u>										
						·					
						·					
	. <u> </u>										
	. <u> </u>										
	. <u> </u>										
¹ Type: C=Co		D-Depl	etion RM	-Reduced M	Aatrix MS		Sand Gra	aine	² Location	PL=Pore Lining, M=Matrix.	
Hydric Soil		, D=Depi				5=IVIASKEU	Sanu Gra	uns.	Indicators	for Problematic Hydric Soils ³ :	
Histosol				Polyva	alue Belov	v Surface	(S8) (LRR	R,	2 cm N	/uck (A10) (LRR K, L, MLRA 149B)	
	pipedon (A2))		MLI	RA 149B)		. , .		Coast	Prairie Redox (A16) (LRR K, L, R)	
Black Hi	. ,							RA 149B)		lucky Peat or Peat (S3) (LRR K, L, R)	
	n Sulfide (A				-		I) (LRR K ,	L)		Surface (S7) (LRR K, L)	
	d Layers (A5 d Below Dar		(11)		ed Matrix	Matrix (F2)			lue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L)	
	ark Surface		; (ATT)			face (F6)				anganese Masses (F12) (LRR K, L, R)	
	lucky Miner					Surface (F	7)			ont Floodplain Soils (F19) (MLRA 149B)	
	Bleyed Matri				Depress		.,			Spodic (TA6) (MLRA 144A, 145, 149B)	
	edox (S5)	(-)			-1	(-)			Red Parent Material (F21)		
	Matrix (S6)								Very Shallow Dark Surface (TF12)		
Dark Su	rface (S7) (I	.RR R, M	LRA 1491	3)					Other	(Explain in Remarks)	
		-	on and we	etland hydro	ology mus	t be prese	ent, unless	disturbed	or problematio).	
Restrictive I	∟ayer (if ob	served):									
Type:	ches):								Hydric Soil	Present? Yes <u>√</u> No	
Remarks:											
Redox fe	atures p	presen	t throu	ghout th	ne prof	ile.					

Midwest Natural Resources, Inc. - Enbridge - Line 5 Relocation Project

wirb031e_w_E

wirb031e_w_W

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	MAL/SAM		
File #:	Date of visit(s):		
wirb031	09/21/2019		
Location:	Ecological Landsc	ape:	
PLSS: 046N-001W-04	Superior Coastal Plain		
	Superior Coastar Flain		
Lat: <u>46.488705</u> Long: <u>-90.488953</u>	Watershed:		
	LS11 Potato River		
County: Iron Town/City/Village: Gurney town			
SITE DESCRIPTION	1		
Soils:	WWI Class:		
Mapped Type(s):	N/A		
204F, Denomie silt loam, 30 to 60 percent slopes	Wetland Type(s):		
	PEM - Fresh Wet Meadow		
Field Verified:		ormoadow	
Series not verified. The soils consist of a loam	Wetland Size:	Wetland Area Impacted	
over a silt loam.	0.01		
		0.01	
	Vegetation:		
Hydrology:	Plant Community [
		se herbaceous layer	
Hydrologic regime is saturated. The wetland	dominated by C	arex scabrata. The shrub	
displays strong seepage and discharge.	cover includes black ash and American elm.		

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	Ν	Used for recreation (hunting, birding, hiking, etc.). List: Private property possibly used for huntir			
2	Ν	N	Used for educational or scientific purposes			
3	N	N	Visually or physically accessible to public			
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation			
			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			In or adjacent to archaeological or cultural resource site			
WH			Wildlife Habitat			
1	N	N	Wetland and contiguous habitat >10 acres			
2	N	N	3 or more strata present (>10% cover)			
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area			
4	Y	Y	100 m buffer – natural land cover >50%(south) 75% (north) intact			
5		1	Occurs in a Joint Venture priority township			
	N	N	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)			
6	N	N				
7	Y	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other			
			plans			
8	N	Y	Part of a large habitat block that supports area sensitive species			
9	N	N	Ephemeral pond with water present <u>> 45 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	Ν	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system			
4	Ν	N	Vegetation is inundated in spring			
SP			Shoreline Protection			
1	Y	Y	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	Y	Y	water levels or high flows - if no, not applicable			
3	N	N	Densely rooted emergent or woody vegetation			
ST			Storm and Floodwater Storage			
1	N	N	Basin wetland, constricted outlet, has through-flow or is adjacent to a stream			
2	Y	Y	Water flow through wetland is NOT channelized			
3	Ň	Ň	Dense, persistent vegetation			
4	Y	Y	Evidence of flashy hydrology			
5	N	Y	Point or non-point source inflow			
6	N	N	Impervious surfaces cover >10% of land surface within the watershed			
7	N	N	Within a watershed with <10% wetland			
8	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	NI	NI	Provides substantial storage of storm and floodwater based on previous section			
	N	N				
2	N	N	Basin wetland <u>or</u> constricted outlet			
3	Y	Y	Water flow through wetland is NOT channelized			
4	Y	Y	Vegetated wetland associated with a lake or stream			
5	N	N	Dense, persistent vegetation			
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth			
7	N	N	Stormwater or surface water from agricultural land is major hydrology source			
8	Y	Y	Discharge to surface water			
9	N	N	Natural land cover in 100m buffer area < 50%			
GW			Groundwater Processes			
1	Y	Y	Springs, seeps or indicators of groundwater present			
2	N	N	Location near a groundwater divide or a headwater wetland			
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs			
4	N	N	Wetland soils are organic			
5	N	N	Wetland is within a wellhead protection area			
5	IN	I IN				

SW-6: The is flanked by shrub and tree cover. WQ-2: The vegetation is dense and water flow through is not channelized. WH-7: The mesic margins of the wetland provide bird habitat. FA-2: Wetland is likely consistently saturated and the associated waterbody provides aquatic habitat.

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	tat for songbird, amphibians, reptiles, aquatic insects, and mammals which occupy streams a

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)
Fraxinus pennsylvanica			PEM	Uncommon
Ulmus americana			PEM	Uncommon
Carex scabrata			PEM	Common
Athyrium filix-femina			PEM	Uncommon
Athyrium angustum			PEM	

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

The feature has moderate floristic integrity. The herbaceous layer is dominated by Carex scabrata.

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
Х	Х		L	С	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.
	ĺ				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 small wetland is within a valley which is associated with a perennial waterbody. There stream has been manipulated and there is erosion present.

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 moderate floristic integrity with a sparse herbaceous cover.
Human Use Values	The wetland is not accessible to the public and is not a location where research or recreation takes place.
Wildlife Habitat	The wetland is quite small and provides limited habitat due to a lack of plant species diversity. Species associated with seepage and streams may utilize this feature
Fish and Aquatic Life Habitat	The wetland itself does not support standing water but feeds a connected perennial stream via groundwater.
Shoreline Protection	N/A
Flood and Stormwater Storage	This wetland is not capable of holding a substantial quality of rainwater which drains quickly into sirb011p.
Water Quality Protection	The feature is a small, sparsely vegetated feature associated with a waterbody.
Groundwater Processes	The feature is a seepage with discharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary trenching, soil storage, and backfilling.	Low
Secondary Impacts (including impacts which are indirectly attributable to the project)	Vegetation removal for construction.	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: 2019-09-21
Applicant/Owner: Enbridge		_ State: <u>WI</u> Sampling Point: <u>wirb031_u</u>
Investigator(s): SAM/MAL		
		ne): <u>Convex</u> Slope (%): <u>26-60%</u>
		0.488967 Datum: WGS84
		NWI classification:
Are climatic / hydrologic conditions on the site typic		
		l Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology		
SUMMARY OF FINDINGS – Attach site	e map showing sampling point location	ons, transects, important features, etc.
	No ✓ No ✓ No ✓ Is the Sampled Area within a Wetland?	Yes No∕
		d Site ID:
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; c		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) Oxidized Rhizospheres on Living Roots (C3) 	Crayfish Burrows (C8)
Sediment Deposits (B2)		
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) Other (Explain in Remarks) 	Shallow Aquitard (D3) Microtopographic Relief (D4)

Surface Water Present?

 Water Table Present?
 Yes _____ No _ ✓ _ Depth (inches): ______

 Saturation Present?
 Yes _____ No _ ✓ _ Depth (inches): ______

 Wetland Hydrology Present?
 Yes _____ No _ ✓ _

 (includes capillary fringe)
 Wetland Hydrology Present?
 Yes _____ No _ ✓ _

 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
 Image: Comparison of the stream gauge in the stream gaug

Remarks:

No primary or secondary indicators of wetland hydrology were observed.

Yes ____ No _✓ Depth (inches): __

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>Tsuga canadensis</u>				
3				Total Number of Dominant Species Across All Strata: 3.0 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.0 (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>0.0</u> x 2 = <u>0.0</u>
1				FAC species X 3 =60.0
2				FACU species <u>155.0</u> x 4 = <u>620.0</u>
3				UPL species 0.0 $x = 0.0$ Column Totals: 175.0 (A) 680.0 (B)
4				
5				Prevalence Index = $B/A = 3.9$
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>Phegopteris connectilis</u>	50.0	Y	<u>FACU</u>	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. <u>Carex pedunculata</u>		N	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Athyrium angustum</u>		N	FAC	1
4. <u>Prunus serotina</u>			FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	75.0	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: <u>30'</u>)				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes No _ ✓
	0.0	= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate		alı		
Canopy of sugar maple, basswood, and		CK.		

Profile Desc	cription: (Describe	to the depth	needed to docur	ment the i	ndicator	or confirm	n the absence of indicators.)	
Depth	Matrix			x Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks	
0-4	<u>7.5YR 4/3</u>	100					<u> </u>	
4-16	7.5YR 5/8	100						
<u> </u>	<u>110111 0/0</u>						E	
		<u> </u>					· ·	
		<u> </u>			·			
		<u> </u>			. <u> </u>			
	oncentration, D=Depl	etion, RM=R	educed Matrix, M	S=Masked	I Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil							Indicators for Problematic Hydric Soils ³ :	
Histosol		_	Polyvalue Belo		(S8) (LRF	R,	2 cm Muck (A10) (LRR K, L, MLRA 1498	
	pipedon (A2) istic (A3)		MLRA 149B Thin Dark Surfa	,		RA 149R)	Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L	
	en Sulfide (A4)		Loamy Mucky				Dark Surface (S7) (LRR K, L)	,)
	d Layers (A5)	_	Loamy Gleyed				Polyvalue Below Surface (S8) (LRR K, L)
	d Below Dark Surface	e (A11)	Depleted Matrix				Thin Dark Surface (S9) (LRR K, L)	
	ark Surface (A12)	_	_ Redox Dark Su	. ,			Iron-Manganese Masses (F12) (LRR K, I	
	/lucky Mineral (S1) Gleyed Matrix (S4)	_	Depleted Dark Redox Depress		-7)		 Piedmont Floodplain Soils (F19) (MLRA Mesic Spodic (TA6) (MLRA 144A, 145, 1 	
	Redox (S5)						Red Parent Material (F21)	40 D)
-	I Matrix (S6)						Very Shallow Dark Surface (TF12)	
Dark Su	rface (S7) (LRR R, N	ILRA 149B)					Other (Explain in Remarks)	
³ Indicators o	f hydrophytic vegetat	ion and woth	and bydrology mus	st ha pros	ont unloca	dicturbod	l or problematic	
	Layer (if observed):	ion and wella	ind hydrology mus	st be prese	ent, unies:	sustuibeu		
Type:								
	ches):						Hydric Soil Present? Yes No	✓
Remarks:								
	(features obs)	erved.						



wirb031_u_N



wirb031_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling Date: 2019-09-27				
Applicant/Owner: Enbridge						
Investigator(s): AGG/MDL						
Landform (hillslope, terrace, etc.): Floodplain						
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.48						
Soil Map Unit Name: <u>Denomie silt Ioam, 30 to 60</u>	•					
Are climatic / hydrologic conditions on the site typical for this time	e of year? Yes <u>√</u> No	(If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology signif	ficantly disturbed? Are "N	ormal Circumstances" present? Yes No				
Are Vegetation, Soil, or Hydrology nature	ally problematic? (If nee	ded, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map sho	owing sampling point lo	cations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes _ ✓ _ No Hydric Soil Present? Yes _ ✓ _ No		Area I? Yes∕_ No				
Wetland Hydrology Present? Yes _ ✓ No _	If yes, optional W	etland Site ID:				
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)				
	tained Leaves (B9)	Drainage Patterns (B10)				
High Water Table (A2) Aquatic						
Saturation (A3) Marl De						
	en Sulfide Odor (C1)					
	e of Reduced Iron (C4)	zospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Reduced Iron (C4) Stunted or Stressed Plants (D1)				
	ron Reduction in Tilled Soils (C					
	ck Surface (C7)					
	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 ((includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aeria		and Hydrology Present? Yes _ ✓ No				
Describe Recorded Data (Stream gauge, monitoring weil, aena	a photos, previous inspections),					
Remarks:						
The wetland hydrology regime is temporal	rilv flooded.					

VEGETATION – Use scientific names of plants.

Sampling Point: wird031e_w

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover		nt Indicator ? Status	Dominance Test worksheet:
1. <u>Betula alleghaniensis</u>				Number of Dominant Species
				That Are OBL, FACW, or FAC: 4.0 (A)
2				Total Number of Dominant Species Across All Strata: 4.0 (B)
3				Species Across All Strata:(B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0</u> (A/B)
5				That Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	5.0	= Total Co	over	OBL species X 1 = X 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species <u>3.0</u> x 2 = <u>6.0</u>
1				FAC species <u>16.0</u> x 3 = <u>48.0</u>
2				FACU species x 4 =0
3				UPL species $0.0 \times 5 = 0.0$
4				Column Totals: <u>94.0</u> (A) <u>129.0</u> (B)
				Prevalence Index = B/A = <u>1.4</u>
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				\sim 2 - Dominance Test is >50%
	0.0	= Total Co	over	\checkmark 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5')				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Carex crinita</u>	30.0	<u> </u>	OBL	data in Remarks or on a separate sheet)
2. <u>Glyceria striata</u>	25.0	Y	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Carex scabrata</u>	20.0	Y	OBL	
4. <u>Osmunda claytoniana</u>	10.0	N	FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Equisetum sylvaticum</u>	2.0	N	FACW	Definitions of Vegetation Strata:
6. <u>Carex intumescens</u>		N	FACW	
7. <u>Symphyotrichum lateriflorum</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 and greater than or equal to 3.28 ft (1 m) tall.
9				
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				Woody vines – All woody vines greater than 3.28 ft in height.
	89.0	= Total Co	over	
Woody Vine Stratum (Plot size: 30')				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes ✓ No
	0.0	= Total Co	over	Present? Yes <u>√</u> No
Remarks: (Include photo numbers here or on a separate				
The feature is a floodplain dominated b	by sedge	es.		

SOIL

Profile Desc	cription: (D	escribe	to the dep	oth needed	to docur	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth (inches)	Color (r	Matrix	%	Color (r		x Features	s Type ¹	Loc ²	Texture	Remarks	
(inches)					10151)	%	Type	LUC		Remarks	
	<u>10YR</u>	4/3	100						VFS		
4-20	<u>7.5YR</u>	4/3	90	<u>7.5YR</u>	5/6	10	_C_	M	VFSL	Distinct redox	
								·			
								<u> </u>			
			·								
								·			
<u> </u>			·					·			
			·					. <u> </u>			
¹ Type: C=C	oncentratior	n, D=Dep	letion, RM	=Reduced N	Matrix, M	S=Masked	I Sand Gra	ains.	² Location	: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:									for Problematic Hydric Soils ³ :	
Histosol		、				w Surface	(S8) (LR	RR,	2 cm Muck (A10) (LRR K, L, MLRA 149B)		
	pipedon (A2 istic (A3))			RA 149B) bark Surfa			LRA 149B)	 Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L) 		
	en Sulfide (A	4)				/lineral (F					
	d Layers (As					Matrix (F2	2)		Polyvalue Below Surface (S8) (LRR K, L)		
	d Below Dar		e (A11)		ed Matrix				Thin Dark Surface (S9) (LRR K, L)		
	ark Surface /lucky Miner					rface (F6) Surface (F			Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B)		
	Gleyed Matri					sions (F8)	,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy F	Redox (S5)								✓ Red Parent Material (F21)		
	Matrix (S6)								 Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 		
Dark Su	Irface (S7) (I	LRR R, N	ILRA 149	B)					Other	(Explain in Remarks)	
³ Indicators o	f hydrophyti	c vegetat	ion and w	etland hydro	ology mus	st be prese	ent, unless	s disturbed	or problematio	C.	
Restrictive				-		-					
Туре:											
Depth (in	ches):								Hydric Soil	Present? Yes <u>√</u> No	
Remarks:									l		
Red pare	ent mate	erial wi	th redo	ox was c	bserv	ed.					



wird031e_w_SE



wird031e_w_SW

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	AGG/MDL			
File #:	Date of visit(s):			
wird031	09/27/2019			
Location:	Ecological Landsca	ape:		
PLSS: 046N-001W-04	Superior Coastal Plain			
Lat: <u>46.489268</u> Long: <u>-90.488873</u>	Watershed:			
	,			
County: Iron Town/City/Village: Gurney town				
	WWI Class:			
	N/A			
204F Denomie silt loam	Wetland Type(s):			
	PEM - sedge meadow			
	, i i i i i i i i i i i i i i i i i i i			
Series not verified. Soils were very fine sand over	Wetland Size:	Wetland Area Impacted		
very fine sandy loam.	0.14	0.14		
	Vegetation:	•		
		Description(s):		
Hydrology:				
The hydrologic regime is temporarily flooded. The feature		•		
is a floodplain located at the junction where a a perennial	chinita, Giycena	Siliala, and Calex Scapiala.		
stream connects with two intermittent tributaries.				
Lat: <u>46.489268</u> Long: <u>-90.488873</u> County: <u>Iron</u> Town/City/Village: <u>Gurney town</u> <u>SITE DESCRIPTION</u> Soils: Mapped Type(s): 204F Denomie silt loam Field Verified: Series not verified. Soils were very fine sand over very fine sandy loam. Hydrology: The hydrologic regime is temporarily flooded. The feature is a floodplain located at the junction where a a perennial	WWI Class: N/A Wetland Type(s): PEM - sedge me Wetland Size: 0.14 Vegetation: Plant Community E The dominate he	Wetland Area Impacted 0.14		

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
2	N	N	Used for educational or scientific purposes
3	N	N	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	NI	N	In or adjacent to RED FLAG areas
	N	N	List:
6	N	N	Supports or provides habitat for endangered, threatened or special concern species
7			In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	N	Y	Wetland and contiguous habitat >10 acres
2	N	N	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>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
5	Ν	Ν	Occurs in a Joint Venture priority township
6	Y	Y	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7		Ň	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
	N	Y	plans
8	Ν	Y	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present > 45 days
10	Y	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	Y	Y	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	Y	Y	Wetland is connected or contiguous with perennial stream or lake
2	Ý	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	Ň	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	Y	Y	Vegetation is inundated in spring
SP			Shoreline Protection
1	Y	Y	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	Y	Y	water levels or high flows - if no, not applicable
3	Y	Y	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	Ň	N	Water flow through wetland is NOT channelized
3	Y	Y	Dense, persistent vegetation
4	Ň	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	Y	Y	Provides substantial storage of storm and floodwater based on previous section
2	N	N	Basin wetland or constricted outlet
3	N	N	Water flow through wetland is NOT channelized
4	Y	Y	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	N	Stormwater or surface water from agricultural land is major hydrology source
8	Y	Y	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
	Y	v	Springs, seeps or indicators of groundwater present
1		Y	
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	Y	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

WQ-4: floodplain wetland associated with a perennial stream and multiple intermittent tributaries GW-1: side hill seepage feeds into streams

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	Birds
	Y	Mammals
	Y	Amphibians
	Y	Amphibians Reptiles

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 🖌		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)
Betula alleghaniensis			PEM	Uncommon
Carex crinita			PEM	Common
Glyceria striata			PEM	Common
Carex scabrata			PEM	Common
Osmunda claytoniana			PEM	Common
Equisetum sylvaticum			PEM	Uncommon
Carex intumescens			PEM	Rare
Symphyotrichum lateriflorum			PEM	Rare

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

The feature is dominated by Carex crinita, Carex scabrata, and Glyceria striata. No invasives 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
					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
	Х		М	U	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
					Removal of herbaceous stratum – mowing,
					grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
					unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
					Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
Х	Х		L		Other (list below):
					Debris

* 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 impacted by debris within the waterbodies resulting from attempts to control the water flow. A utility corridor is present to the east of the feature.

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	Good assemblage of native species
Human Use Values	Steep slopes result in limited accessibility, located on private land
Wildlife Habitat	Missing strata, standing water may provide habitat for amphibians
Fish and Aquatic Life Habitat	Inundation and standing water may provide habitat for aquatic invertebrates, stream features are not deep enough to support many species
Shoreline Protection	Vegetation prevents erosion caused by streams
Flood and Stormwater Storage	Appears that water flows over the feature instead of being held by the feature
Water Quality Protection	See above
Groundwater Processes	Wetland hydrology is fed by features that are seep fed

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>2019-09-27</u>
Applicant/Owner: Enbridge	State: <u>WI</u> Sampling Point: <u>wird031_u</u>
Investigator(s): AGG/MDL	Section, Township, Range: 046N-001W-04
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.48929	Local relief (concave, convex, none): None Slope (%): 3-7% 97 Long: -90.488707 Datum: WGS84 cent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y Are Vegetation, Soil, or Hydrology significantl Are Vegetation, Soil, or Hydrology naturally p	year? Yes <u>√</u> No (If no, explain in Remarks.) tly disturbed? Are "Normal Circumstances" present? Yes <u>√</u> No
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: (Explain alternative procedures here or in a separate rep	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID: port.)
The sample point is located at the bottom of a	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)

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)
Soils (C6) Geomorphic Position (D2)
Shallow Aquitard (D3)
Microtopographic Relief (D4)
FAC-Neutral Test (D5)
Wetland Hydrology Present? Yes No _✓
- Course Market - Course Harbor
ctions), if available:

VEGETATION – Use scientific names of plants.

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: 2.0 (A)
2. <u>Tilia americana</u>				
3				Total Number of Dominant Species Across All Strata: <u>5.0</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>40.0</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cov		$\begin{array}{c} \hline \hline$
Sapling/Shrub Stratum (Plot size: 15')				FACW species $0.0 \times 2 = 0.0$
1. <u>Acer saccharum</u>	10.0	V	FACU	FAC species 7.0 x 3 = 21.0
				FACU species <u>86.0</u> x 4 = <u>344.0</u>
2				UPL species <u>0.0</u> x 5 = <u>0.0</u>
3				Column Totals: <u>93.0</u> (A) <u>365.0</u> (B)
4				Prevalence Index = $B/A = 3.9$
5				
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	10.0	= Total Cov	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5')				3 - Prevalence Index is <3.0 ¹
1. <u>Carex pedunculata</u>	5.0	Y	FAC	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. <u>Clintonia borealis</u>			FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Maianthemum canadense</u>				
4				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6	<u> </u>			_
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	8.0	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: 30')				
1				
2.				
3				Hydrophytic
4.				Vegetation
		= Total Cov		Present? Yes No ✓
Remarks: (Include photo numbers here or on a separate s				
The area is dominated by eastern heml	ock. Th	e groun	d cover	is sparse.
		0		•

	cription: (Describe	to the deptl	h needed to docum	nent the in	ndicator or confirm	the absence of indicato	ors.)
Depth (inches)	Matrix Color (moist)	%	Redox Color (moist)	<u>k Features</u> %		Texture	Remarks
	10YR 2/1						Remarks
0-2		100					
2-4	<u>10YR 4/3</u>	100		<u> </u>		SIL	
4-20	<u>7.5YR 4/4</u>	100				SI	
						,	
		·					
		·					
	. <u> </u>	·					
		·					
	oncentration, D=Dep	letion, RM=F	Reduced Matrix, MS	=Masked	Sand Grains.	² Location: PL=Pore Indicators for Proble	
Hydric Soil Histosol			Polyvalue Below	Surface			(LRR K, L, MLRA 149B)
	pipedon (A2)	-	MLRA 149B)	Junace	(50) (ERR R,		ox (A16) (LRR K, L, R)
Black H	istic (A3)	-			RR R, MLRA 149B)	5 cm Mucky Peat	or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)	-	Loamy Mucky N			Dark Surface (S7)	
	d Layers (A5) d Below Dark Surfac	e (A11) -	Loamy Gleyed N Depleted Matrix			Thin Dark Surface	Surface (S8) (LRR K, L) (L RR K, L)
	ark Surface (A12)		Redox Dark Sur				Masses (F12) (LRR K, L, R)
-	Mucky Mineral (S1)	-	Depleted Dark S		7)		ain Soils (F19) (MLRA 149B)
	Gleyed Matrix (S4)	-	Redox Depressi	ons (F8)			6) (MLRA 144A, 145, 149B)
-	Redox (S5) d Matrix (S6)					Red Parent Materi Very Shallow Dark	
	urface (S7) (LRR R, N	/LRA 149B))			Other (Explain in F	
			land hydrology mus	t be prese	nt, unless disturbed o	or problematic.	
Type:	Layer (if observed):						
	ah a a).					Hydric Soil Present?	Yes No∕
Remarks:	iches):						
	c soil indicato	rs were (observed				
i to nyan			00001700				



wird031_u_E



wird031_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iro	n	Sampling Date: 2019-09-26
Applicant/Owner: Enbridge		State: WI	_ Sampling Point: <u>wird029f_w</u>
Investigator(s): AGG/MDL	Section, Townshi	p, Range: <u>046N-001W-0</u>	3
Landform (hillslope, terrace, etc.): Depression			
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.48	89249	Long: <u>-90.484661</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Kellogg-Allendale-Ashwabay c	complex, 0 to 15 pe	ercent slopes NWI classifica	ation:
Are climatic / hydrologic conditions on the site typical for this tin	ne of year? Yes	No (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology signi	ificantly disturbed?	Are "Normal Circumstances" pr	resent? Yes No
Are Vegetation, Soil, or Hydrology natu	rally problematic?	(If needed, explain any answers	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map she	owing sampling po	int locations, transects,	important features, etc.
	le the Ser	naled Area	

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:
Remarks: (Explain alternative proce The feature is a small sh	dures here or in a separate report.) allow depression located	within forest.

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
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 _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: 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: Remarks:	
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Remarks:	
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Remarks:	
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Remarks:	
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Remarks:	
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Remarks:	
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Remarks:	
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Remarks:	
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: wird029f_w

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover		t Indicator Status	Dominance Test worksheet:
1. <u>Acer saccharinum</u>				Number of Dominant Species
				That Are OBL, FACW, or FAC:(A)
2				Total Number of Dominant
3				Species Across All Strata:(B)
4				Percent of Dominant Species
5		·		That Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
7		<u> </u>		Total % Cover of:Multiply by:
	75.0	= Total Co	over	OBL species <u>90.0</u> x 1 = <u>90.0</u>
Sapling/Shrub Stratum (Plot size: 15')				FACW species <u>75.0</u> x 2 = <u>150.0</u>
1				FAC species x 3 =00
2				FACU species x 4 =00
3				UPL species x 5 =0
				Column Totals: <u>165.0</u> (A) <u>240.0</u> (B)
4				Prevalence Index = B/A =1.5
5				
6				Hydrophytic Vegetation Indicators:
7		- <u> </u>		\checkmark 2 - Dominance Test is >50%
	0.0	= Total Co	over	\checkmark 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5')				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Carex tuckermanii</u>	50.0	Y	OBL	data in Remarks or on a separate sheet)
2. <u>Juncus effusus</u>	25.0	Y	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Calamagrostis canadensis</u>			OBL	1
4. <u>Scirpus cyperinus</u>	5.0	Ν	OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5				
6				Definitions of Vegetation Strata:
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11		- <u> </u>		
12		·		Woody vines – All woody vines greater than 3.28 ft in height.
	90.0	= Total Co	over	
Woody Vine Stratum (Plot size: 30')				
1				
2		<u></u>		
3				Hydrophytic
4				Vegetation
		= Total Co	over	Present? Yes <u>√</u> No
Remarks: (Include photo numbers here or on a separate	sheet.)	-		
The sample plot is dominated by silver	maple.			

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth		Matrix				x Feature	<u>s</u> 1	. 2	_		
(inches)	Color (r		%	<u>Color (</u> n	noist)	%	Type ¹	Loc ²	Texture	Remarks	
	<u>10YR</u>	2/1	100						CL		
4-20	10YR	4/2	90	10YR	5/8	10	С	M	SICL	Prominent redox	
						·	·				
<u> </u>						·	·				
						·	·				
						·	·				
						·	·				
							. <u> </u>				
						·					
						·	·				
						·	·				
¹ Type: C=C		n, D=Dep	etion, RM	Reduced N	/latrix, MS	S=Masked	Sand Gra	ains.		n: PL=Pore Lining, M=Matrix.	
Hydric Soil				5.		o ((00) (1 0			for Problematic Hydric Soils ³ :	
Histosol	I (A1) pipedon (A2)			ilue Belov RA 149B)		(S8) (LRF	К К,	2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)		
	istic (A3))			- /		_RR R. MI	LRA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)	
	en Sulfide (A	4)					1) (LRR K			Surface (S7) (LRR K, L)	
	d Layers (At				-	Matrix (F2	2)		-	alue Below Surface (S8) (LRR K, L)	
	d Below Dar		e (A11)		ed Matrix				 Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) 		
	ark Surface Nucky Miner					rface (F6) Surface (F					
-	Gleyed Matri				Depress		1)				
-	Redox (S5)	(-)			-	(-)			Red Parent Material (F21)		
	d Matrix (S6)								Very Shallow Dark Surface (TF12)		
Dark Su	urface (S7) (I	LRR R, N	ILRA 149	B)					Other	(Explain in Remarks)	
³ Indicators o	of hydrophyti	c venetat	ion and w	atland hydro		t he pres	ant unless	s disturbed (or problemati	c .	
Restrictive					logy mus						
Type:	•										
	iches):								Hydric Soil	Present? Yes <u>√</u> No	
Remarks:									-		
A deplet	ed matri	x was	observ	ed bene	eath a	dark s	urface	laver.			
•								,			



wird029f_w_N



wird029f_w_S

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

WETLAND IDENTIFICATION					
Project name:	Evaluator(s):				
Line 5 Relocation Project	AGG/MDL				
File #:	Date of visit(s):	Date of visit(s):			
wird029	09/26/2019				
Location:	Ecological Landsca	Ecological Landscape:			
PLSS: 046N-001W-03	North Central Forest				
	North Central Polest				
Lat: <u>46.489302</u> Long: <u>-90.484649</u>	Watershed:				
	LS11, Potato River				
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>					
SITE DESCRIPTION					
Soils:	WWI Class:				
Mapped Type(s):	N/A				
713B Kellogg-Allendale-Ashwabay complex, 713C	Wetland Type(s):				
Kellogg-Allendale-Ashwabay complex	PFO - hardwood swamp				
Field Verified:		2 offairip			
Series not verified. Soils were a clay loam over	Wetland Size:	Wetland Area Impacted			
silty clay loam.	0.26	0.26			
	Vegetation:	1			
	Plant Community Description(s):				
Hydrology:	The feature is a hardwood swamp dominated				
The hydrologic regime is seasonally saturated,	by a canopy of Acer saccharinum, with Carex				
with recharge hydrology.					
with recharge rightiology.	tuckermanii and Juncus effusus dominating				
	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	N	Y	Used for recreation (hunting, birding, hiking, etc.). List: Hunting
2	N	N	Used for educational or scientific purposes
3	N	N	Visually or physically accessible to public
4	N	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas
	IN	IN	List:
6	Ν	N	Supports or provides habitat for endangered, threatened or special concern species
7			In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	Ν	N	3 or more strata present (>10% cover)
3	Ν	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	Ν	Y	100 m buffer – natural land cover <a>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
5	N	N	Occurs in a Joint Venture priority township
6	N	N	Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex, etc.)
7	V	X	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
· ·	Y	Y	plans
8	Ν	N	Part of a large habitat block that supports area sensitive species
9	Ν	Y	Ephemeral pond with water present <u>> 45</u> days
10	Y	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	Y	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
2			Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
۷	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 or is adjacent to a stream
2	Y	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	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	Y	Y	Provides substantial storage of storm and floodwater based on previous section
2	Ý	Ý	Basin wetland <u>or</u> constricted outlet
3	Ý	Ý	Water flow through wetland is NOT channelized
4	Ň	N	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	Ň	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
3	N	N Y	Wetland remains saturated for an extended time period with no additional water inputs
-	N		Wetland remains saturated for an extended time period with no additional water inputs Wetland soils are organic
4 5	N	N	Wetland soils are organic Wetland is within a wellhead protection area
Э	N	N	

HU-3: located on private land
WH-4: a road and land use decrease potential natural land cover, but the wetland itself is located in a forest with the only significant disturbance being logging
ST-5: the wetland receives runoff from the adjacent road

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

Observed	Potential	Species/Habitat/Comments
	Y	Mammals
Y	Y	Birds
	Y	Amphibians
	Y	Amphibians Reptile

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 saccharinum			PFO	Abundant
Carex tuckermanii			PFO	Abundant
Juncus effusus			PFO	Common
Calamagrostis canadensis			PFO	Common
Scirpus cyperinus			PFO	Uncommon

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

The canopy is dominated by Acer saccharinum, and the ground layer is dominated by Carex tuckermanii and Juncus effusus. No shrub vegetation is present within the wetland.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells,
					impounded water, increased runoff
Х	Х		Н	С	Point source or stormwater discharge
Х	Х		М	С	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
Х	Х		Н	С	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
					Removal of herbaceous stratum – mowing,
					grading, earthworms, etc.
	X	Х	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)

Logging has occurred on an adjacent tract, affecting the hydrology of the area.

SUMMARY OF FUNCTIONAL VALUES

FUNCTION		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	Good assemblage of native species
Human Use Values	Potential for hunting
Wildlife Habitat	Shallow pools for amphibians and invertebrates
Fish and Aquatic Life Habitat	Habitat when inundated
Shoreline Protection	N/A
Flood and Stormwater Storage	Closed depressional wetland that obtains stormwater runoff
Water Quality Protection	Allows water to infiltrate and not run off
Groundwater Processes	Recharge feature

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary trenching, soil storage, and backfilling.	Low
Secondary Impacts (including impacts which are indirectly attributable to the project)	Vegetation removal for construction.	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: Iro	n	_ Sampling Date: 2019-09-26		
Applicant/Owner: Enbridge					
Investigator(s): AGG/MDL Section, Township, Range: 046N-001W-03					
Landform (hillslope, terrace, etc.): <u>Rise</u> Local relief (concave, convex, none): <u>Convex</u> Slope (%): <u>0-2</u>					
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.489243</u> Long: <u>-90.484943</u> Datum: <u>WGS84</u>					
Soil Map Unit Name: Kellogg-Allendale-Ashwabay	complex 2 to 6 pe	rcent slopes NWI classif	ication:		
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sig					
Are Vegetation, Soil, or Hydrology na					
SUMMARY OF FINDINGS – Attach site map s	howing sampling po	int locations, transect	s, important features, etc.		
Hydrophytic Vegetation Present? Yes No		npled Area			
Hydric Soil Present? Yes No	✓ within a V	/etland? Yes	No		
Wetland Hydrology Present? Yes No		onal Wetland Site ID:			
Remarks: (Explain alternative procedures here or in a sepa	rate report.)	with a canopy domin	acted by auger mente		
The sample point is located within mesic			lated by sugar maple.		
The sapling stratum is dominated by iror		lei is sparse.			
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary India	cators (minimum of two required)		
Primary Indicators (minimum of one is required; check all th	at apply)	Surface So	il Cracks (B6)		
Surface Water (A1) Water	-Stained Leaves (B9)	Drainage P	atterns (B10)		
High Water Table (A2) Aquat	ic Fauna (B13)	Moss Trim	Lines (B16)		
Saturation (A3) Marl I	Deposits (B15)	Dry-Seasor	n Water Table (C2)		
Water Marks (B1) Hydro	gen Sulfide Odor (C1)	Crayfish Bu	irrows (C8)		
Sediment Deposits (B2) Oxidiz	ed Rhizospheres on Living	Roots (C3) Saturation	Visible on Aerial Imagery (C9)		
Drift Deposits (B3) Prese	nce of Reduced Iron (C4)	Stunted or	Stressed Plants (D1)		
Algal Mat or Crust (B4) Recei	nt Iron Reduction in Tilled S	oils (C6) Geomorphi			
Iron Deposits (B5) Thin I	/luck Surface (C7)	Shallow Aq	uitard (D3)		
Inundation Visible on Aerial Imagery (B7) Other	(Explain in Remarks)	Microtopog	raphic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)		FAC-Neutra	al Test (D5)		
Field Observations:					
Surface Water Present? Yes No _ ✓ Dept					
Water Table Present? Yes No _ ✓ Dept	h (inches):				
Saturation Present? Yes No _ ✓ Dept	h (inches):	Wetland Hydrology Prese	ent? Yes No _✓		
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, as	erial photos, previous inspe	tions), if available:			
Remarks: No wetland hydrology indicators were of	sorvod				
1					

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				
3				Total Number of Dominant Species Across All Strata: 3.0 (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3333333333333333333333333333333333
5				()
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	/5.0	= Total Cov	/er	OBL species $0.0 \times 1 = 0.0$
Sapling/Shrub Stratum (Plot size: 15')			_	FACW species $0.0 \times 2 = 0.0$
1. <u>Ostrya virginiana</u>				FAC species 20.0 x 3 = 60.0 FACU species 150.0 x 4 = 600.0
2. <u>Betula alleghaniensis</u>	10.0	N	FAC	UPL species $0.0 \times 5 = 0.0$
3				Column Totals: 170.0 (A) 660.0 (B)
4				
5				Prevalence Index = B/A =3.9
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov		2 - Dominance Test is >50%
Herb Stratum (Plot size:5')				3 - Prevalence Index is ≤3.0 ¹
1. <u>Carex pedunculata</u>	10.0	V	FAC	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
2				Problematic Hydrophytic Vegetation ¹ (Explain)
3				¹ Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8			<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
	10.0	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: <u>30'</u>)				
1				
2				
3				Hydrophytic
4				Vegetation
		= Total Cov		Present? Yes No ✓
Remarks: (Include photo numbers here or on a separate s				
The sample plot is located within mesic	hardwo	ood fore	st domi	nated by sugar maple.

	ription: (Describe	to the depth	needed to docun	nent the i	ndicator or confirm	the absence of indic	ators.)	
Depth (inches)	Matrix Color (moist)	%	Redox Color (moist)	x Features %	Type ¹ Loc ²	Texture	Remarks	
<u>0-10</u>	<u>10YR 4/3</u>	100		/0		SI	<u>Nemarks</u>	
						 SI		
10-20	<u>101K 4/4</u>	100						
		<u> </u>						
				·				
¹ Type: C=Ce	oncentration, D=Depl	letion, RM=R	educed Matrix, MS	S=Masked	Sand Grains.	² Location: PL=Po	ore Lining, M=Matr	rix.
Hydric Soil						Indicators for Pro		
Histosol			Polyvalue Below		(S8) (LRR R,		10) (LRR K, L, MLI	
	oipedon (A2) stic (A3)		MLRA 149B) Thin Dark Surfa		.RR R, MLRA 149B)		Redox (A16) (LRR eat or Peat (S3) (L	,
	en Sulfide (A4)		Loamy Mucky M				S7) (LRR K, L)	, _,,
	d Layers (A5)		Loamy Gleyed I)		ow Surface (S8) (L	
	d Below Dark Surface ark Surface (A12)	e (A11)	Depleted Matrix Redox Dark Sul				ace (S9) (LRR K, I se Masses (F12) (I	
	lucky Mineral (S1)		_ Depleted Dark Sul		7)	-	dplain Soils (F12) (
	Gleyed Matrix (S4)		_ Redox Depress		.,		(TA6) (MLRA 144	
	Redox (S5)					Red Parent Ma		
	l Matrix (S6) rface (S7) (LRR R, N					Very Shallow I Other (Explain	Dark Surface (TF12	2)
Dark Su		ILKA 149D)					III Remarks)	
			and hydrology mus	t be prese	ent, unless disturbed o	or problematic.		
	Layer (if observed):							
Туре:						Undria Sail Drasan	42 Vaa	No (
	ches):					Hydric Soil Presen		NO <u> </u>
Remarks: No hydrid	c soil indicator	s were o	bserved					
i to riyan		0 1010 0						



wird029_u_N



wird029_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron		Sampling Date: 2019-09-26
Applicant/Owner: Enbridge		State:	Sampling Point: <u>wird030f_w</u>
Investigator(s): AGG/MDL			
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, no	ne): <u>Concave</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Morthcentral Forests Lat:	46.489842 Long: -90	0.487068	Datum: <u>WGS84</u>
Soil Map Unit Name: Kellogg-Allendale-Ashwa			
Are climatic / hydrologic conditions on the site typical for		-	
Are Vegetation, Soil, or Hydrology			
Are Vegetation, Soil, or Hydrology			
SUMMARY OF FINDINGS – Attach site m	ap showing sampling point location	ons, transects	, important features, etc.
	No No If yes, optional Wetland a separate report.)	d Site ID:	
Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is required: check	k all that apply)	Surface Soil	
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) Aquatic Fauna (B13) Marl Deposits (B15) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C3)	Drainage Pa Moss Trim Li Dry-Season Crayfish Bur	tterns (B10) ines (B16) Water Table (C2)
	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7)	Stunted or S Geomorphic	

Iron Deposits (B5)		_ Thin Muck Surface (C7)	Shallow Aquitard (D3)		
Inundation Visible on A	erial Imagery (B7)	Other (Explain in Remarks)	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):			
Saturation Present? (includes capillary fringe)	Yes No _∡	_ Depth (inches):	Wetland Hydrology Present? Yes _ ✓ No _		
		well, aerial photos, previous inspec			
Remarks: The wetland hydrol	ogy regime is se	easonally saturated.			

VEGETATION – Use scientific names of plants.

Sampling Point: wird030f_w

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover		nt Indicator ? Status	Dominance Test worksheet:
1. <u>Acer saccharinum</u>				Number of Dominant Species
2. <u>Acer saccharum</u>				That Are OBL, FACW, or FAC:(A)
				Total Number of Dominant Species Across All Strata: <u>4.0</u> (B)
3				
4				Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	65.0	= Total Co	over	OBL species 55.0 x 1 = 55.0 FACW species 95.0 x 2 = 190.0
Sapling/Shrub Stratum (Plot size: 15')				FAC species $0.0 \times 3 = 0.0$
1				FACU species $15.0 \times 4 = 60.0$
2				UPL species <u>0.0</u> x 5 = <u>0.0</u>
3				Column Totals: <u>165.0</u> (A) <u>305.0</u> (B)
4				Prevalence Index = B/A =1.8
5				
6		·		Hydrophytic Vegetation Indicators:
7		·		1 - Rapid Test for Hydrophytic Vegetation
	0.0	= Total Co	over	\checkmark 2 - Dominance Test is >50% \checkmark 3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5')				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Calamagrostis canadensis</u>	50.0	Y	OBL	data in Remarks or on a separate sheet)
2. <u>Solidago gigantea</u>	25.0	<u> </u>	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Carex intumescens</u>	10.0	N	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Onoclea sensibilis</u>	5.0	N	FACW	be present, unless disturbed or problematic.
5. <u>Carex crinita</u>	5.0	N	OBL	Definitions of Vegetation Strata:
6. Osmundastrum cinnamomeum	5.0	N	FACW	
7		<u> </u>		Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8		<u> </u>		Sapling/shrub – Woody plants less than 3 in. DBH
9		<u> </u>		and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
		= Total Co	over	height.
Woody Vine Stratum (Plot size: 30')				
1				
2				
3				Hydrophytic
4				Vegetation
		= Total Co	over	Present? Yes <u>√</u> No
Remarks: (Include photo numbers here or on a separate	sheet.)			
The sample plot is dominated by silver	maple a	and Ca	nada blu	ejoint.

SOIL

			Still Heeded					the absence	of indicators.)		
Depth	Matrix			Redo	x Feature	s					
(inches)	Color (moist)	%	Color (n		%	Type ¹	Loc ²	Texture	Remarks		
0-4	7.5YR 3/1	100						SICL			
					- <u> </u>						
4-20	<u>7.5YR 4/3</u>	90	<u>10YR</u>	2/1	10	<u>C</u>	M	SIL	Mn		
·						·					
						·					
						·					
						·					
1								2.			
	oncentration, D=Depl	etion, RN	=Reduced N	/atrix, M	s=Masked	Sand Gra	ains.		n: PL=Pore Lining, M=Mat		
Hydric Soil									for Problematic Hydric S		
Histosol						(S8) (LRF	RR,		Muck (A10) (LRR K, L, ML		
	pipedon (A2)			RA 149B)					Coast Prairie Redox (A16) (LRR K, L, R)		
	istic (A3)						_RA 149B)		Mucky Peat or Peat (S3) (L	.RR K, L, R)	
	en Sulfide (A4)			-		1) (LRR K	, L)		Surface (S7) (LRR K, L)		
	d Layers (A5)		-	-	Matrix (F2	2)		-	alue Below Surface (S8) (L		
Deplete	d Below Dark Surface	e (A11)	Deplet	ed Matrix	(F3)			Thin Dark Surface (S9) (LRR K, L)			
Thick Da	ark Surface (A12)		Redox	Dark Su	rface (F6)			Iron-M	langanese Masses (F12) (LRR K, L, R)	
Sandy N	/lucky Mineral (S1)		Deplet	ed Dark	Surface (F	7)		Piedm	ont Floodplain Soils (F19)	(MLRA 149B)	
Sandy C	Eleyed Matrix (S4)		Redox	Depress	ions (F8)			Mesic	Spodic (TA6) (MLRA 144	A, 145, 149B)	
Sandy F	Redox (S5)							Red Parent Material (F21)			
Stripped	I Matrix (S6)							Very Shallow Dark Surface (TF12)			
Dark Su	rface (S7) (LRR R, N	ILRA 149	B)					Other (Explain in Remarks)			
³ Indicators o	f hydrophytic vegetat	ion and w	etland hydro	logy mus	st be prese	ent, unless	disturbed	or problemati	С.		
Restrictive	Layer (if observed):										
	Layer (if observed):										
Туре:								Undria Cai	Present? Yes /	No	
Туре:	Layer (if observed):							Hydric Soi	I Present? Yes _√	No	
Type: Depth (in Remarks:	ches):								I Present? Yes <u>√</u>	No	
Type: Depth (in Remarks:	ches):			conce	entratic	ons was	s observ		I Present? Yes _ ✓	No	
Type: Depth (in Remarks:				conce	entratic	ons was	s observ		I Present? Yes <u>√</u>	No	
Type: Depth (in Remarks:	ches):			conce	entratic	ons was	s observ		I Present? Yes <u>√</u>	No	
Type: Depth (in Remarks:	ches):			conce	entratic	ons was	s observ		I Present? Yes <u>√</u>	No	
Type: Depth (in Remarks:	ches):			conce	entratio	ons was	s observ		I Present? Yes _ ✓	No	
Type: Depth (in Remarks:	ches):			conce	entratio	ons was	s observ		I Present? Yes _ ✓	No	
Type: Depth (in Remarks:	ches):			conce	entratio	ons was	s observ		I Present? Yes _ ✓	No	
Type: Depth (in Remarks:	ches):			conce	entratio	ons was	s observ		I Present? Yes _ ✓	No	
Type: Depth (in Remarks:	ches):			conce	entratio	ons was	s observ		I Present? Yes <u>√</u>	No	
Type: Depth (in Remarks:	ches):			conce	entratio	ons was	s observ		I Present? Yes _ ✓	No	
Type: Depth (in Remarks:	ches):			conce	entratio	ons was	s observ		I Present? Yes _ ✓	No	
Type: Depth (in Remarks:	ches):			conce	entratio	ons was	s observ		I Present? Yes _ ✓	No	
Type: Depth (in Remarks:	ches):			conce	entratio	ons was	s observ		I Present? Yes _ ✓	No	
Type: Depth (in Remarks:	ches):			conce	entratio	ons was	s observ		I Present? Yes _ ✓	No	
Type: Depth (in Remarks:	ches):			CONC	entratio	ons was	s observ		I Present? Yes _ ✓	No	
Type: Depth (in Remarks:	ches):			CONC	entratio	ons was	s observ		I Present? Yes _ ✓ _	No	
Type: Depth (in Remarks:	ches):			CONCE	entratio	ons was	s observ		I Present? Yes _ ✓ _	No	
Type: Depth (in Remarks:	ches):			CONCE	entratio	ons was	s observ		I Present? Yes _ ✓ _	No	



wird030f_w_E



wird030f_w_W

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

WETLAND IDENTIFICATION			
Project name: Line 5 Relocation Project	Evaluator(s): AGG/MDL		
File #: wird030	Date of visit(s): 09/26/2019		
Location: PLSS: <u>046N-001W-03</u>	Ecological Landsca Superior Coastal Plain	ape:	
Lat: <u>46.489848</u> Long: <u>-90.487116</u>	Watershed: LS11 - Potato River		
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
713C Kellogg-Allendale-Ashwabay complex	Wetland Type(s): PFO - Hardwood swamp		
Field Verified:		1	
Series not verified. The soils consist of a silty clay loam over a silt loam.	Wetland Size: 0.03	Wetland Area Impacted 0.03	
	Vegetation: Plant Community D	Description(s):	
Hydrology: The hydrologic regime is seasonally saturated. The feature is the headwater of an intermittent stream.	The wetland is a PFO hardwood swamp dominated by Acer saccharinum and Calamagrostis canadensis.		

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				
2	N	N	Used for educational or scientific purposes				
3	N	N	Visually or physically accessible to public				
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation				
5	N	N	In or adjacent to RED FLAG areas				
	IN	IN	List:				
6	N	N	Supports or provides habitat for endangered, threatened or special concern species				
7			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 <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.)				
7	NI	v	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other				
	N	Y	plans				
8	N	N	Part of a large habitat block that supports area sensitive species				
9	N	Y	Ephemeral pond with water present <u>> 45</u> 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	Ν	N	Wetland is connected or contiguous with perennial stream or lake				
2	Y	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	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	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	Y	Y	Dense, persistent vegetation				
4	Ν	Ν	Evidence of flashy hydrology				
5	Ν	Ν	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 <u>or</u> constricted outlet				
3	Ý	Ý	Water flow through wetland is NOT channelized				
4	Ý	Ý	Vegetated wetland associated with a lake or stream				
5	Ň	Ň	Dense, persistent vegetation				
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth				
7	N	N	Stormwater or surface water from agricultural land is major hydrology source				
8	Y	Y	Discharge to surface water				
9	Ň	N	Natural land cover in 100m buffer area < 50%				
GW			Groundwater Processes				
1	N	N	Springs, seeps or indicators of groundwater present				
2	Y	Y	Location near a groundwater divide or a headwater wetland				
3		Y Y	Wetland remains saturated for an extended time period with no additional water inputs				
	N		Wetland soils are organic				
4 5	N	N	Wetland soils are organic Wetland is within a wellhead protection area				
Э	N	N					

HU-3: located on private land GW-2: headwater of intermittent stream to the west of 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
	Y	Birds
	Y	Amphibians
	Y	Amphibians Reptiles

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)
Acer saccharinum			PFO	Abundant
Acer saccharum			PFO	Common
Calamagrostis canadensis			PFO	Abundant
Solidago gigantea			PFO	Common
Carex intumescens			PFO	Common
Onoclea sensibilis			PFO	Uncommon
Carex crinita			PFO	Uncommon
Osmundastrum cinnamomeum			PFO	Uncommon

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

The feature is dominated by Acer saccharinum with a good assemblage 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
	Х		М	С	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
					Removal of herbaceous stratum – mowing,
					grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
					unprescribed fire
	Х		L	С	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
	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)

The wetland is located within a forested area. A utility corridor is present within the buffer area to the west of the feature, and an unpaved human trail is present to the south.

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	Good assemblage of native species, missing shrub strata
Human Use Values	Private land with limited recreational value
Wildlife Habitat	Missing strata, no wildlife observed
Fish and Aquatic Life Habitat	Provides habitat for amphibians in the spring
Shoreline Protection	N/A
Flood and Stormwater Storage	Shallow basin, wetland feeds an intermittent stream
Water Quality Protection	Depression that allows a limited amount of water to infiltrate, the remainder enters a stream as runoff
Groundwater Processes	Discharge feature

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary trenching, soil storage, and backfilling.	Low
Secondary Impacts (including impacts which are indirectly attributable to the project)	Vegetation removal for construction.	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	Samp	bling Date: <u>2019-09-26</u>
Applicant/Owner: Enbridge		State: <u>WI</u> Sar	mpling Point: <u>wird030 u</u>
Investigator(s): AGG/MDL	Section, Township, Range: 04	<u>6N-001W-03</u>	
	Local relief (concave, convex, none		
Subregion (LRR or MLRA): Morthcentral Forests Lat: 46.490	029 Long: <u>-90.</u>	487189	Datum: <u>WGS84</u>
Soil Map Unit Name: Kellogg-Allendale-Ashwabay com	plex, 0 to 15 percent slope	S NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes ✓ No (If	no, explain in Remarks	s.)
Are Vegetation, Soil, or Hydrology significar	ntly disturbed? Are "Normal C	Circumstances" present	? Yes _ ✔ No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, exp	plain any answers in Re	emarks.)
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point location	is, transects, impo	ortant 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 <u> </u>	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedu	ares here or in a	a separate report.)	d forest dominated by FAC and FACU species.
The sample point is locate	d within m	Nesic hardwood	

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 _ ✓ Depth (inches):			
Water Table Present? Yes No _ ✓ Depth (inches):			
Saturation Present? Yes <u>No</u> <u>✓</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:		
	ctions), if available:		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	ctions), if available:		
	ctions), if available:		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	ctions), if available:		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	ctions), if available:		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	ctions), if available:		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	ctions), if available:		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	ctions), if available:		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	ctions), if available:		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	ctions), if available:		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	ctions), if available:		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	ctions), if available:		

VEGETATION – Use scientific names of plants.

Sampling Point: wird030 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. <u>Prunus nigra</u>				
3				Total Number of Dominant Species Across All Strata:4(B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.00</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	75.0	= Total Cov	ver	OBL species 0 x 1 = 0 FACW species 0 x 2 = 0
Sapling/Shrub Stratum (Plot size: 15')				FAC species $60 \times 3 = 180$
1				FACU species X 4 = 380
2				UPL species x 5 =
3				Column Totals: <u>155</u> (A) <u>560</u> (B)
4				Prevalence Index = $B/A = 3.61$
5				
6				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
	0.0	= Total Cov	ver	$3 - Prevalence Index is \leq 3.0^{1}$
Herb Stratum (Plot size: 5')				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Osmunda claytoniana</u>				data in Remarks or on a separate sheet)
2. <u>Carex pedunculata</u>	20.0	<u> </u>	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Brachyelytrum erectum</u>	20.0	Y	FACU	¹ Indicators of hydric soil and wetland hydrology must
4. Dryopteris intermedia	15.0	N	FAC	be present, unless disturbed or problematic.
5. <u>Carex arctata</u>	10.0	N	NI	Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
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.
	90	= Total Cov	ver	l
Woody Vine Stratum (Plot size: <u>30'</u>)				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes <u>No √</u>
	0.0	= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			
The sample plot is located within mesic	: nardwo	bod fore	st domi	nated by maples.
<u></u>				

Profile Dese	cription: (Describe	to the depth	needed to docu	ment the i	indicator o	r confirm	the absence of indi	cators.)	
Depth	Matrix			x Feature	S1				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	5
0-6	<u>10YR 3/2</u>	100					SIL		
6-20	10YR 4/6	100					SI		
		· ·					<u> </u>		
		· · · · · · · · · · · · · · · · · · ·			·				
		·			·				
		· · · · · · · · · · · · · · · · · · ·			·				
		· ·							
1									
Type: C=C Hydric Soil	oncentration, D=Dep	letion, RM=R	educed Matrix, M	S=Masked	Sand Grai	ns.	² Location: PL=P Indicators for Pro		
-			Dobucchus Dolo			P		•	
— Histosol Histic F	pipedon (A2)		Polyvalue Belo MLRA 149B		(30) (LKK	к,		10) (LRR K, L, N Redox (A16) (LR	
	istic (A3)		_ Thin Dark Surfa	,	_RR R. MLI	RA 149B)		eat or Peat (S3)	
	en Sulfide (A4)		Loamy Mucky					(S7) (LRR K, L)	
	d Layers (A5)		Loamy Gleyed		2)			ow Surface (S8)	
	d Below Dark Surfac	e (A11)	_ Depleted Matrix					face (S9) (LRR I	
	ark Surface (A12)		_ Redox Dark Su	. ,			-	se Masses (F12)	
	Aucky Mineral (S1)		_ Depleted Dark		-7)				9) (MLRA 149B)
	Gleyed Matrix (S4) Redox (S5)		_ Redox Depress	SIONS (FO)			Red Parent M		4A, 145, 149B)
	d Matrix (S6)							Dark Surface (TF	=12)
	urface (S7) (LRR R, N	//LRA 149B)					Other (Explain		/
		,							
	f hydrophytic vegeta		and hydrology mus	st be prese	ent, unless	disturbed	or problematic.		
Restrictive	Layer (if observed):								
Туре:			_						
Depth (in	ches):						Hydric Soil Presen	t? Yes	No∕
Remarks:							I		
No hydri	c soil indicator	rs were c	bserved.						



wird030_u_E



wird030_u_N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

•	City/County: Iron Sampling Date: 2019-09-27		
3	State: WI Sampling Point: wird034e_w		
	Section, Township, Range: 046N-001W-03		
	ocal relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>		
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.49076	58 Long: <u>-90.487761</u> Datum: <u>WGS84</u>		
Soil Map Unit Name: Kellogg-Allendale-Ashwabay comp	vlex, 2 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.)		
	v disturbed? Are "Normal Circumstances" present? Yes No		
Are Vegetation, Soil, or Hydrology naturally pr			
	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 repo			
HYDROLOGY			
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)			
High Water Table (A2) Aquatic Fauna			
Saturation (A3)			
Water Marks (B1) Hydrogen Sulf	ide Odor (C1) Crayfish Burrows (C8)		
Sediment Deposits (B2) Oxidized Rhize	ospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3) Presence of Re			
	uction in Tilled Soils (C6) Geomorphic Position (D2)		
Iron Deposits (B5) Thin Muck Sur			
Inundation Visible on Aerial Imagery (B7) Other (Explain			
Sparsely Vegetated Concave Surface (B8) Field Observations:	FAC-Neutral Test (D5)		
Surface Water Present? Yes No Depth (inches	.).		
Water Table Present? Yes No ✓ Depth (inclusion)			
Saturation Present? Yes No ✓ Depth (inclusion)			
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:		
Remarks:			
The wetland appears to be inundated for peric	ds throughout the growing season.		

VEGETATION – Use scientific names of plants.

Sampling Point: wird034e_w

Tree Stratum (Plot size: <u>30'</u>)	Absolute		nt Indicator ? Status	Dominance Test worksheet:
,,,				Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>2.0</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>100.0</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0.0			OBL species 15.0 x 1 = 15.0
Septing/Shrub Stratum (Distaire) 15'		- 1010100	0001	FACW species $30.0 \times 2 = 60.0$
Sapling/Shrub Stratum (Plot size: 15')				FAC species $20.0 \times 3 = 60.0$
1				FACU species $0.0 \times 4 = 0.0$
2				UPL species $0.0 \times 5 = 0.0$
3				Column Totals: 65.0 (A) 135.0 (B)
4				
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
	0.0	= Total Co	over	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5')				4 - Morphological Adaptations ¹ (Provide supporting
1. Osmundastrum cinnamomeum	25.0	<u> </u>	FACW	data in Remarks or on a separate sheet)
2. <u>Osmunda claytoniana</u>	20.0	Y	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Glyceria grandis</u>	10.0	N	OBL	1
4. <u>Onoclea sensibilis</u>			FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Carex crinita</u>			OBL	
				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	65.0	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30')				
1				
2				
3				Hydrophytic Vegetation
4				Present? Yes <u>√</u> No
		= Total Co	over	
Remarks: (Include photo numbers here or on a separate		n		
The feature is a wet meadow dominate	a by ler	ns.		

Profile Desc	cription: (Describe t	o the der	oth needed	to docun	nent the i	ndicator	or confirm	the absence	e of indicators.)	
Depth	Matrix				x Features					
(inches)	Color (moist)	%	Color (r		%	Type ¹	Loc ²	Texture	Remarks	
0-4	<u>10YR 3/1</u>	95	<u>10YR</u>	5/6	5	C	M	SIL	Prominent redox	
4-20	<u>10YR 5/1</u>	90	<u>10YR</u>	5/6	10	C	M	SIL	Prominent redox	
					·					
					·					
					·					
					·					
	oncentration, D=Deple	etion, RM	=Reduced N	Matrix, MS	S=Masked	Sand Gra	ains.		n: PL=Pore Lining, M=Matrix.	
Hydric Soil			Dohar		v Surfago			Indicators for Problematic Hydric Soils ³ :		
Histosol	oipedon (A2)		-	RA 149B)	w Surface	(30) (LRI	х к,		2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)	
	istic (A3)			,		RR R, MI	LRA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)	
	en Sulfide (A4)				/lineral (F1				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				Thin Dark Surface (S9) (LRR K, L)		
	ark Surface (A12)				rface (F6)				Manganese Masses (F12) (LRR K, L, R)	
-	Aucky Mineral (S1)			ed Dark 3 Depress	Surface (F	()		 Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) 		
	Gleyed Matrix (S4) Redox (S5)			Depiess	10115 (1-0)					
	I Matrix (S6)							Very Shallow Dark Surface (TF12)		
	rface (S7) (LRR R, M	LRA 149	B)					Other (Explain in Remarks)		
	f hydrophytic vegetati	on and w	etland hydro	ology mus	t be prese	nt, unless	s disturbed	or problemati	с.	
Restrictive	Layer (if observed):									
	ches):							Hydric Soi	I Present? Yes _ ✓ No	
Remarks:										
Redox o	bserved throug	ghout t	he profil	e.						
		-								



wird034e_w_E



wird034e_w_W

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	AGG/MDL			
File #:	Date of visit(s):			
wird034	09/27/2019			
Location:	Ecological Landsca	ape:		
PLSS: 046N-001W-04, 046N-001W-03	Superior Coastal Plain			
Lat: <u>46.490968</u> Long: <u>-90.487799</u>	Watershed: LS11. Potato River			
County: Iron Town/City/Village: Gurney town	- ,			
County. <u>non</u> rown/City/village. Ourney town				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
713B Kellogg-Allendale-Ashwabay complex	Wetland Type(s):			
rob Konogg / mondale / konwabay complex	PEM - Fresh (wet) meadow			
Field Verified:				
Series not verified. Soils were silt loam	Wetland Size:	Wetland Area Impacted		
throughout the profile.	0.11	0.11		
	Vegetation:			
	Plant Community Description(s):			
Hydrology:	The herbaceous vegetation is dominated by			
The hydrologic regime is seasonally flooded and	Osmundastrum cinnamomeum and Osmunda			
appears to be inundated for periods throughout	claytoniana.			
the growing season.				

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
2	N	N	Used for educational or scientific purposes
3	N	Y	Visually or physically accessible to public
4	N	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas
	IN	IN	List:
6	N	N	Supports or provides habitat for endangered, threatened or special concern species
7			In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	N	Y	Wetland and contiguous habitat >10 acres
2	N	N	3 or more strata present (>10% cover)
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	N	Y	100 m buffer – natural land cover <u>></u> 50%(south) 75% (north) intact
5	N	N	Occurs in a Joint Venture priority township
6	N	N	Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex, etc.)
7	NI	NI	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
· ·	N	N	plans
8	N	N	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present <u>> 45</u> 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	Ν	Wetland is connected or contiguous with perennial stream or lake
2	N	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	Ν	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	Y	Vegetation is inundated in spring
SP			Shoreline Protection
1	N	Ν	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	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	Y	Y	Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Y	Y	Water flow through wetland is NOT channelized
3	Y	Ý	Dense, persistent vegetation
4	Ň	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
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	Ý	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	Y	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-1: located within a forest canopy opening WH-10, FA-2: standing water may be present after precipitation events to support some aquatic 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	Amphibians
	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

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)
Osmundastrum cinnamomeum			PEM	Common
Osmunda claytoniana			PEM	Common
Glyceria grandis			PEM	Common
Onoclea sensibilis			PEM	Uncommon
Carex crinita			PEM	Uncommon

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

The feature is dominated by various ferns.

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
	Х		М	С	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
					Removal of herbaceous stratum – mowing,
					grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
					unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
					Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is located in an opening in the forest canopy adjacent to a utility corridor. The corridor is present to the east of the feature within the buffer area.

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	Low diversity of species, not all strata present
Human Use Values	Private land with no recreational value
Wildlife Habitat	Missing strata, no wildlife observed
Fish and Aquatic Life Habitat	Potentially has standing water in the spring
Shoreline Protection	N/A
Flood and Stormwater Storage	Shallow basin
Water Quality Protection	Closed depression that allows a limited amount of water to infiltrate
Groundwater Processes	Recharge feature

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron		_ Sampling Date: 2019-09-27
Applicant/Owner: Enbridge		State: WI	Sampling Point: <u>wird034_u</u>
Investigator(s): AGG/MDL			
Landform (hillslope, terrace, etc.): Head slope			
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.49</u>	0668 Lo	ong: <u>-90.487580</u>	Datum: WGS84
Soil Map Unit Name: Kellogg-Allendale-Ashwabay c			
Are climatic / hydrologic conditions on the site typical for this tim	•	•	
Are Vegetation, Soil, or Hydrology signif	-		
Are Vegetation, Soil, or Hydrology natur			
SUMMARY OF FINDINGS – Attach site map sho	wing sampling point	locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes No	✓ Is the Sample		
Hydric Soil Present? Yes No		and? Yes	No
Wetland Hydrology Present? Yes No		Wetland Site ID:	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that a		Surface So	
	tained Leaves (B9)	Drainage P	
High Water Table (A2) Aquatic		Moss Trim	
Saturation (A3) Marl Dep			Water Table (C2)
	en Sulfide Odor (C1)	Crayfish Bu	
	I Rhizospheres on Living Roc e of Reduced Iron (C4)		√isible on Aerial Imagery (C9) Stressed Plants (D1)
	ron Reduction in Tilled Soils		c Position (D2)
	ck Surface (C7)	Shallow Aq	
	Explain in Remarks)		raphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	,	FAC-Neutra	
Field Observations:			. ,
Surface Water Present? Yes No _ ✓ Depth (inches):		
Water Table Present? Yes No _ ✓ Depth (inches):		

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

Yes ____ No _ ✓ Depth (inches): _____

Remarks:

Saturation Present?

No wetland hydrology indicators were observed.

No

Wetland Hydrology Present? Yes ____

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominan Species?	t Indicator Status	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: 2.0 (B)
3				Species Across All Strata:(B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 (A/B)
5			·	That Are OBL, FACW, or FAC: 50.0 (A/B)
6			<u> </u>	Prevalence Index worksheet:
7			·	Total % Cover of: Multiply by:
	80.0	= Total Co	ver	OBL species x 1 =00
Sapling/Shrub Stratum (Plot size: 15')				FACW species <u>0.0</u> x 2 = <u>0.0</u>
1				FAC species X 3 = 30.0
2				FACU species <u>80.0</u> x 4 = <u>320.0</u>
3				UPL species x 5 =0
4				Column Totals: <u>90.0</u> (A) <u>350.0</u> (B)
				Prevalence Index = $B/A = 3.9$
5				
6			·	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
7			·	2 - Dominance Test is >50%
	0.0	= Total Co	ver	$3 - Prevalence Index is \leq 3.0^{1}$
Herb Stratum (Plot size: 5')				4 - Morphological Adaptations ¹ (Provide supporting
1. Matteuccia struthiopteris	10.0	Y	FAC	data in Remarks or on a separate sheet)
2				Problematic Hydrophytic Vegetation ¹ (Explain)
3				1
4				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5				
6				Definitions of Vegetation Strata:
				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10			·	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11			·	of size, and woody plants less than 5.26 it tail.
12				Woody vines – All woody vines greater than 3.28 ft in height.
	10.0	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30'</u>)				
1			<u> </u>	
2				
3				Hydrophytic
4				Vegetation
··		= Total Co		Present? Yes No ✓
Remarks: (Include photo numbers here or on a separate		= 10(a) 00	VCI	
Vegetation is disturbed. The sample po		cated cl	ose to a	a maintained powerline corridor.

Profile Dese	cription: (Describe t	o the depth	needed to docur	ment the i	ndicator	or confirm	n the absence of indicate	ors.)
Depth	Matrix		Redo	x Features	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
	<u>10YR 3/2</u>	100					SI	
3-12	<u>10YR 3/3</u>	100					SI	
12-20	<u>7.5YR 4/4</u>	100					SI	
							·	
<u> </u>								
<u></u>								
	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	S=Masked	I Sand Gra	ains.	² Location: PL=Pore Indicators for Proble	
Hydric Soil Histosol			Polyvalue Belov	w Surface	(S8) /I DE	D		(LRR K, L, MLRA 149B)
	pipedon (A2)		MLRA 149B		(50) (ERF	х к ,		dox (A16) (LRR K, L, R)
	istic (A3)		_ Thin Dark Surfa	, ace (S9) (L	.RR R, MI	RA 149B		or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)	_	Loamy Mucky N			, L)	Dark Surface (S7)	
	d Layers (A5)		_ Loamy Gleyed)		-	Surface (S8) (LRR K, L)
	d Below Dark Surface ark Surface (A12)	(ATT)	Depleted Matrix Redox Dark Su				Thin Dark Surface	Masses (F12) (LRR K, L, R)
	Aucky Mineral (S1)		_ Depleted Dark				-	lain Soils (F19) (MLRA 149B)
	Gleyed Matrix (S4)	_	Redox Depress		,			6) (MLRA 144A, 145, 149B)
-	Redox (S5)						Red Parent Mater	
	d Matrix (S6)						Very Shallow Dar	
Dark Su	Irface (S7) (LRR R, M	ILRA 149B)					Other (Explain in	Remarks)
³ Indicators o	f hydrophytic vegetat	ion and wetla	and hydrology mus	st be prese	ent, unless	disturbed	l or problematic.	
Restrictive	Layer (if observed):							
Туре:								
Depth (in	ches):						Hydric Soil Present?	Yes No_✓_
Remarks:							·	
No hydri	c soil indicator	s were c	bserved.					



wird034_u_SE



wird034_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling Date: 2019-09-27
Applicant/Owner: Enbridge		State: WI Sampling Point: wird032s_w
Investigator(s): AGG/MDL		
Landform (hillslope, terrace, etc.): Terrace		
Subregion (LRR or MLRA): Northcentral Forests Lat:		
Soil Map Unit Name: Denomie silt loam, 30		
Are climatic / hydrologic conditions on the site typical for	or this time of year? Yes No	_ (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Norm	al Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology		
SUMMARY OF FINDINGS - Attach site m	ap showing sampling point locat	ions, transects, important features, etc.
Hydric Soil Present? Yes _ ✓		Yes∕ No
Wetland Hydrology Present? Yes Remarks: (Explain alternative procedures here or in a strength or in a strenget or in a strength or in a strength or in a strength		nd Site ID:
and is fed by nearby Vaughn Creek		
		Secondary Indicators (minimum of two required)
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check		
	Water-Stained Leaves (B9) Aquatic Fauna (B13)	 ✓ Drainage Patterns (B10) Moss Trim Lines (B16)
	Marl Deposits (B15)	Dry-Season Water Table (C2)
	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
	Oxidized Rhizospheres on Living Roots (C3	
	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		_∠ FAC-Neutral Test (D5)
Field Observations:		
	Depth (inches):	
	Depth (inches): <u>10</u>	
Saturation Present? Yes <u>√</u> No <u></u>	Depth (inches): <u>6</u> Wetland	Hydrology Present? Yes _ ✓ No
Describe Recorded Data (stream gauge, monitoring w	vell, aerial photos, previous inspections), if av	vailable:
Demorius		
Remarks: The wetland hydrology regime is sea	asonally flooded	

VEGETATION – Use scientific names of plants.

Sampling Point: wird032s_w

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)	<u>% Cover</u>			Number of Dominant Species
1. <u>Fraxinus nigra</u>				That Are OBL, FACW, or FAC: 6.0 (A)
2. <u>Abies balsamea</u>				Total Number of Dominant
3. <u>Ulmus americana</u>				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>85.71428571428571</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	25.0	= Total Co	over	OBL species <u>35.0</u> x 1 = <u>35.0</u>
Sapling/Shrub Stratum (Plot size: 15')				FACW species 105.0 x 2 = 210.0
1. <u>Alnus incana</u>	60.0	Y	FACW	FAC species $15.0 \times 3 = 45.0$
2				FACU species 0.0 x 4 = 0.0 UPL species 20.0 x 5 = 100.0
3				Column Totals: 175.0 (A) 390.0 (B)
4				
5				Prevalence Index = $B/A = 2.2$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Co	over	2 - Dominance Test is >50%
Herb Stratum (Plot size:5')				3 - Prevalence Index is ≤3.0 ¹
1. <u>Myosotis cf. sylvatica</u>	20.0	Y	UPL	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. <u>Carex scabrata</u>		Ý	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Phalaris arundinacea</u>		Y	FACW	
4. <u>Carex bromoides</u>		N	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Glyceria striata</u>		N	OBL	
6. <u>Carex crinita</u>		N		Definitions of Vegetation Strata:
7. <u>Symphyotrichum lateriflorum</u>		N	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
		N	FACW	at breast height (DBH), regardless of height.
	0.0	N	FACW	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Equisetum sylvaticum</u>		N	FACW	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				Woody vines – All woody vines greater than 3.28 ft in height.
	90.0	= Total Co	over	
Woody Vine Stratum (Plot size: <u>30'</u>)				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes <u>√</u> No
	0.0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate The feature is dominated by speckled a		d black	ach	
The realure is dominated by speckled a		u Diach	asii.	

Profile Des	cription: (Describe	to the dept				or confirm	the absence o	f indicators.)
Depth (in shas)	Matrix			x Feature		L = = 2	Tautuna	Demerius
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	_Loc ²	Texture	Remarks
0-20	<u>10YR 4/3</u>	100					<u> S </u>	
		·						
		·						
<u> </u>		·						
		·						
				<u> </u>				
		·						
¹ Type: C-C	oncentration, D=Dep	lotion PM-I	Poducod Matrix M	S-Mackor	Sand Gr		² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil				J=IVIASKEL	i Sanu Gr	aii 15.		or Problematic Hydric Soils ³ :
Histoso			Polyvalue Belov	w Surface	(S8) (I RI	RR		uck (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)	-	MLRA 149B		(00) (ER			rairie Redox (A16) (LRR K, L, R)
	istic (A3)		Thin Dark Surfa		RR R, M	LRA 149B)		ucky Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)	_	Loamy Mucky M					rface (S7) (LRR K, L)
Stratifie	d Layers (A5)	_	Loamy Gleyed	Matrix (F2	:)		Polyvalu	e Below Surface (S8) (LRR K, L)
Deplete	d Below Dark Surface	e (A11)	Depleted Matrix	(F3)			Thin Dai	rk Surface (S9) (LRR K, L)
	ark Surface (A12)	-	Redox Dark Su					nganese Masses (F12) (LRR K, L, R)
	Mucky Mineral (S1)	-	Depleted Dark		7)			nt Floodplain Soils (F19) (MLRA 149B)
	Gleyed Matrix (S4)	-	Redox Depress	sions (F8)				podic (TA6) (MLRA 144A, 145, 149B)
-	Redox (S5)							rent Material (F21)
	d Matrix (S6)							allow Dark Surface (TF12)
Dark St	Irface (S7) (LRR R, N	ILRA 149B)					_∠ Other (E	Explain in Remarks)
³ Indicators o	of hydrophytic vegetat	ion and wet	land hydrology mus	st ha nrasa	ant unles	s disturbad	or problematic	
	Layer (if observed):		and hydrology mat	st be plest		3 distuibed		
Type:	Euger (in observeu).							
	ches):						Hydric Soli P	Present? Yes ✓ No
Remarks:							_	
No hydri	c soil indicator	s were	observed due	e to see	diment	ation fro	om the ass	ociated creek. The soils
are very	sandy.							
-	-							



wird032s_w_E



wird032s_w_N

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

WETLAND IDENTIFICATION		
Project name: Line 5 Relocation Project	Evaluator(s): AGG/MDL	
File #: wird032	Date of visit(s): 09/27/2019	
Location: PLSS: <u>046N-001W-04</u>	Ecological Landsca Superior Coastal Plain	ape:
Lat: <u>46.492047</u> Long: <u>-90.489048</u>	Watershed: LS11, Potato River	
County: <u>Iron</u> Town/City/Village: <u>Gurney town</u>		
SITE DESCRIPTION		
Soils:	WWI Class:	
Mapped Type(s):	N/A	
204F Denomie silt loam	Wetland Type(s): PSS - shrub-car	r
Series not verified. Soils were sand throughout the profile.	Wetland Size: 0.15	Wetland Area Impacted 0.15
	Vegetation: Plant Community [Description(s):
Hydrology: The hydrologic regime is seasonally flooded. The wetland is located on a floodplain receiving inputs from Vaughn Creek and an associated tributary.	incana. The her dominated by M	wetland is dominated by Alnus baceous vegetation is lyosotis cf. sylvatica, Carex halaris arundinacea.

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
2	N	N	Used for educational or scientific purposes
3	N	N	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Y	Y	In or adjacent to RED FLAG areas
	Ť	ř	List: Vaughn Creek
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7			In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	N	Y	Wetland and contiguous habitat >10 acres
2	Y	Y	3 or more strata present (>10% cover)
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	N	Y	100 m buffer – natural land cover <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.)
7	N	X	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
· ·	N	Y	plans
8	N	N	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present <u>> 45</u> days
10	Y	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	Ν	Y	Wetland is connected or contiguous with perennial stream or lake
2	Y	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	Y	Y	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	Y	Y	water levels or high flows - if no, not applicable
3	Y	Y	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	Y	Y	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 $\leq 10\%$ 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	Y	Y	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	N	Stormwater or surface water from agricultural land is major hydrology source
8	Y	Y	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	Y	Y	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	Y	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

FA-1: associated with Vaughn Creek and one of its tributaries and may provide seasonal access to aquatic species GW-1: tributary is seep fed

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Amphibians
	Y	Birds
	Y	Mammals
	Y	Reptiles

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			PSS	Common
Abies balsamea			PSS	Common
Ulmus americana			PSS	Uncommon
Alnus incana			PSS	Abundant
Myosotis cf. sylvatica			PSS	Common
Carex scabrata			PSS	Common
Phalaris arundinacea			PSS	Common
Carex bromoides			PSS	Common
Glyceria striata			PSS	Common
Carex crinita			PSS	Uncommon
Symphyotrichum lateriflorum			PSS	Uncommon
Onoclea sensibilis			PSS	Uncommon
Osmundastrum cinnamomeum			PSS	Uncommon
Equisetum sylvaticum			PSS	Rare

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

There is an abundance of species present but invasive species are dominant within the wetland.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells,
					impounded water, increased runoff
					Point source or stormwater discharge
					Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
					Roads or railroad
	Х		М	U	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
Х			М	U	Sediment input
					Removal of herbaceous stratum – mowing,
					grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
					unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
Х			М	С	Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):
				1	
				1	

* 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 impacted by sedimentation from the associated creek and some invasive species coverage. A utility corridor is present to the north and the east of the feature within the buffer area.

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	Invasive species present
Human Use Values	Difficult access on private land
Wildlife Habitat	Diversity of habitats support various wildlife types
Fish and Aquatic Life Habitat	Associated with a perennial stream and has shallow pools that provide habitat
Shoreline Protection	Vegetation prevents erosion from Vaughn creek and its tributaries
Flood and Stormwater Storage	Holds floodwaters from Vaughn Creek
Water Quality Protection	Allows rain and floodwater to infiltrate
Groundwater Processes	Tributary is seep fed

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: 2019-09-27
Applicant/Owner: Enbridge		State: WI Samplin	ng Point: <u>wird032 u</u>
Investigator(s): <u>AGG/MDL</u>	Section, Township, Range: ()46N-001W-04	
Landform (hillslope, terrace, etc.): Base Slope			
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.491	858 Long: <u>-9</u>	0.488906	Datum: WGS84
Soil Map Unit Name: Denomie silt loam, 30 to 60 pe	ercent slopes	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	Intly disturbed? Are "Norma	al Circumstances" present?	′es No
Are Vegetation, Soil, or Hydrology naturally	y problematic? (If needed,	explain any answers in Rema	ırks.)
SUMMARY OF FINDINGS – Attach site map show	ing sampling point locati	ons, transects, import	ant 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 sample point is locate			dominated forest.

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):	
I I I I I I I I I I I I I I I I I I I	
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
	· · · · <u> </u>
(includes capillary fringe)	· · · · <u> </u>
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	· · · · <u> </u>
(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 Remarks:	· · · · · · · · · · · · · · · · · · ·
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	· · · · <u> </u>
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	· · · · <u> </u>
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	· · · · <u> </u>
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	· · · · <u> </u>
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	· · · · <u> </u>
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	· · · · <u> </u>
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	· · · · <u> </u>

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute Dominant Indicator % Cover Species? Status	Dominance Test worksheet:
1. <u>Tsuga canadensis</u>		Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2. <u>Betula alleghaniensis</u>		
	<u>10.0 N FAC</u>	Total Number of Dominant Species Across All Strata: <u>1.0</u> (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:
	<u>100.0</u> = Total Cover	OBL species 0.0 x 1 = 0.0 FACW species 0.0 x 2 = 0.0
Sapling/Shrub Stratum (Plot size: 15')		FAC species $25.0 \times 3 = 75.0$
1		FACU species $_{75.0}$ x 4 = $_{300.0}$
2		UPL species $0.0 \times 5 = 0.0$
3		Column Totals: <u>100.0</u> (A) <u>375.0</u> (B)
4		
5		Prevalence Index = B/A = <u>3.8</u>
6		Hydrophytic Vegetation Indicators:
7		1 - Rapid Test for Hydrophytic Vegetation
	0.0 = Total Cover	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5')		3 - Prevalence Index is ≤3.0 ¹
1		 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
2		Problematic Hydrophytic Vegetation ¹ (Explain)
3		
4		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5		
6		Definitions of Vegetation Strata:
7		Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8		Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9		
10		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11		Woody vines – All woody vines greater than 3.28 ft in
12		height.
	<u>0.0</u> = Total Cover	
Woody Vine Stratum (Plot size: 30')		
1		
2		
3		Hydrophytic Versteiler
4		Vegetation Present? Yes No∕
	0.0 = Total Cover	
Remarks: (Include photo numbers here or on a separate The ground layer of the sample plot is		

Profile Desc	cription: (D	escribe t	o the dep	th needed to docu	ment the	indicator	or confirm	n the absence of indicators.)	
Depth		Matrix		Redo	x Feature	s			
(inches)	Color (n	noist)	%	Color (moist)	%		Loc ²	Texture R	Remarks
0-7	<u>10YR</u>	3/2	100					SICL	
7-20	10YR	4/6	100					SIL	
	<u>-1011(</u>	1/0	100			·			
						·	·		
			<u> </u>			·			
					<u> </u>				
						·		·	
. <u> </u>						. <u> </u>			
						·			
						·	<u> </u>	- <u></u>	
1		D D		De duce d Matrix M				² Less time. DL. Dans Linia	
Hydric Soil		, D=Depi	etion, RM	=Reduced Matrix, M	S=Masked	d Sand Gra	ains.	² Location: PL=Pore Linin Indicators for Problematic	
-				Debaselus Dela					•
Histosol	(A1) pipedon (A2)			Polyvalue Belo MLRA 149B		(58) (LRF	KR,	2 cm Muck (A10) (LRR Coast Prairie Redox (A	
	istic (A3)			Thin Dark Surfa			RA 149B)		
	en Sulfide (A	4)		Loamy Mucky I				Dark Surface (S7) (LRI	
	d Layers (A5			Loamy Gleyed			, _,	Polyvalue Below Surfac	
	d Below Dar		e (A11)	Depleted Matrix		,		Thin Dark Surface (S9)	
Thick Da	ark Surface ((A12)		Redox Dark Su	rface (F6)	1		Iron-Manganese Masse	es (F12) (LRR K, L, R)
Sandy N	lucky Minera	al (S1)		Depleted Dark	Surface (F	-7)		Piedmont Floodplain Se	oils (F19) (MLRA 149B)
Sandy G	Bleyed Matrix	k (S4)		Redox Depress	ions (F8)			Mesic Spodic (TA6) (M	ILRA 144A, 145, 149B)
	Redox (S5)							Red Parent Material (Fi	
	I Matrix (S6)							Very Shallow Dark Sur	
Dark Su	rface (S7) (L	.RR R, M	ILRA 1498	3)				Other (Explain in Remain Control of the second s	arks)
31 11 1									
Restrictive			ion and we	etland hydrology mus	st be pres	ent, uniess	aisturbea	or problematic.	
	Layer (If ob:	servea):							
Туре:									
Depth (in	ches):							Hydric Soil Present? Yes	s No_ <u>√</u> _
Remarks:									
No hydri	c soil inc	licator	s were	observed.					



wird032_u_S



wird032_u_SW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron Sampling Date: 2019-09-27
•	State: WI Sampling Point: wird033f_w
C C	Section, Township, Range: 046N-001W-03
	ocal relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
	1Long: <u>-90.487034</u> Datum: WGS84
•	ent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	
Are Vegetation, Soil, or Hydrology significantly	/ 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 repo	
present. The feature is located in an old stream	corridor. The feature is a PFO with standing water moxbow.
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)	Leaves (B9) Drainage Patterns (B10)
✓ High Water Table (A2) Aquatic Fauna	
✓ Saturation (A3) Marl Deposits	
Water Marks (B1) Hydrogen Sulf	
	ospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of R Algal Mat or Crust (B4) Recent Iron Reference of R	educed Iron (C4) Stunted or Stressed Plants (D1) eduction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Sur	
Inundation Visible on Aerial Imagery (B7) Other (Explain	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes _ ✓ No Depth (inches	s): <u>8</u>
Water Table Present? Yes _ ✓ No Depth (inches	s): <u>0</u>
Saturation Present? Yes <u>√</u> No Depth (inches (includes capillary fringe)	s): 0 Wetland Hydrology Present? Yes _ ✓ No
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if available:
Remarks: The wetland hydrology regime is semi-permar	pently flooded

VEGETATION – Use scientific names of plants.

Sampling Point: wird033f_w

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominan Species?	t Indicator Status	Dominance Test worksheet:
1. <u>Fraxinus nigra</u>				Number of Dominant Species
2. <u>Betula alleghaniensis</u>			FAC	That Are OBL, FACW, or FAC:(A)
•			FACW	Total Number of Dominant Species Across All Strata: <u>6.0</u> (B)
 <u>Thuja occidentalis</u> <u>Betula papyrifera</u> 			FACU	
				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0</u> (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	50.0	= Total Co	ver	OBL species 10.0 x 1 = 10.0 FACW species 40.0 x 2 = 80.0
Sapling/Shrub Stratum (Plot size: 15')	40.0	Ň		FAC species $20.0 \times 3 = 60.0$
1. <u>Alnus incana</u>				FACU species $5.0 \times 4 = 20.0$
2. <u>Abies balsamea</u>				UPL species $2.0 \times 5 = 10.0$
3				Column Totals: <u>77.0</u> (A) <u>180.0</u> (B)
4		·		
5				Prevalence Index = B/A =
6		·		Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	15.0	= Total Co	ver	∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5')				 _✓ 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting
1. <u>Carex crinita</u>	5.0	Y	OBL	data in Remarks or on a separate sheet)
2. <u>Glyceria striata</u>	5.0	Y	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Myosotis sylvatica</u>			UPL	1
4				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				
9				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12		·	·	Woody vines – All woody vines greater than 3.28 ft in
12.	12.0	= Total Co		height.
	12.0	= Total Co	ver	
Woody Vine Stratum (Plot size: <u>30'</u>)				
1				
2				
3				Hydrophytic Vegetation
4			·	Present? Yes <u>√</u> No
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate The majority of the ground layer is cover		standing	n water v	with no vegetation present
		Mariani	y mater i	

Profile Desc	ription: (D	escribe	to the dep	th needed to docu	ment the i	indicator	or confirm	the absence	of indicators.)
Depth		Matrix			ox Feature		2	Tard	Dama
(inches)	<u>Color (n</u>		%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	<u>7.5YR</u>	4/4	100			·	. <u></u>	SI	
6-20	<u>10YR</u>	5/1	100					SICL	
			·				·		
			·			·	·		
			- <u> </u>						
			- <u> </u>				<u> </u>		
			·						
			- <u> </u>						
·			·			·	·		
¹ Type: C=C	oncentration	. D=Dep	letion. RM=	Reduced Matrix, M	S=Masked	d Sand Gra	ains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil		/	,	,					for Problematic Hydric Soils ³ :
Histosol	(A1)			Polyvalue Belo	w Surface	(S8) (LRF	RR,	2 cm M	luck (A10) (LRR K, L, MLRA 149B)
-	pipedon (A2))		MLRA 149B	,				Prairie Redox (A16) (LRR K, L, R)
	stic (A3)				_ Thin Dark Surface (S9) (LRR R, MLRA 149B)				lucky Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A d Layers (A5				Loamy Mucky Mineral (F1) (LRR K, L) Loamy Gleyed Matrix (F2)				urface (S7) (LRR K, L) lue Below Surface (S8) (LRR K, L)
	d Below Dar		e (A11)	Depleted Matri		.)			ark Surface (S9) (LRR K, L)
	ark Surface		0 (/)	Redox Dark Su					anganese Masses (F12) (LRR K, L, R)
	lucky Miner			Depleted Dark					ont Floodplain Soils (F19) (MLRA 149B)
-	Bleyed Matriz	x (S4)		Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
-	Redox (S5)								arent Material (F21)
	Matrix (S6)			2)					hallow Dark Surface (TF12) Explain in Remarks)
Dark Su	rface (S7) (I		VILKA 1490	•)					
³ Indicators o	f hydrophytic	c vegetat	tion and we	tland hydrology mu	st be prese	ent, unless	s disturbed	or problematic	
Restrictive				, ,,					
Туре:									
Depth (in	ches):							Hydric Soil	Present? Yes <u>√</u> No
Remarks:	,								
A deplete	ed matri	x was	observ	ed.					
•									



wird033f_w_E



wird033f_w_W

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	AGG/MDL		
File #:	Date of visit(s):		
wird033	09/27/2019		
Location:	Ecological Landsca	ape:	
PLSS: 046N-001W-03	Superior Coastal Plain		
Lat: <u>46.492541</u> Long: <u>-90.487013</u>	Watershed:		
	LS11, Potato River		
County: Iron Town/City/Village: Gurney town			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	T5/S3Kw		
204F Denomie silt loam	Wetland Type(s):		
	PFO - hardwood swamp		
Field Verified:		•	
Series not verified. Soils were silt above silty clay	Wetland Size:	Wetland Area Impacted	
loam.	0.11	0.11	
	Vegetation:	•	
	Plant Community Description(s):		
Hydrology:		ted by Fraxinus nigra and Betula	
The hydrologic regime is semi-permanently	alleghaniensis. Shrubs are dominated by Alnus incana and Abies balsamea. Carex crinita and Glyceria striata dominate		
flooded.			
	the herbaceous vegetation, though the majority of the ground layer is unvegetated due to the presence of standing water.		
	ayer is unvegetated o	ide to the presence of standing water.	

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	N	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	Y	Y	List: Vaughn Creek
6	Ν	Y	Supports or provides habitat for endangered, threatened or special concern species
7			In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	N	Y	Wetland and contiguous habitat >10 acres
2	Y	Ý	3 or more strata present (>10% cover)
3	Ň	Ň	Within or adjacent to habitat corridor or established wildlife habitat area
4	N	Y	100 m buffer – natural land cover >50%(south) 75% (north) intact
5	N	N	Occurs in a Joint Venture priority township
6	N	N	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
			Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
7	N	Y	plans
8	N	N	Part of a large habitat block that supports area sensitive species
9	Y	Y	Ephemeral pond with water present \geq 45 days
10	Ý	Ý	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	Y	Y	Wetland is connected or contiguous with perennial stream or lake
2	Y	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	Y	Y	Vegetation is inundated in spring
SP	1	•	Shoreline Protection
1	Y	Y	Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable
	1		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	IN		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	N	N	Dense, persistent vegetation
4	N	N	Evidence of flashy hydrology
5	I		Point or non-point source inflow
6	N N	N N	Impervious surfaces cover >10% of land surface within the watershed
7	1	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
o 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
	Y	Y	<u> </u>
4	Y	Y	Vegetated wetland associated with a lake or stream
5	N	N	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	N	Stormwater or surface water from agricultural land is major hydrology source
8	Y	Y	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			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	Y	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-3: located on private land SP-1: located in an old stream oxbow adjacent to Vaughn Creek

> 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	Amphibians
	Y	Birds
	Y	Reptiles

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 🖌		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	Common
Betula alleghaniensis			PFO	Common
Thuja occidentalis			PFO	Uncommon
Betula papyrifera			PFO	Uncommon
Alnus incana			PFO	Common
Abies balsamea			PFO	Uncommon
Carex crinita			PFO	Uncommon
Glyceria striata			PFO	Uncommon
Myosotis sylvatica			PFO	Uncommon

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

The feature is dominated by Fraxinus nigra, and non-native vegetation is present within the wetland.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells,
					impounded water, increased runoff
					Point source or stormwater discharge
					Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
					Roads or railroad
Х	Х		Н	С	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
					Removal of herbaceous stratum – mowing,
					grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
					unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
Х			L	U	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 predominately impacted by the utility corridor that runs through the middle of the feature. Non-native vegetation is present within the 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	Low diversity of species, partially cleared due to power line corridor
Human Use Values	Private land with no recreational value
Wildlife Habitat	Habitats for amphibians and reptiles
Fish and Aquatic Life Habitat	Provides habitat for amphibians in the spring
Shoreline Protection	Old oxbow of stream
Flood and Stormwater Storage	Shallow basin
Water Quality Protection	Closed depression that allows a limited amount of water to infiltrate
Groundwater Processes	Recharge feature

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary trenching, soil storage, and backfilling.	Low
Secondary Impacts (including impacts which are indirectly attributable to the project)	Vegetation removal for construction.	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: 2019-09-27
Applicant/Owner: Enbridge		
Investigator(s): AGG/MDL		
Landform (hillslope, terrace, etc.): <u>Side slope</u>		
Subregion (LRR or MLRA): Northcentral Forests Lat: <u>46.4</u>	02321 J	ong: -90.486990 Datum: WGS84
Cail Man Linit Names, Depomio ailt Joom, 20 to 60	<u>accont clones</u>	
Soil Map Unit Name: Denomie silt Ioam, 30 to 60		
Are climatic / hydrologic conditions on the site typical for this til		
Are Vegetation, Soil, or Hydrology sigr	ificantly disturbed? A	re "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology nate	urally problematic? (If	needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh	owing sampling poin	t locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes _ ✓ No _ Hydric Soil Present? Yes No _ Wetland Hydrology Present? Yes No _	within a Wet	led Area land? Yes No∕ al Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separa		
There is wetland present to the east of th	- 	
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that		
	Stained Leaves (B9)	Drainage Patterns (B10)
	c Fauna (B13)	Moss Trim Lines (B16)
	eposits (B15) jen Sulfide Odor (C1)	<pre> Dry-Season Water Table (C2) Crayfish Burrows (C8)</pre>
	ed Rhizospheres on Living R	
	ice of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
	Iron Reduction in Tilled Soil	
	uck Surface (C7)	Shallow Aquitard (D3)
	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		
Saturation Present? Yes No _ ✓ Depth (includes capillary fringe)	(inches):	Wetland Hydrology Present? Yes No∕
Describe Recorded Data (stream gauge, monitoring well, aer	ial photos, previous inspection	ons), if available:
Remarks:		
No wetland hydrology indicators were ob	served.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute	Dominant Species?	Indicator	Dominance Test worksheet:
, ·,				Number of Dominant Species
1. <u>Tsuga canadensis</u>			FACU	That Are OBL, FACW, or FAC: (A)
2. <u>Betula alleghaniensis</u>			FAC	Total Number of Dominant
3. <u>Acer saccharum</u>	10.0	N	FACU	Species Across All Strata: <u>3.0</u> (B)
4				Percent of Dominant Species
5			·	That Are OBL, FACW, or FAC: <u>66.6666666666666666666666666666666666</u>
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Co		OBL species 0.0 x 1 = 0.0
Sapling/Shrub Stratum (Plot size:15')				FACW species 0.0 x 2 = 0.0
				FAC species <u>30.0</u> x 3 = <u>90.0</u>
1				FACU species <u>60.0</u> x 4 = <u>240.0</u>
2				UPL species <u>0.0</u> x 5 = <u>0.0</u>
3				Column Totals: <u>90.0</u> (A) <u>330.0</u> (B)
4			·	
5				Prevalence Index = B/A =3.7
6		·	·	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Co		_ 2 - Dominance Test is >50%
Herb Stratum (Plot size:5')				3 - Prevalence Index is ≤3.0 ¹
1. <u>Athyrium angustum</u>	10.0	V	EAC	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation ¹ (Explain)
2				
3		·	·	¹ Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree Woody plants 2 in (7.6 cm) or more in diameter
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				
9				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10			·	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11		·	·	
12			·	Woody vines – All woody vines greater than 3.28 ft in height.
	10.0	= 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	-	- 10(0) 00	VOI	
Sample plot is located in forest domina		eastern	hemlock	κ.
	-			

Profile Desc	cription: (Describe	to the depth	needed to docur	ment the	indicator or confirm	the absence of i	ndicators.)
Depth	Matrix Redox		x Feature	S	-		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹ Loc ²	Texture	Remarks
0-5	<u>10YR 3/2</u>	100			·	SIL	
5-18	<u>7.5YR 4/4</u>	100				SI	
					·		
		·			·		
					·		
					· ·		
					·		
		·					
					· ·		
		·			· ·		
¹ Type: C=C	oncentration, D=Dep	letion. RM=R	Reduced Matrix. M	S=Maske	d Sand Grains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil			· · · · · · · · · · · · · · · · · · ·				Problematic Hydric Soils ³ :
Histosol	(A1)	_	Polyvalue Belo	w Surface	(S8) (LRR R,	2 cm Mucł	< (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)		MLRA 149B	,			irie Redox (A16) (LRR K, L, R)
	istic (A3)	_			LRR R, MLRA 149B)		ky Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)	-	_ Loamy Mucky N				ace (S7) (LRR K, L)
	d Layers (A5) d Below Dark Surface	ο (Δ11)	Loamy Gleyed Depleted Matrix		-)		Below Surface (S8) (LRR K, L) Surface (S9) (LRR K, L)
	ark Surface (A12)	<u> </u>	Redox Dark Su				anese Masses (F12) (LRR K, L, R)
	/lucky Mineral (S1)	_	Depleted Dark	, ,		-	Floodplain Soils (F19) (MLRA 149B
	Gleyed Matrix (S4)	_	_ Redox Depress	sions (F8)			odic (TA6) (MLRA 144A, 145, 149B)
	Redox (S5)						nt Material (F21)
	Matrix (S6)						ow Dark Surface (TF12)
Dark Su	rface (S7) (LRR R, N	ILRA 149B)				Other (Exp	plain in Remarks)
³ Indicators o	f hydrophytic vegetat	tion and wetla	and hydrology mus	st be pres	ent, unless disturbed	or problematic.	
	Layer (if observed):		, ,,				
Туре:							
	ches):					Hydric Soil Pre	esent? Yes No∕
Remarks:						-	
	c soil indicator	rs observ	ved.				



wird033_u_E



wird033_u_N

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Line 5	City/County:	Iron	Sampling Date: 10/17/2019	
Applicant/Owner: Enbridge	_	State: WI	Sampling Point WIRV008f	f_W
Investigator(s): Caitlin Cyrus, Clay Robertson		Section, Township	, Range: N/A	
Landform (hillslope, terrace, etc.): Depression	Loc	al relief (concave, o	convex, none): Concave	
Slope (%): 2-5% Lat.: 46.494085 Long.:	-90.488315	Datum: WGS 1	984	
Soil Map Unit Nam Kellogg-Allendale-Ashwaby complex, (lassification: None	
Are climatic/hydrologic conditions of the site typical for this	s time of the yea	r? yes (If no, e	explain in remarks)	
Are vegetation , soil , or hydrology	significantly	/ disturbed?	Are "normal	
Are vegetation , soil , or hydrology	naturally pr	oblematic?	circumstances" present? Y	′es
(If needed, explain any answers in remarks)				

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Hydric soil present? Indicators of wetland hydrology present?	Y Y Y	Is the sampled area within a wetland? Y				
Remarks: (Explain alternative procedures here or in a separate report.)						
Data point located in PFO system adjacent to powerline easement. ATV tracks cross through wetland.						

HYDROLOGY

		Secondary Indicators (minimum of two				
Primary Indicators (minimum of one is req	required)					
Surface Water (A1)	X Water-Stained Leaves (B9)	Surface Soil Cracks (B6)				
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)				
X Saturation (A3)	Marl Deposits (B15)	X Moss Trim Lines (B16)				
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)				
Sediment Deposits (B2)	Oxidized Rhizospheres on	Crayfish Burrows (C8)				
Drift Deposits (B3)	Living Roots (C3)	Saturation Visible on Aerial Imagery				
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	(C9)				
Iron Deposits (B5)	Recent Iron Reduction in Tilled	Stunted or Stressed Plants (D1)				
Inundation Visible on Aerial	Soils (C6)	X Geomorphic Position (D2)				
Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Sparsely Vegetated Concave	Other (Explain in Remarks)	FAC-Neutral Test (D5)				
Surface (B8)		X Microtopographic Relief (D4)				
Field Observations:						
Surface water present? Yes	No X Depth (inches):	Indicators of				
Water table present? Yes	No Depth (inches):	wetland				
Saturation present? Yes X	No Depth (inches): Surface	– hydrology				
(includes capillary fringe)		present? Y				
(includes capillary fillige)						
Describe recorded data (stream dauge, m	opitoring well parial photos, provinus inspe	actions) if available:				
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						
Remarks:						
Primary and secondary indicators of wetland hydrology present; parameter is met. Subsurface hydrology indicators						
were not identified due to potential for underground utilities.						

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VEGETATION - Use scientific names of plants

Sampling Point: WIRV008f_W

				50/20 Thresholds
Tree Stratum Plot Size (30' radius)	Absolute	Dominant	Indicator	20% 50%
	% Cover	Species	Status	Tree Stratum 10 24
1 Betula alleghaniensis	15	Y	FAC	Sapling/Shrub Stratum 17 42
2 Fraxinus nigra	15	Y	FACW	Herb Stratum 18 45
3 Tsuga canadensis	15	Y	FACU	Woody Vine Stratum 0 0
4 Abies balsamea	3	N	FAC	
5				Dominance Test Worksheet
6				Number of Dominant
7				Species that are OBL,
8				FACW, or FAC:7 (A) Total Number of
9 10				Dominant Species Across 8 (B)
	48	= Total Cover		
	-+0			Percent of Dominant
Condina (Chrysh	A h a a h ita	Deminant	la dia ata a	Species that are OBL,
Sapling/Shrub Plot Size (15' radius)	Absolute	Dominant	Indicator	FACW, or FAC: <u>87.50%</u> (A/B)
Stratum	% Cover	Species	Status	
1 Betula alleghaniensis	63	Y	FAC	Prevalence Index Worksheet
2 Fraxinus nigra	15	N	FACW	Total % Cover of:
3 Abies balsamea	3	N	FAC	OBL species <u>53</u> x 1 = <u>53</u>
4 Acer saccharum	3	N	FACU	FACW species 66 x 2 = 132
5				FAC species $84 \times 3 = 252$
6				FACU species $18 \times 4 = 72$
/				UPL species $0 \times 5 = 0$
8				Column totals 221 (A) 509 (B)
9				Prevalence Index = $B/A = 2.30$
10	04	Total Cover		
	84 :	= Total Cover		Hydrophytic Vegetation Indicators:
	Absolute	Dominant	Indicator	Rapid test for hydrophytic vegetation
Herb Stratum Plot Size (5' radius)	% Cover	Species	Status	X Dominance test is >50%
1 Glyceria striata	38	Y	OBL	X Prevalence index is $\leq 3.0^*$
2 Carex intumescens	15	Y	FACW	Morphogical adaptations* (provide
3 Juncus effusus	15	Ý	OBL	supporting data in Remarks or on a
4 Equisetum pratense	15	Y	FACW	separate sheet)
5 Solidago gigantea	3	N	FACW	Problematic hydrophytic vegetation*
6 Onoclea sensibilis	3	N	FACW	(explain)
7				*Indicators of hydric soil and wetland hydrology must be
8				present, unless disturbed or problematic
9				
10				Definitions of Vegetation Strata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12				at breast height (DBH), regardless of height.
13				Continue Woody plants loss than 2 in DDI and
14				Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
15				g (in the intervention of the interventi
	89	= Total Cover		Herb - All herbaceous (non-woody) plants, regardless
	A h a a h ita	Deminant	la dia ata a	of size, and woody plants less than 3.28 ft tall.
Woody Vine Plot Size (30' radius)	Absolute	Dominant	Indicator	
Stratum	% Cover	Species	Status	Woody vines - All woody vines greater than 3.28 ft in
1				height.
2				
4				
4				Hydrophytic
5				vegetation
	0	= Total Cover		present? Y
Demoder (Include of etc.)	anata al cott			ļ
Remarks: (Include photo numbers here or on a sep				
Dominance Test indicator is present; para	meter is me	i. Prevalence	e index calci	liated for reference purposes only.

SOIL							S	ampling Point: WIRV008f_W
		be to tł				e indicat	tor or confirm the abse	nce of indicators.)
Depth (Inches)	Matrix Color (moist)	%	Red Color (moist)	ox Fea %	tures Type*	Loc**	Texture	Remarks
		70						
	Concentration, D= PL=Pore Lining,			ed Matı	rix, CS=0	Covered	or Coated Sand Grain	S
	il Indicators:	101-1010					Indicators for Pro	oblematic Hydric Soils:
His Bla Hy De Thi Sa Sa Sa Str Da 149	ttisol (A1) ttic Epipedon (A2 tck Histic (A3) drogen Sulfide (A atified Layers (A4 pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) ipped Matrix (S6) rk Surface (S7) (9B) of hydrophytic vo	(4) 5) rk Sufa (A12) ral (S1) x (S4) x (S4) LRR R	(S8 — (LR Loa ce (A11)(F1 Loa Cer Rec Rec Rec) (LRR n Dark : R R, M imy Mu) (LRR imy Gle bleted M dox Dar bleted E dox Dep	eyed Mat Natrix (F3 k Surfac Dark Surf Dark Surf	A (S9) 9B eral rix (F2) 3) e (F6) éace (F7) s (F8)	Coast Prairie I 5 cm Mucky P Dark Surface (Polyvalue Belo Thin Dark Surf Iron-Mangane: Piedmont Floo Mesic Spodic	Dark Surface (TF12) i in Remarks)
Restrictive Type: Depth (incl	Layer (if observe	ed):			-		Hydric soil prese	ent? Y
-	und disturbanc ce of hydrology		•			-	nd utilities; assume	soils to be hydric due to

Wetland Data Point Photographs Line 5 Wetland Delineation October 17, 2019, Page 1 of 2



Photograph 1: WIRV008f_W, North



Photograph 2: WIRV008f_W, East

Wetland Data Point Photographs Line 5 Wetland Delineation October 17, 2019, Page 2 of 2



WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Line 5	City/County:	Gurney/Iron	_Sampling Date: 10/17/201	9
Applicant/Owner: Enbridge	_	State: WI	Sampling Point WIR	V008_U
Investigator(s): Caitlin Cyrus, Clay Robertson		Section, Townshi	p, Range: N/A	
Landform (hillslope, terrace, etc.): Hillslope	Loc	al relief (concave,	convex, none): Flat	
Slope (%): 2-5% Lat.: 46.494338 Long.:	-90.487886	Datum: WGS	1984	
Soil Map Unit Nam Kellogg-Allendale-Ashwaby complex, 2	2 to 6 percent sl	opes NWI	Classification: None	
Are climatic/hydrologic conditions of the site typical for this	s time of the yea	r? yes (If no	explain in remarks)	
Are vegetation , soil , or hydrology	significantly	y disturbed?	Are "normal	
Are vegetation , soil , or hydrology	naturally pr	oblematic?	circumstances" present?	Yes
(If needed, explain any answers in remarks)				

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Y Hydric soil present? N	Is the sampled area within a wetland? N					
Indicators of wetland hydrology present?	If yes, optional wetland site ID:					
Remarks: (Explain alternative procedures here or in a separate report.)						
Data point is located on hillslope within	mature mixed forest stand north of wetland WIRV008.					

HYDROLOGY

		Secondary Indicators (minimum of two
Primary Indicators (minimum of one is rec	required)	
Surface Water (A1)	Surface Soil Cracks (B6)	
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)
Saturation (A3)	Marl Deposits (B15)	Moss Trim Lines (B16)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Oxidized Rhizospheres on	Crayfish Burrows (C8)
Drift Deposits (B3)	Living Roots (C3)	Saturation Visible on Aerial Imagery
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	(C9)
Iron Deposits (B5)	Recent Iron Reduction in Tilled	Stunted or Stressed Plants (D1)
Inundation Visible on Aerial	Soils (C6)	Geomorphic Position (D2)
Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Sparsely Vegetated Concave	Other (Explain in Remarks)	FAC-Neutral Test (D5)
Surface (B8)		Microtopographic Relief (D4)
Field Observations:		
Surface water present? Yes	No X Depth (inches):	Indicators of
Water table present? Yes	No X Depth (inches):	wetland
Saturation present? Yes	No X Depth (inches):	hydrology
(includes capillary fringe)		present? N
(
Describe recorded data (stream gauge, m	onitoring well, aerial photos, previous ins	spections), if available:
	0 • • • • •	
Remarks:		
No indicators of wetland hydrology ar	re present; parameter is not met.	
, , , , , , , , , , , , , , , , , , , ,		

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VEGETATION - Use scientific names of plants

Sampling Point: WIRV008_U

·				50/20 Thresholds
Tree Stratum Plot Size (30' radius)	Absolute	Dominant	Indicator	20% 50%
	% Cover	Species	Status	Tree Stratum 15 38
1 Abies balsamea	38	Y	FAC	Sapling/Shrub Stratum 7 17
2 Acer saccharum	15	<u>N</u>	FACU	Herb Stratum 1 4
3 Pinus strobus	15	<u> </u>	FACU	Woody Vine Stratum 0 0
4 <u>Thuja occidentalis</u> 5 Fraxinus nigra	5	<u> </u>	FACW FACW	Dominance Test Worksheet
6	3	IN	FACW	Number of Dominant
7				Species that are OBL,
8				FACW, or FAC: 3 (A)
9				Total Number of
10				Dominant Species Across 5 (B)
	76 =	= Total Cover		Percent of Dominant
				Species that are OBL,
Sapling/Shrub Plot Size (15' radius)	Absolute	Dominant	Indicator	FACW, or FAC: <u>60.00%</u> (A/B)
Stratum	% Cover	Species	Status	
1 Corylus americana	15	Y	FACU	Prevalence Index Worksheet
2 Abies balsamea	15	Y	FAC	Total % Cover of:
3 Acer saccharum	3	N	FACU	OBL species 0 x 1 = 0
4				FACW species 9 x 2 = 18
5				FAC species $56 \times 3 = 168$
6				FACU species $51 \times 4 = 204$
7				UPL species $0 \times 5 = 0$ Column totals 116 (A) 390 (B)
8 9				Column totals 116 (A) 390 (B) Prevalence Index = B/A = 3.36
10				
	33 -	= Total Cover		
				Hydrophytic Vegetation Indicators:
Herb Stratum Plot Size (5' radius)	Absolute	Dominant	Indicator	Rapid test for hydrophytic vegetation
	% Cover	Species	Status	X Dominance test is >50%
1 Dryopteris intermedia	3	Y	FAC	Prevalence index is ≤3.0*
2 Carex pedunculata	3	Y	FACU	Morphogical adaptations* (provide
3 Osmunda cinnamomea	1	<u>N</u>	FACW	supporting data in Remarks or on a
4 5				separate sheet) Problematic hydrophytic vegetation*
5 6				(explain)
7				
8				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
9				present, unless disturbed of problematic
10				Definitions of Vegetation Strata:
11				Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12				at breast height (DBH), regardless of height.
13				Sapling/shrub - Woody plants less than 3 in. DBH and
14				greater than 3.28 ft (1 m) tall.
15	7	= Total Cover		
	:			Herb - All herbaceous (non-woody) plants, regardless
Woody Vine	Absolute	Dominant	Indicator	of size, and woody plants less than 3.28 ft tall.
Stratum Plot Size (30' radius)	% Cover	Species	Status	Woody vines - All woody vines greater than 3.28 ft in
1				height.
2				
3				
4				Hydrophytic
5				vegetation
		= Total Cover		present? Y
Remarks: (Include photo numbers here or on a sep			بالمحامد والمعال	
Dominance Test indicator is present; parar	neter is mei	. Prevalence	e index calci	ulated for reference purposes only.

SOIL							San	npling Point: WIRV008_U
	cription: (Descr	ibe to th	ne depth needed	to doc	ument th	e indicat	or or confirm the absenc	e of indicators.)
Depth (Inches)	Matrix Color (moist)	%	Red Color (moist)	lox Fea [:] %	tures Type*	Loc**	Texture	Remarks
0-8	7.5YR 2.5/3	100		,.	1		Silty Clay Loam	
8-11	7.5YR 5/2	80	7.5YR 4/6	20	С	М	Sandy Clay Loam	
11-18	5YR 4/6	100					Fine Sandy Loam	
*Type: C=0	Concentration, D	=Deple	tion, RM=Reduc	ed Mati	ix, CS=0	Covered	or Coated Sand Grains	
**Location:	PL=Pore Lining	, M=Ma	trix					
Hydric Soi	I Indicators:						Indicators for Prob	lematic Hydric Soils:
Bla Hyu Str. De Thi Sau Sau Sau Sau Sau Sau Sau Sau Sau Sau	,	A4) 55) irk Sufa (A12) iral (S1) fix (S4) 5) (LRR R	Ce (A11) (F1 Loa Ce (A11) (F1 Loa Dep Red Red Red	n Dark : R R, M amy Mu) (LRR amy Gle bleted M dox Dar bleted E dox Dep	yed Mat Matrix (F3 k Surfac Dark Surf Dressions	(S9) 9 B rix (F2) 3) e (F6) face (F7) s (F8)	5 cm Mucky Pea Dark Surface (S Polyvalue Below Thin Dark Surfac Iron-Manganese Piedmont Floodp Mesic Spodic (T Red Parent Mate	Surface (S8) (LRR K, L) ce (S9) (LRR K, L) Masses (F12) (LRR K, L, R) blain Soils (F19) (MLRA 149B) A6) (MLRA 144A, 145, 149B) erial (F21) rk Surface (TF12) Remarks)
Туре:	Restrictive Layer (if observed): Type: Depth (inches):						t? <u>N</u>	
Remarks: No hydi	ric soil indicate	ors pre	sent; paramet	ter is n	ot met.			

Wetland Data Point Photographs Line 5 Wetland Delineation October 17, 2019, Page 1 of 2



Photograph 1: WIRV008_U, North



Photograph 2: WIRV008_U, East

Wetland Data Point Photographs Line 5 Wetland Delineation October 17, 2019, Page 2 of 2



Photograph 3: WIRV008_U, South

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Line 5	City/County:	Iron	Sampling Date: 10/17/201	9
Applicant/Owner: Enbridge	_	State: WI	Sampling Point WIR	/009f_W
Investigator(s): Caitlin Cyrus, Clay Robertson		Section, Township	, Range: N/A	
Landform (hillslope, terrace, etc.): Depression	Loc	cal relief (concave, o	convex, none): Concave	
Slope (%): 2-5% Lat.: 46.495265 Long.:	-90.488109	Datum: WGS ?	1984	
Soil Map Unit Nam Kellogg-Allendale-Ashwaby complex, 2			lassification: None	
Are climatic/hydrologic conditions of the site typical for this	s time of the yea	r? yes (If no,	explain in remarks)	
Are vegetation , soil , or hydrology	significantly	y disturbed?	Are "normal	
Are vegetation , soil , or hydrology	naturally pr	oblematic?	circumstances" present?	Yes
(If needed, explain any answers in remarks)				

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Hydric soil present? Indicators of wetland hydrology present?	Y Y Y	Is the sampled area within a wetland? If yes, optional wetland site ID:	Y						
Remarks: (Explain alternative procedures here or in a separate report.)									

Data point located in an unmaintained pine plantation. PFO wetland continues outside of survey corridor to the west.

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HYDROLOGY

		Secondary indicators (minimum of two
Primary Indicators (minimum of one is requi	required)	
Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
X High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)
X Saturation (A3)	Marl Deposits (B15)	Moss Trim Lines (B16)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Oxidized Rhizospheres on	Cravfish Burrows (C8)
Drift Deposits (B3)	Living Roots (C3)	Saturation Visible on Aerial Imagery
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	(C9)
Iron Deposits (B5)	Recent Iron Reduction in Tilled	Stunted or Stressed Plants (D1)
Inundation Visible on Aerial	Soils (C6)	X Geomorphic Position (D2)
Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Sparsely Vegetated Concave	Other (Explain in Remarks)	X FAC-Neutral Test (D5)
Surface (B8)		Microtopographic Relief (D4)
Field Observations:		
Surface water present? Yes	No X Depth (inches):	Indicators of
Water table present? Yes X	No Depth (inches): 5"	wetland
Saturation present? Yes X	No Depth (inches): Surface	hydrology
(includes capillary fringe)		present? Y
(melddes capillary milge)		
Describe recorded data (stream gauge, mor	nitoring well aerial photos previous inspe	ctions) if available:
Remarks:		
Primary and secondary indicators of we	etland hydrology present: parameter is	met.
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VEGETATION - Use scientific names of plants

Sampling Point: WIRV009f_W

· · ·				50/20 Thresholds
Tree Stratum Plot Size (30' radius) 1 Abies balsamea 2	Absolute % Cover 38	Dominant Species Y	Indicator Status FAC	20%50%Tree Stratum819Sapling/Shrub Stratum1024Herb Stratum1845Woody Vine Stratum00
5 6 7 8 9 10 Sapling/Shrub Stratum Plot Size (15' radius)		= Total Cover Dominant Species	Indicator Status	Dominance Test WorksheetNumber of DominantSpecies that are OBL,FACW, or FAC:8 (A)Total Number ofDominant Species Across8 (B)Percent of DominantSpecies that are OBL,FACW, or FAC:100.00% (A/B)
1 Abies balsamea	15	Y	FAC	Prevalence Index Worksheet
2 Alnus incana 3 Salix bebbiana 4 Tilia americana 5 6 7 8 9	15 15 3	Y Y N	FACW FACW FACU	Total % Cover of: OBL species 83 x 1 = 83 FACW species 33 x 2 = 66 FAC species 56 x 3 = 168 FAC species 3 x 4 = 12 UPL species 0 x 5 = 0 Column totals 175 (A) 329 Prevalence Index = B/A = 1.88
10	48	= Total Cover		
Herb Stratum Plot Size (5' radius) 1 Carex crinita 2 Scirpus hattorianus 3 Juncus effusus 4 Glyceria striata 5 Symphyotrichum lateriflorum 6 Solidago gigantea 7	Absolute % Cover 38 15 15 15 3 3	Dominant Species Y Y Y Y N N	Indicator Status OBL OBL OBL FAC FACW	Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation X Dominance test is >50% X Prevalence index is ≤3.0* Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
10 11 12 13				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
14				Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
15 Woody Vine Plot Size (30' radius) 1	89 Absolute % Cover	= Total Cover Dominant Species	Indicator Status	 Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.
2 3 4 5		= Total Cover		Hydrophytic vegetation present? Y
Remarks: (Include photo numbers here or on a sep Dominance Test indicator is present; para		t. Prevalence	Index calcu	ulated for reference purposes only.

SOIL							Sa	mpling Point: WIRV009f_W
Profile Des	cription: (Descr	ibe to th	ne depth needed	to doci	ument th	e indicat	tor or confirm the absen	ce of indicators.)
Depth	Matrix				x Features Texture			Remarks
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-9	7.5YR 4/2	95	5YR 4/6	5	С	М	Loam	
9-18	5YR 4/9	100					Loamy Sand	
	01111 #0						_cally calla	
*Type: C=C	Concentration, D	=Deple	tion, RM=Reduce	ed Mati	rix, CS=0	Covered	or Coated Sand Grains	
**Location:	PL=Pore Lining	, M=Ma	trix					
Hydric Soi	I Indicators:						Indicators for Pro	blematic Hydric Soils:
								-
Bla Hyo Stra De Thi Sau Sau Sau Sau Sau Sau Sau Sau Sau Sau	,	A4) 55) irk Sufa (A12) iral (S1) fix (S4) 5) (LRR R	Ce (A11) (F1) Ce (A11) (F1) Coa Ce (A11) (F1) Coa Coa Coa Coa Coa Coa Coa Coa	n Dark : R R, M my Mu) (LRR my Gle bleted N lox Dar bleted E lox Dep	eyed Mat Natrix (F3 k Surfac Dark Surf pressions	(S9) 9 B rix (F2) 3) e (F6) face (F7) s (F8)	5 cm Mucky Pe Dark Surface (\$ Polyvalue Belo Thin Dark Surfa Iron-Manganes Piedmont Flood Mesic Spodic (Red Parent Ma	w Surface (S8) (LRR K, L) ace (S9) (LRR K, L) e Masses (F12) (LRR K, L, R) dplain Soils (F19) (MLRA 149B) TA6) (MLRA 144A, 145, 149B) terial (F21) bark Surface (TF12) in Remarks)
Type: Depth (inch	Layer (if observ nes):	ed):			-		Hydric soil prese	nt? <u>Y</u>
Remarks: Indicato	or Redox Dark	s Surfa	ce (F6) is pres	sent; p	aramet	er is m	et.	

Wetland Data Point Photographs Line 5 Wetland Delineation October 17, 2019, Page 1 of 2



Photograph 1: WIRV009f_W, North



Photograph 2: WIRV009f_W, South

Wetland Data Point Photographs Line 5 Wetland Delineation October 17, 2019, Page 2 of 2



Photograph 3: WIRV009f_W, West

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Line 5	City/County:	Iron	Sampling Date	e: 10/17/2019	
Applicant/Owner: Enbridge		State: WI	Sampling	Point WIRV	009_U
Investigator(s): Caitlin Cyrus, Clay Robertson		Section, Towr	nship, Range: N/A		
Landform (hillslope, terrace, etc.): Hillslope	Lc	cal relief (conca	ave, convex, none):	Convex	
Slope (%): <u>5-10%</u> Lat.: <u>46.495812</u> Long.:	-90.487865	Datum: W	/GS 1984		
Soil Map Unit Nam Kellogg-Allendale-Ashwaby complex,			WI Classification: No		
Are climatic/hydrologic conditions of the site typical for the	is time of the ye	ar? <u>yes</u> (If		rks)	
Are vegetation, soil, or hydrology	significant	tly disturbed?	Are "normal		
Are vegetation, soil, or hydrology	naturally p	problematic?	circumstances	s" present?	Yes
(If needed, explain any answers in remarks)					
SUMMARY OF FINDINGS					
Hydrophytic vegetation present? N	Is the sample	ed area within a	a wetland?	N	
Hydric soil present? N					

Hydric soll present? Indicators of wetland hydrology present? If yes, optional wetland site ID: Ν Remarks: (Explain alternative procedures here or in a separate report.) Data point located in upland portion of unmaintained pine plantation.

HYDROLOGY

Primary Indicators (minimum of one is rec	wired: check all that apply)	Secondary Indicators (minimum of two required)	
Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)	
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)	
Saturation (A3)	Marl Deposits (B15)	Moss Trim Lines (B16)	
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)	
Sediment Deposits (B2)	Oxidized Rhizospheres on	Crayfish Burrows (C8)	
Drift Deposits (B3)	Living Roots (C3)	Saturation Visible on Aerial Imagery	
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	(C9)	
Iron Deposits (B5)	Recent Iron Reduction in Tilled	Stunted or Stressed Plants (D1)	
Inundation Visible on Aerial	Soils (C6)	Geomorphic Position (D2)	
	Thin Muck Surface (C7)	Shallow Aquitard (D3)	
Imagery (B7)		FAC-Neutral Test (D5)	
Sparsely Vegetated Concave	Other (Explain in Remarks)		
Surface (B8)		Microtopographic Relief (D4)	
Field Observations:			
Surface water present? Yes	No X Depth (inches):	Indicators of	
Water table present? Yes	No X Depth (inches):	wetland	
Saturation present? Yes	No X Depth (inches):	hydrology	
(includes capillary fringe)		present? N	
(molddod odpinary milgo)			
Describe recorded data (stream gauge, m	nonitoring well, aerial photos, previous insi	pections), if available:	
	······································		
Remarks:			
No wetland hydrology present; paran	neter is not met.		

VEGETATION - Use scientific names of plants

Sampling Point: WIRV009_U

				50/20 Thresholds
	Absolute	Dominant	Indicator	20% 50%
Tree Stratum Plot Size (30' radius)	% Cover	Species	Status	Tree Stratum 17 43
1 Picea glauca	85	Ý	FACU	Sapling/Shrub Stratum 0 0
2				Herb Stratum 4 9
3				Woody Vine Stratum 0 0
4				
5				Dominance Test Worksheet
6				Number of Dominant
7				Species that are OBL,
8				FACW, or FAC: 0 (A)
9				Total Number of
10				Dominant Species Across 2 (B)
	85	= Total Cover		Percent of Dominant
				Species that are OBL,
Sapling/Shrub Plot Size (15' radius)	Absolute	Dominant	Indicator	FACW, or FAC: 0.00% (A/B)
Stratum	% Cover	Species	Status	
1				Prevalence Index Worksheet
2				Total % Cover of:
3				OBL species $0 \times 1 = 0$
4				FACW species $0 \times 2 = 0$
5				FAC species $0 \times 3 = 0$
6				FACU species $103 \times 4 = 412$
7				UPL species $0 \times 5 = 0$
8				Column totals 103 (A) 412 (B)
9				Prevalence Index = $B/A = 4.00$
10				
	0	= Total Cover		
				Hydrophytic Vegetation Indicators:
Herb Stratum Plot Size (5' radius)	Absolute	Dominant	Indicator	Rapid test for hydrophytic vegetation
	% Cover	Species	Status	Dominance test is >50%
1 Solidago canadensis	15	Y	FACU	Prevalence index is ≤3.0*
2 Plantago lanceolata	3	N	FACU	Morphogical adaptations* (provide
3				supporting data in Remarks or on a
4				separate sheet)
5				Problematic hydrophytic vegetation*
6				(explain)
7				*Indicators of hydric soil and wetland hydrology must be
8				present, unless disturbed or problematic
9				Definitions of Varatation Strates
10				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter
11				at breast height (DBH), regardless of height.
12				
				Sapling/shrub - Woody plants less than 3 in. DBH and
14 15				greater than 3.28 ft (1 m) tall.
	18	= Total Cover		
				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Plot Size (30' radius)	Absolute	Dominant	Indicator	5, 5125, and woody plants 1555 that 5.20 It tall.
Stratum Plot Size (30 radius)	% Cover	Species	Status	Woody vines - All woody vines greater than 3.28 ft in
1				height.
2				
3				
4				Hydrophytic
5				vegetation
	0	= Total Cover		present? N
				·
Remarks: (Include photo numbers here or on a sep	arate sheet)			-
No indicators of hydrophytic vegetation pro		neter is not m	et.	
, , , , , , , , , , , , , , , , , , ,	,			

SOIL							Sa	mpling Point: WIRV009_U
Profile Des	cription: (Descri	ibe to th	e depth needed	to doci	ument th	e indicat	or or confirm the absen	ce of indicators.)
Depth (Inches)	Matrix Color (moist)	%		lox Feat %		Loc**	Texture	Remarks
0-20	20 7.5YR 3/4 100						Fine Sandy Loam	
					'			
<u> </u>					— —			
	Concentration, D: PL=Pore Lining,			ed Matr	rix, CS=0	Covered	or Coated Sand Grains	
	il Indicators:	, 101–1014					Indicators for Prot	plematic Hydric Soils:
Bla Hyo Stra De Thi Sau Sau Sau Sau Sau Sau Sau Sau Sau Sau	,	A4) 5) rk Sufar (A12) ral (S1) ix (S4)) LRR R		n Dark 3 R R, M amy Mua) (LRR amy Gle bleted M dox Dar bleted D dox Dep	eyed Matr Matrix (F3 k Surfac Dark Surf Dressions	(S9) 9 B rix (F2) 3) re (F6) face (F7) s (F8)	5 cm Mucky Pe Dark Surface (S Polyvalue Belov Thin Dark Surfa Iron-Manganese Piedmont Flood Mesic Spodic (1 Red Parent Mat	w Surface (S8) (LRR K, L) ace (S9) (LRR K, L) e Masses (F12) (LRR K, L, R) lplain Soils (F19) (MLRA 149B) ΓΑ6) (MLRA 144A, 145, 149B) terial (F21) ark Surface (TF12) n Remarks)
Restrictive Type: Depth (inch	Layer (if observe nes):	ed):			-		Hydric soil preser	nt? <u>N</u>
Remarks: No hydi	ric soil indicato	ors pre	sent; paramet	er is n	ot met.			

Wetland Data Point Photographs Line 5 Wetland Delineation October 17, 2019, Page 1 of 2



Photograph 1: WIRV009_U, North



Photograph 2: WIRV009_U, East

Wetland Data Point Photographs Line 5 Wetland Delineation October 17, 2019, Page 2 of 2



Photograph 3: WIRV009_U, South

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County:	Ashland	Sampling	Date: 16-Oct-19
Applicant/Owner: Enbridge		State: WI	Sampling Point:	wirw049e
Investigator(s): ES/AS	Section, To	wnship, Range: S.	4 T . 46N	R . 1W
Landform (hillslope, terrace, etc.): Lowland	Local relief (co	ncave, convex, nor	ne): flat	Slope: 0.0 % / 0.0
Subregion (LRR or MLRA): LRR K Lat.:	46.49563956	Long.:	-90.48907245	Datum: WGS 1984
Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 pe	ercent slopes		NWI classification:	lone
	tly disturbed? problematic?	Are "Normal Ci (If needed, ex	f no, explain in Remarks. ircumstances" present? plain any answers in Rem 5, transects, impor	Yes • No O Parks.)
Hydrophytic Vegetation Present? Yes ● No ○ Hydric Soil Present? Yes ● No ○ Wetland Hydrology Present? Yes ● No ○		Sampled Area a Wetland?	Yes $ullet$ No $igcap$	
Remarks: (Explain alternative procedures here or in a separate rep Wetland is classified as emergent due to dominance of herbaceous canopy cover in plot from upland forest (wirw049u) outside of the v	vegetation with	5	land depression. Datapoi	nt includes overhanging

Wetland Hydrology Indic	ators:		Secondary Indicators (minimum of 2 required)
Primary Indicators (minir	num of one 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 along Living R	bots (C3) Saturation Visible on Aerial Imagery (C9)
Drift deposits (B3)		Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils	C6) Geomorphic Position (D2)
Iron Deposits (B5)		Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on A	erial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Con	cave Surface (B8)		FAC-neutral Test (D5)
Field Observations:			
Surface Water Present?	Yes 🔿 No 🖲	Depth (inches):	
Water Table Present?	Yes 💿 No 🔾	Depth (inches): <u>16</u>	
Saturation Present? (includes capillary fringe)	$_{\rm Yes} \bullet _{\rm No} \bigcirc$	Depth (inches):16	Wetland Hydrology Present? Yes 💿 No 🔿
	stream gauge, monit	oring well, aerial photos, previous inspe	ctions), if available:
Remarks:			
US Army Corps of Enginee	rs		Northcentral and Northeast Region - Version 2.0

VEGETATION - Use scientific names of plants

		Dominant —Species?		Sampling Point:	wirw049e
Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Rel.Strat.	Indicator Status	Dominance Test worksheet:	
	40	<u></u> 61.5%	FACU	Number of Dominant Species	2 (4)
1. Populus tremuloides		 ✓ 81.5% ✓ 23.1% 	FACU	That are OBL, FACW, or FAC:	<u>3</u> (A)
2. Ulmus americana				Total Number of Dominant	
3. Ables balsamea	5	7.7%	FAC	Species Across All Strata:	<u>5</u> (B)
4. Fraxinus americana	5 0	0.0%	FACU	Percent of dominant Species	
5		0.0%		That Are OBL, FACW, or FAC:	<u>60.0%</u> (A/B)
6	0	0.0%			
7	10			Prevalence Index worksheet:	
Sapling/Shrub Stratum (Plot size: 15')	65	= Total Cove	r		Multiply by:
1. Alnus incana	15	60.0%	FACW	OBL species <u>20</u>	
2. Populus tremuloides	10	40.0%	FACU		x 2 = <u>260</u>
3	0	0.0%			3 = <u>21</u>
4	0	0.0%		•	4 = <u>220</u>
5	0	0.0%		UPL species <u>0</u> >	(5 = <u>0</u>
6	0	0.0%		Column Totals: ((A) <u>521</u> (B)
7	0	0.0%		Prevalence Index = B/A =	2.458
	25	= Total Cove	r		
Herb Stratum (Plot size: 5')				Hydrophytic Vegetation Indica Rapid Test for Hydrophyti	
1. Phalaris arundinacea	100	82.0%	FACW	✓ Rapid Test for Hydrophytr ✓ Dominance Test is > 50%	-
2. Scirpus cyperinus	10	8.2%	OBL	 ✓ Dominance Test is > 50% ✓ Prevalence Index is ≤3.0 	
3. Juncus effusus	10	8.2%	OBL		
4. Euthamia graminifolia	2	1.6%	FAC	Morphological Adaptation data in Remarks or on a se	
5	0	0.0%		Problematic Hydrophytic	Vegetation ¹ (Explain)
6	0	0.0%			
7	0	0.0%		¹ Indicators of hydric soil and be present, unless disturbed o	
8	0	0.0%		· · · ·	
9	0	0.0%		Definitions of Vegetation S	strata:
10	0	0.0%		Tree - Woody plants, 3 in. (7.6	cm) or more in diameter
11	0	0.0%		at breast height (DBH), regardl	
12	0	0.0%		Sapling/shrub - Woody plants I	ess than 3 in DBH and
Woody Vine Stratum (Plot size: 15')	122 =	= Total Cove	r	greater than 3.28 ft (1m) tall.	
	0	0.0%			adu) planta regardiago of
1		0.0%		Herb - All herbaceous (non-wo size, and woody plants less that	
2	0	0.0%			
3	0	0.0%		Woody vine - All woody vines g height.	reater than 3.28 ft in
4	-			neight.	
	:	= Total Cove	r		
				Hydrophytic	
				Vegetation	\bigcirc
				Present? Yes Vo	0
Remarks: (Include photo numbers here or on a separate shee	et.)				

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

(inches) Color (moist) % Color (moist) % Type 1 Loc2 Texture Remarks 0-5 10YR 3/2 93 5YR 4/4 7 C PL Silly Claam Sil	Depth	Matrix	•						absence of indicators.)	
0-5 10YR 3/2 93 5YR 4/4 7 C PL Silty Clay Loam 5-16 10YR 3/2 45 5YR 4/4 10 C PL Clay Loam mottle 10YR 5/2 45	•		%	Color				Loc ²	Texture	Remarks
5:16 10YR 3/2 45 5YR 4/4 10 C PL Clay Leam rmottle 10YR 5/2 45 Clay Leam Clay Leam 16-24 5YR 4/3 100 Leamy Sand Leamy Sand 16-24 5YR 4/3 100 Leamy Gray Sattrace (S8) (LR R, Indicators for Problematic Hydric Soils : ³ 11 Histos Cl(A1) Polyvalue Below Surface (S9) (LR R, MLRA 149B) Leamy Gleyed Matrix (F3) Leamy Gleyed Matrix (F3) Leamy Gleyed Matrix (F3) Dark Surface (S9) (LR K, L, R) 11 Depleted Matrix (F3)										
Involte 10YR 5/2 45 Clay Leam 16-24 5YR 4/3 100 Leamy Sand 17 Polyvalue Below Surface (S8) (LRR R, MLRA 149E) Indicators for Problematic Hydric Solis : ³ 18/st Epipedon (X2) MIRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) 19/stogen Suffide (A4) Leamy Mucky Mineral (F1) LRR K, L) Coast Prairie Redox (A16) (LRR K, L, R) 19/stogen Suffide (A4) Leamy Surface (F7) Depleted Matrix (F3) Depleted Matrix (F3) 19/stogen Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 1448, 145, 1498) 10/storface										
16-24 5YR 4/3 100 Loamy Sand 16-27 16-27 16-27 16-27 16-27 16-27 17 17 17 17 17 17 17 17 17 18 17 17 17 17 16-27 18 17 100 17 17 17 19 17 17 17 17 17 17 19 17 17 17 17 17 17 17 19 17 <td></td>										
ype: C-Concentration. D-Depletion. RM-Reduced Matrix, CS=Covered or Coated Sand Grains *Location: PL=Pore Lining. M=Matrix ype: C-Concentration. D-Depletion. RM-Reduced Matrix, CS=Covered or Coated Sand Grains *Location: PL=Pore Lining. M=Matrix ype: C-Concentration. D-Depletion. RM-Reduced Matrix, CS=Covered or Coated Sand Grains *Location: PL=Pore Lining. M=Matrix ype: C-Concentration. D-Depletion. RM-Reduced Matrix, CS=Covered or Coated Sand Grains *Location: PL=Pore Lining. M=Matrix ype: C-Concentration. D-Depletion. RM-Reduced Matrix, CS=Covered or Coated Sand Grains *Location: PL=Pore Lining. M=Matrix Histic Expipedon (A2) MLRA 149B) Indicators for Problematic Hydric Soils : 3 Histic Ka3) Diamy Mucky Mineral (F1) LRR K, L) Depleted Matrix (F2) Black Histic (A3) Loamy Gleyed Matrix (F3) Depleted Matrix (F3) Depleted Matrix (F3) Depleted Matrix (F3) Depleted Matrix (F3) Sandy Muck Mineral (S1) Depleted Dark Surface (F7) Prion-Manganese Masses (F12) (LRR K, L, R) Sandy Redox (S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 1449B) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Meticators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic <td< td=""><td>+mottle 10YR</td><td>5/2</td><td>45</td><td></td><td></td><td></td><td></td><td></td><td>Clay Loam</td><td></td></td<>	+mottle 10YR	5/2	45						Clay Loam	
ydric Soil Indicators: Indica	16-24 5YR	4/3	100						Loamy Sand	
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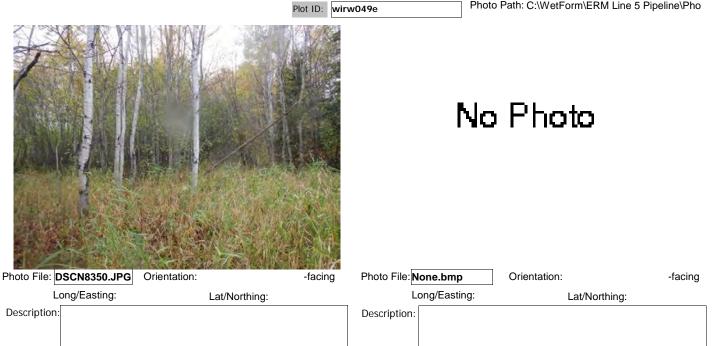
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Wisconsin Department of Natural Resources Wetland Rapid Assessment Methodology – version 2.0

WETLAND IDENTIFICATION wirw049e					
Project name: Line 5 Pipeline	Evaluator(s): Emily Stulik and Aaron Suehring				
File #:	Date of visit(s): 10/16/2019				
Location: SE1/4, NE1/4, S4, T46N, R1W PLSS:	Ecological Landscape: - North Central Forest				
Lat: <u>46.49563956</u> Long: <u>-90.48907245</u>	Watershed:				
County: Iron Town/City/Village:	Potato river 040103020	5			
SITE DESCRIPTION					
Soils: Mapped Type(s):	WWI Class: Fresh wet meadow				
Mapped Type(s): Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes Field Verified:	Wetland Type(s): Forested				
Yes	Wetland Size: 0.11	Wetland Area Impacted			
Hydrology: drainage patterns, geomorphic position, water stained leaves. Primary driven by precipitation, topography. 16 inch water table	Vegetation: Plant Community D Phalaris arundinacea and americana, Alnus incana	d Populus tremuloides, also Ulmus			

SITE MAP



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

Section 1 Comments (Refer to Section 1 numbers)

HU 7 ongoing cultural resource surveys onsite
emergent wetland mapped adjacent to first order stream, but stream not observed in field
wetland adjacent to upland open field dominated by goldenrod, and forested upland and conifer plantation
water stained leaves, drainage patterns observed. 16 in water table and saturation
wetland is basin/lowland

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

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%	<mark>20-50%</mark>	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)	<mark><13</mark>	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

*Note: separate plant communities are described independently

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

Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)	
balsam fir	5		5%	
speckled alder	4		15%	
common flat-topped goldenrod, grass-leaved goldenrod	4		2%	
white ash	5		5%	
common rush, soft rush	4		10%	
reed canary grass	0		100%	
aspen, quaking aspen	2		50%	
wool-grass	4		10%	
American elm, white elm	3		15%	
	balsam fir speckled alder common flat-topped goldenrod, grass-leaved goldenrod white ash common rush, soft rush reed canary grass aspen, quaking aspen wool-grass	balsam fir5speckled alder4common flat-topped goldenrod, grass-leaved goldenrod, grass-leaved4white ash5common rush, soft rush4reed canary grass0aspen, quaking aspen2wool-grass4	Ccommunitiesbalsam fir5speckled alder4common flat-topped goldenrod, grass-leaved goldenrod4white ash5common rush, soft rush4reed canary grass0aspen, quaking aspen2wool-grass4	

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

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

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

Phalaris 100% dominant species in herbaceous layer. ATV trails in Solidago field adjacent to wetland							

SUMMARY OF FUNCTIONAL VALUES

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

RATIONALE
Phalaris 100% dominant, fresh wet meadow
private property, ATV trails
wetland dominated by invasive species but located within larger, intact upland field and forest habitat
no standing water, habitat present
N/A
basin wetland, within watershed with <10% wetland.
basin wetland, within watershed with <10% wetland.
deep water table, groundwater plants not observed

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 and tree removal for construction.	low
Cumulative Impacts	Operational vegetation maintenance	low
Spatial/Habitat Integrity	Temporary construction impacts	low
Rare Plant/Animal Communities/ Natural Areas	N/A	N/A

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County:	Ashland	Sampling Date: 16-Oct-19		
Applicant/Owner: Enbridge	-	State: WI	Sampling Point	: wirw049u	
Investigator(s): ES/AS	Section, Tov	wnship, Range: S.	4 T . 46N	R . 1W	
Landform (hillslope, terrace, etc.): Hillside	Local relief (co	ncave, convex, non	e): flat	Slope: <u>3.0</u> % / <u>1.7</u>	
Subregion (LRR or MLRA): LRR K	- 46.49564705	Long.:	-90.48847827	Datum: WGS 1984	
Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 pe	ercent slopes		NWI classification:	None	
Are climatic/hydrologic conditions on the site typical for this time of	f year? Yes	● _{No} ○ (I	۔۔ f no, explain in Remarks.	.)	
Are Vegetation, Soil, or Hydrology significant	ntly disturbed?	Are "Normal Ci	rcumstances" present?	Yes 💿 No 🔾	
Are Vegetation . , Soil , or Hydrology naturally	/ problematic?	(If needed, exp	blain any answers in Ren	narks.)	
Summary of Findings - Attach site map showing	-	•	2	•	
Hydrophytic Vegetation Present? Yes No •					
Hydric Soil Present? Yes No		Sampled Area	Yes \bigcirc No $lacksquare$		
Wetland Hydrology Present? Yes O No •	within	a Wetland?			
Remarks: (Explain alternative procedures here or in a separate rep	port.)				
	•				
Hydrology					
Wetland Hydrology Indicators:		S	econdary Indicators (minim	num of 2 reauired)	
Primary Indicators (minimum of one required; check all that apply	<u>/)</u>	[Surface Soil Cracks (B6)		
Surface Water (A1) Water-Stained L		Ĺ	Drainage Patterns (B10)		
High Water Table (A2)		L	Moss Trim Lines (B16)		
Saturation (A3) Marl Deposits (B		L	Dry Season Water Table	e (C2)	
Water Marks (B1)	• •	L	Crayfish Burrows (C8)		
	spheres along Living	Roots (C3)	Saturation Visible on Ae	0 9 1 1	
Drift deposits (B3)	duced Iron (C4)	L	Stunted or Stressed Plar		
	duction in Tilled Soils	s (C6)	Geomorphic Position (D2	2)	
Iron Deposits (B5)	ace (C7)	L	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7) Other (Explain in	in Remarks)	L	Microtopographic Relief	(D4)	
Sparsely Vegetated Concave Surface (B8)		[FAC-neutral Test (D5)		
Field Observations: Surface Water Present? Yes No Depth (inches)	- \				
	5):				
	s):	Wetland Hydrol	ogy Present? Yes	🔿 No 🖲	
(includes capillary fringe) Yes V No V Depth (inches)		-			
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous ins	pections), if availat	ble:		

Remarks:

No hydrology indicators observed

VEGETATION - Use scientific names of plants

DominantSpecies?				Sampling Point: wirw049u
Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Rel.Strat.	Indicator Status	Dominance Test worksheet:
		,		Number of Dominant Species
1. Populus tremuloides	15		FACU	That are OBL, FACW, or FAC: (A)
2. Prunus serotina	10		FACU	Total Number of Dominant
3. Pinus strobus			FACU	Species Across All Strata: <u>10</u> (B)
4. Abies balsamea			FAC	Percent of dominant Species
5. Acer rubrum			FAC	That Are OBL, FACW, or FAC: 30.0% (A/B)
6. Betula papyrifera	7	9.1%✓ 13.0%	FACU	
7. <u>Pinus resinosa</u>	10		FACU	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15')		= Total Cover		Total % Cover of:Multiply by: OBL species0 x 1 =0
1. Prunus serotina	25	43.1%	FACU	
2. Populus tremuloides	20	✔ 34.5%	FACU	FACW species $0 \times 2 = 0$
3. Acer saccharum	10	17.2%	FACU	FAC species $40 \times 3 = 120$
4. Ostrya virginiana	3	5.2%	FACU	FACU species 160 x 4 = 640
5	0	0.0%		UPL species $-\frac{0}{x 5} = -\frac{0}{-x 5}$
6	0	0.0%		Column Totals: <u>200</u> (A) <u>760</u> (B)
7	0	0.0%		Prevalence Index = B/A = 3.800
	58	= Total Cover	-	Hydrophytic Vegetation Indicators:
Herb Stratum (Plot size: 5')				Rapid Test for Hydrophytic Vegetation
1. Pteridium aquilinum	10	15.4%	FACU	Dominance Test is $> 50\%$
2. Mitchella repens	30	46.2%	FACU	Prevalence Index is $\leq 3.0^{1}$
3. Matteuccia struthiopteris	15	23.1%	FAC	
4. Prunus serotina	5	7.7%	FACU	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. Carex pedunculata	5	7.7%	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
6	0	0.0%		
7	0	0.0%		¹ Indicators of hydric soil and wetland hydrology must
8	0	0.0%		be present, unless disturbed or problematic.
9	0	0.0%		Definitions of Vegetation Strata:
10	0	0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11	0	0.0%		at breast height (DBH), regardless of height.
12	0	0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and
	65	= Total Cover		greater than 3.28 ft (1m) tall
Woody Vine Stratum (Plot size: 15')	0			
1	0	0.0%		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
2	0	0.0%		
3	0	0.0%		Woody vine - All woody vines greater than 3.28 ft in
4		1		height.
	0	= Total Cover	•	
				Hydrophytic
				Vegetation
				Present? Yes V NO
Remarks: (Include photo numbers here or on a separate she	et.)			

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FW

Profile Desc	ription: (De	scribe to	the dept	n needed to	documen	t the indi	cator or c	onfirm the	e absence of indicators.)	<u></u>	
Depth <u>Matrix</u> (inches) Color (moist) %		Color (<u>Redox Features</u> Color (moist) % Type ¹ Loc ²			Loc ²	Texture	Remarks			
0-8	10YR	3/2	70	5YR	3/4	7	C C	PL	Clay Loam	Remarks	
+mottle	7.5YR	5/3	23						Clay Loam		
8-20	7.5YR	5/3	50	·					Silty Clay Loam		
				·							
+mottle	7.5YR	4/4	30	·					Silty Clay Loam		
+mottle	10YR	3/1	20	·					Silty Clay Loam		
20-24	7.5YR	4/4	100	·					Sandy Loam		
									,		
									·		
									c		
						- <u>-</u>					
¹ Type: C=Con	ncentration. D	=Depletio	on. RM=Re	duced Matrix,	CS=Cover	ed or Coat	ted Sand G	irains ² Lo	cation: PL=Pore Lining. M=M	Matrix	
Hydric Soil									Indicators for Proble	ematic Hydric Soils : ³	
Histosol (alue Belov A 149B)	w Surface	(S8) (LRR	R,	_	LRR K, L, MLRA 149B)	
	ipedon (A2)				,	ace (S9) ((LRR R, ML	RA 149B)	Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
Black His) LRR K, L				
	n Sulfide (A4) Layers (A5)					Matrix (F2)		/	Dark Surface (S7) (LRR K, L, M)		
	Below Dark S	Surface ()	\11)		eted Matri				Polyvalue Below Surface (S8) (LRR K, L)		
	rk Surface (A		117	✓ Redo					Thin Dark Surface (S9) (LRR K, L)		
_	uck Mineral (S			Deple	eted Dark	Surface (F	7)		☐ Iron-Manganese Masses (F12) (LRR K, L, R)		
	eyed Matrix (Redo	x Depress	ions (F8)				in Soils (F19) (MLRA 149B)	
Sandy Re		0.17) (MLRA 144A, 145, 149B)	
	Matrix (S6)								Red Parent Material (F21) Very Shallow Dark Surface (TF12)		
Dark Sur	face (S7) (LR	R R, MLR	A 149B)						Other (Explain in Remarks)		
³ Indicators o	of hydrophytic	: veaetati	on and wet	land hydrolog	v must be	present, u	Inless distu	rbed or pro		(Shidino)	
Restrictive L				<u> </u>	,	1					
Type:	ayer (ii obs	eiveu).									
Depth (inc	ches):								Hydric Soil Present?	Yes $oldsymbol{igstar}$ No $igcap$	
Remarks:											
Kemarks.											

Plot ID: wirw049u





Photo File: DS	SCN8357.JPG	Orientation:		-facing
Lat/Long or UTM:	Long/Easting:		Lat/Northing:	
Description:				

		Plot ID: v	virw049u	Photo	Path: C:\WetForm\ERM Line 5	Pipeline\Pho
					Photo	
Photo File: DSCN8358.JP	Orientation:	-facing			Orientation:	-facing
Long/Easting:	Lat/Northing:		Lo	ng/Easting:	Lat/Northing:	
Description:			Description:			

No Photo

No Photo

Photo File: None.bmp	Orientation:	-facing	Photo File: None.bmp	Orientation:	-facing
Long/Easting:	Lat/Northing:		Long/Easting:	Lat/Northing:	
Description:			Description:		