WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/C	ounty: <u>Ashland</u>	Sa	mpling Date: <u>2020-06-01</u>
Applicant/Owner: Enbridge			State: Wisconsin	Sampling Point: wasd1015e_w
Investigator(s): AGG/OTG	Sectio	on, Township, Range: <u>S</u>	ec 13 T045N R	002W
Landform (hillslope, terrace, etc.): Depression	Local reli	ef (concave, convex, no	ne): <u>Concave</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 4	6.377737	Lona: -9().553832	Datum: WGS84
Soil Map Unit Name: <u>Gogebic silt loam, 2 to 6</u>	percent slope	es, very stony, roo	<u>cky</u> NWI classificatio	n:
Are climatic / hydrologic conditions on the site typical for the	his time of year? Y	es 🖌 No	(If no, explain in Rema	arks.)
Are Vegetation, Soil, or Hydrology	significantly distur	bed? Are "Norma	Circumstances" pres	ent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	naturally problema	atic? (If needed, e	explain any answers ir	n Remarks.)
SUMMARY OF FINDINGS – Attach site map	o showing sam	pling point location	ons, transects, in	nportant features, etc.
Hydrophytic Vegetation Present? Yes <u> Ves </u>	No	Is the Sampled Area within a Wetland?	Yes 🖌 🖌	No
Wetland Hydrology Present? Yes ✓	No	If ves optional Wetland	l Site ID [.]	
			O	(minimum of the monoton of)
wetland Hydrology Indicators:			Secondary Indicators	(minimum of two required)
Printary Indicators (minimum of one is required, check an	ator Stained Leove	o (P0)	Surface Soli Cra	CKS (DO)
High Water Table (A2)	alei-Slaineu Leave Matic Fauna (B13)	S (D9)	Drainage Fallen Moss Trim Lines	(B16)
Saturation (A3)	arl Deposits (B15)		Drv-Season Wat	er Table (C2)
Water Marks (B1)	/drogen Sulfide Od	or (C1)	Cravfish Burrows	s (C8)
Sediment Deposits (B2)	kidized Rhizosphere	es on Living Roots (C3)	Saturation Visible	e on Aerial Imagery (C9)
Drift Deposits (B3)	esence of Reduced	I Iron (C4)	Stunted or Stress	sed Plants (D1)
Algal Mat or Crust (B4) Re	ecent Iron Reductio	n in Tilled Soils (C6)	Geomorphic Pos	sition (D2)
Iron Deposits (B5) Th	nin Muck Surface (C	(7)	Shallow Aquitarc	1 (D3)
Inundation Visible on Aerial Imagery (B7) Ot	her (Explain in Ren	narks)	Microtopographic	c Relief (D4)
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Tes	st (D5)
Field Observations:				
Surface Water Present? Yes No 🖌 D	epth (inches):			

 Saturation Present?
 Yes _ ✓ No ____ Depth (inches): _ ____
 Wetland Hydrole

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

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

Remarks:

Water Table Present? Saturation Present?

The wetland hydrology regime is saturated. There is standing water present at the time of survey, but it is assumed that is due to recent rain events.

Wetland Hydrology Present? Yes ____

No

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1015e_w

	Absolute	Dominan	t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	% Cover	Species	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
				That Are OBL, FACW, or FAC: 100 (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	over	OBL species x 1 =0
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>102</u> x 2 = <u>204</u>
1				FAC species x 3 =2
2				FACU species x 4 =
2				UPL species x 5 =
3				Column Totals: <u>106</u> (A) <u>216</u> (B)
4				
5				Prevalence Index = $B/A = \frac{2.0377358490566038}{2.0377358490566038}$
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
·		Tatal O		2 - Dominance Test is >50%
-			over	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Phalaris arundinacea</u>	100	<u> </u>	<u>FACW</u>	data in Remarks or on a separate sheet)
2. <u>Onoclea sensibilis</u>	2	N	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Ranunculus acris	2	Ν	FAC	
4 Osmunda clavtoniana	2	N	FAC	Indicators of hydric soil and wetland hydrology must
r	Z			be present, unless disturbed of problematic.
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
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.
· · ·				Weedwainen Allwoodwainen groater then 2.29 ft in
12				height.
	106	= Total Co	over	5
Woody Vine Stratum (Plot size: 30)				
1				
2				
3				Hadrow had a
				Hydropnytic Vegetation
4				Present? Yes <u>v</u> No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)		المام مامي	minated by read conomy grace
	vo agric	ulturari	ielus doi	minated by reed canary grass.

SOIL	
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Depth	cription: (D	escribe f Matrix	to the dep	th needed	to docur Redo	ment the in x Features	ndicator	or confirm	the absence	of indicators.)		
(inches)	Color (n	noist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks		
0-6	<u>5YR</u>	3/3	100					·	SIL			
6-20	5YR	3/3	90	5YR	4/6	10	C	M	SIL			
				_								
								·	<u> </u>			
								·				
								·				
							<u> </u>					
¹ Type: C=C	oncentration	, D=Depl	etion, RM	=Reduced	Matrix, M	S=Masked	Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix.		
Hydric Soil	Indicators:		,						Indicators	for Problematic Hydric Soils ³ :		
Histosol	(A1)			Polyva	alue Belov	w Surface	(S8) (LRI	RR,	2 cm N	luck (A10) (LRR K, L, MLRA 149B)		
Histic E	pipedon (A2))		ML Thin I	RA 149B)			Coast I	Prairie Redox (A16) (LRR K, L, R)		
Black H	istic (A3) en Sulfide (A	4)			Jark Suna v Muckv N	ace (S9) (L Mineral (F1	. K K K , MI	LRA 149B)	5 cm Ⅳ Dark S	urface (S7) (I RR K, I)		
Stratifie	d Layers (A5	5)		Loam	y Gleyed	Matrix (F2))	, _/	Polyval	lue Below Surface (S8) (LRR K, L)		
Deplete	d Below Dar	k Surface	e (A11)	Deple	ted Matrix	(F3)			Thin Dark Surface (S9) (LRR K, L)			
Thick Da	ark Surface	(A12)		Redo	k Dark Su	rface (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)		
Sandy N	Aucky Miner	al (S1)		Deple	ted Dark	Surface (F	7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)		
Sandy C	sleyed Matri Redox (S5)	x (54)		Redo	x Depress	sions (F8)			 Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) 			
Stripped	d Matrix (S6)											
Dark Su	irface (S7) (I	LRR R, N	ILRA 1491	3)					Other (Explain in Remarks)		
3												
Indicators o	f hydrophytic	c vegetat	ion and we	etland hydro	ology mus	st be prese	ent, unles	s disturbed of	or problematic			
Type		seiveu).										
Denth (in	-h).								Hydric Soil	Present? Yes 🗸 No		
Depth (In	cnes):											
A rod silf	v loam v	with ro	dox ob	sorvod	in the	lower		filo				
	ly ioann v	MILLIE		Serveu	in the			me.				



wasd1015e_w_E



wasd1015e_w_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County	Ashland	Sampling Date: 2020-06-01
Applicant/Owner: Enbridge	oky/oddiky. <u>_</u>	State ⁻ Wiscon	sin Sampling Point [,] wasd1015s w
Investigator(e): ACC/OTC	Section Town	ship Banga: SAC 13 TO/5	<u>N R002\//</u>
Landform (hillshop target at) Depression		ship, Range. <u>Sec 15 10451</u>	
Landform (hillslope, terrace, etc.): <u>Depression</u>		ave, convex, none): CONCAVE	Slope (%): <u>U-2%</u>
Subregion (LRR or MLRA): Montheentral Porests Lat: 2	16.377731	Long: <u>-90.551536</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: <u>Gogebic silt loam, 2 to 6</u>	percent slopes, ver	<u>y stony, rocky</u> NWI classifi	cation:
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes	No (If no, explain in I	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	_naturally problematic?	(If needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	p showing sampling	point locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes 🗸	No Is the S	Sampled Area	
Hydric Soil Present? Yes	No within	a Wetland? Yes 🗸	No
Wetland Hydrology Present? Yes <u> v</u>	No If yes, o	optional Wetland Site ID:	
Remarks: (Explain alternative procedures here or in a s	separate report.)		atad alay in C. I.I.
I he feature is a shrub-dominated con	nponent of a long li	near feature that is loo	cated along a field
access road.			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum of one is required: check a	all that apply)	Surface Soi	Cracks (B6)
Surface Water (A1)	(ater-Stained Leaves (B9)	Ourlace Our Drainage P:	atterns (B10)
\sim High Water Table (A2)	quatic Fauna (B13)	Moss Trim I	ines (B16)
Saturation (A3)	arl Deposits (B15)	Dry-Season	Water Table (C2)
Water Marks (B1)	vdrogen Sulfide Odor (C1)	Cravfish Bu	rrows (C8)
Sediment Deposits (B2)	xidized Rhizospheres on Liv	ing Roots (C3) Saturation \	/isible on Aerial Imagery (C9)
Drift Deposits (B3)	resence of Reduced Iron (C4	4) Stunted or S	Stressed Plants (D1)
Algal Mat or Crust (B4)	ecent Iron Reduction in Tille	d Soils (C6) - Geomorphic	Position (D2)
Iron Deposits (B5)	hin Muck Surface (C7)	Shallow Aqu	uitard (D3)
Inundation Visible on Aerial Imagery (B7) O	ther (Explain in Remarks)	Microtopogr	aphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	, , , , , , , , , , , , , , , , , , ,	✓ FAC-Neutra	l Test (D5)
Field Observations:			
Surface Water Present? Yes 🖌 No [Depth (inches): <u>2</u>	_	
Water Table Present? Yes <u>v</u> No [Depth (inches): <u>0</u>		
Saturation Present? Yes <u>v</u> No [Depth (inches): 0	Wetland Hydrology Prese	nt? Yes <u><</u> No
(includes capillary fringe)	Il aerial photos, previous ins	nections) if available:	
Describe Recorded Data (stream gauge, monitoring we	ii, achai photos, previous inc		
Remarks:			
I ne wetland hydrology regime is seas	sonally saturated.		

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1015s_w

Tree Stratum (Plat size: 20)	Absolute	Dominant	Indicator	Dominance Test worksheet:
	% Cover	<u>Species</u> ?	Status	Number of Dominant Species
1		·	·	That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5.				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6				
7				Prevalence Index worksheet:
/			·	Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species <u>75</u> x 1 = <u>75</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>80</u> x 2 = <u>160</u>
1. <u>Salix petiolaris</u>	75	Y	FACW	FAC species $0 \times 3 = 0$
2.				FACU species x 4 =0
3				UPL species x 5 =
				Column Totals: <u>155</u> (A) <u>235</u> (B)
4			·	Prevalence index = $B/A = 15161290322580645$
5		·	·	
6			·	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	75	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				\checkmark 3 - Prevalence Index is $\leq 3.0^{1}$
1. Colomograptia conodonaia	75	V		4 - Morphological Adaptations ¹ (Provide supporting
				Drahlematic Lludraphytic Vegetation ¹ (Eveloin)
2. <u>Onoclea sensibilis</u>	5	<u> </u>	FACW	
3			·	¹ Indicators of hydric soil and wetland hydrology must
4			. <u> </u>	be present, unless disturbed or problematic.
5.				Definitions of Vagatation Strata
6				Demittons of Vegetation Strata.
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
/			·	at breast height (DBH), regardless of height.
8		·	·	Sapling/shrub – Woody plants less than 3 in. DBH
9		·		and greater than or equal to 3.28 ft (1 m) tall.
10			·	Herb – All herbaceous (non-woody) plants, regardless
11.				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	80	- Total Ca		height.
00	0		ver	
Woody Vine Stratum (Plot size: <u>30</u>)				
1		·		
2			·	
3				Hydrophytic
4.				Vegetation
···		- Total Ca		Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	sheet)		vei	
The feature is a shrub-carr dominated	by mead	dow will	ow.	
			••••	

SOIL	
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Profile Desc	ription: (Describe	to the dep	th needed	to docun	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth		Matrix			Redo	x Feature	s1				
(inches)	Color (moist)	%	<u>Color (</u>	moist)	%	Type'	Loc	Texture	Remarks	
0-8	5YR	4/2	95	5YR	4/6	5	_ <u>C</u>	M			
8-20	5YR	4/3	100			0			SIL		
			- <u> </u>					·			
			. <u> </u>					·			
						·					
			·					·			
			. <u> </u>			·					
			<u> </u>								
1 Type: C=C(oncentratio	n D=Den	letion RM:	=Reduced	Matrix MS	S=Masker	Sand Gra	ains	² Location	· PI =Pore Lining M=Matrix	
Hydric Soil	Indicators:			Reduced	matrix, me				Indicators	for Problematic Hydric Soils ³ :	
Histosol	(A1)			Polyva	alue Belov	v Surface	(S8) (LRF	RR,	2 cm M	luck (A10) (LRR K, L, MLRA 149B)	
Histic Ep	oipedon (A2	2)		ŃL	RA 149B)	1			Coast	Prairie Redox (A16) (LRR K, L, R)	
Black Hi	stic (A3)			Thin [Dark Surfa	ce (S9) (L	RR R, ML	_RA 149B)	5 cm N	lucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	n Sulfide (A	\ 4)		Loam	y Mucky N	lineral (F	1) (LRR K	, L)	Dark S	urface (S7) (LRR K, L)	
Stratified	d Layers (A	5) nli Cumfee	~ (\ 1 1)	Loam	y Gleyed I	Matrix (F2	2)		Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron Manageneous (S12) (LRP K, L)		
Depleted	J Below Da ark Surface	(A12)	e (ATT)	Depie	v Dark Su	(F3) face (E6)					
Thick Da	Ark Surrace Aucky Mine	(A12) ral (S1)			ted Dark 9	Surface (F0)	7)		IIOII-IVI	anyanese masses (F12) (LKK K, L, K)	
Sandy G	Bleved Matr	ix (S4)		Redox	x Depress	ions (F8)	,		Mesic :	Spodic (TA6) (MLRA 144A. 145. 149B)	
Sandy R	edox (S5)	()				()			Red Pa	arent Material (F21)	
Stripped	Matrix (S6)							Very Shallow Dark Surface (TF12)		
Dark Su	rface (S7) (LRR R, M	/ILRA 1498	3)					Other ((Explain in Remarks)	
³ Indiactors of	fbydropbyt	io vogoto	tion and we	tland by dr		the proof	ant unload	diaturbad	or problematic		
Restrictive I	aver (if of	served)	uon and we	elianu nyun	ology mus	t be prese	ent, uniess	aisturbed	or problematic		
Type											
Type									Hydric Soil	Prosont? Yos 🗸 No	
Depth (inc	ches):								Hyunc Soli		
Remarks:	ad motr	iv with	rodovu	waa ah	aanvad						
A depiete	eu mau		redux	was ob	serveu	•					



wasd1015s_w_E



wasd1015s_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/OTG		
File #:	Date of visit(s):		
wasd1015	2020-06-01		
Location:	Ecological Landsc	ape:	
PLSS: sec 13 T045N R002W	Superior Mineral Range	s	
	Cuponol Minoral Range		
Lat: <u>46.377737</u> Long: <u>-90.553832</u>	Watershed:		
	LS13, Tyler Forks		
County: <u>Ashland</u> Town/City/Village: <u>WOrSe town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Gogebic silt loam, 2 to 6 percent slopes, very stony, rocky	Wetland Type(s):		
	PEM/PSS complex		
Field Verified:			
The soils were not verified.	Wetland Size:	Wetland Area Impacted	
	0.3531	0.3531	
	Vegetation:		
	Plant Community	Description(s):	
Hydrology:	The feature is a	depression between two ag	
The wetland hydrology regime is saturated. There is	fields dominated by reed canary grass canada		
standing water present at the time of survey but it	hlugigint and wi	low apopion	
assumed that is due to recent rain events and not	bluejoint and wi		
indicative of the feature.			

SITE MAP

SECTION 1: Functional Value Assessment

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

HU-3: The feature is visible from the road. ST-3: The feature is covered by an almost continuous cover of reed canary grass and canada bluejoint with willows.

> 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	Birds
	Y	Amphibians

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

Observed	Potential	Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Phalaris arundinacea			PEM/PSS	Interrupted
Calamagrostis canadensis			PSS	Patchy
Salix discolor			PEM/PSS	Rare
Salix petiolaris			PSS	Rare
Salix bebbiana			PEM/PSS	Rare
Equisetum arvense			PEM	Barren
Onoclea sensibilis			PEM/PSS	Barren
Osmunda claytoniana			PEM	Barren
Ranunculus acris			PEM/PSS	Barren

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities) The floristic integrity is low. The feature is dominated by invasives with low overall diversity.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The feature is highly altered by agriculture in the feature and the surrounding area.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The feature is dominated by invasive species with low overall diversity.
Human Use Values	No observed human value.
Wildlife Habitat	Birds were observed in the area.
Fish and Aquatic Life Habitat	
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature holds a small amount of stormwater.
Water Quality Protection	It is not believed that the feature has much of an impact on water quality.
Groundwater Processes	The wetland serves as groundwater recharge

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: As	nland	Sampling Date: <u>2020-06-01</u>			
Applicant/Owner: Enbridge		State: Wisc	onsin Sampling Point: wasd1015_u			
Investigator(s): AGG/OTG	Section. Townshir	. Range: sec 13 T04	5N R002W			
andform (hillslope terrace etc.): Head Slope						
Subrogion (I BB or MI BA): Northcentral Forests	Leour rener (container,	Long: -00 553028	Dotum: WGS84			
Soll Man Linit Name: Cogebic silt Loom 2 to	n 6 percent slopes, verv s	tony rocky NWI day	Datum. <u>VVG304</u>			
As alignetic (house a size and differences the size to missed)	<u>5 o percent siopes, very s</u>	<u>SIOTY, TOCKy</u> INVITCIASE				
Are climatic / nydrologic conditions on the site typical	for this time of year? Yes	No (If no, explain II	n Remarks.)			
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstance	s" present? Yes No			
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any ans	swers in Remarks.)			
SUMMARY OF FINDINGS – Attach site	map showing sampling poi	nt locations, transed	cts, important features, etc.			
Hydrophytic Vagetation Procent? Vag	No. 1 Is the Sam	pled Area				
Hydrophytic Vegetation Present? Tes	No v within a W	etland? Yes	No 🖌			
Wetland Hydrology Present? Yes	No V If yes, optic	onal Wetland Site ID:				
Remarks: (Explain alternative procedures here or in	n a separate report.)					
The upland sample point is located	along a field access roa	ad on the upper po	ortion of the roadside			
ditch. The upland sample point is s	hared with feature wasd	1016e.				
Metland Hydrology Indicators:		Socondany Inc	diastors (minimum of two required)			
Wetland Hydrology Indicators:		Secondary Inc				
Primary indicators (minimum of one is required; che		Surface S				
Ligh Water Table (A2)	_ vvater-Stained Leaves (B9)	Drainage	Patterns (B10)			
High Water Table (A2)	_ Aquatic Fauna (B13)		n Lines (B16)			
Saturation (AS)	_ Mail Deposits (B15)	Dry-Seas				
Videl Marks (B1)	_ Hydrogen Suilide Odor (C1)	Depte (C2) Seturation	Surrows (Co)			
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted o	r Stressed Plants (D1)			
Algal Mat or Crust (B4)	_ Presence of Reducted from (C4)	nils (C6) Geomorn	his Position (D2)			
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow A	Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopc	ographic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)		FAC-Neu	tral Test (D5)			
Field Observations:						
Surface Water Present? Yes No 🗸	Depth (inches) [.]					
Water Table Present? Yes No 🖌	Depth (inches):					
Saturation Present? Yes No V	Depth (inches):	Wetland Hydrology Pre	sent? Yes No 🖌			
(includes capillary fringe)		fronana fryarology fron				
Describe Recorded Data (stream gauge, monitoring	, well, aerial photos, previous inspec	tions), if available:				
Remarks:	<u> </u>					
No indicators of wetland hydrology	were observed.					

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1015_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Quercus rubra	25	Y	FACU	Number of Dominant Species
2. Betula papyrifera	10	 N	FACU	
3 Ulmus americana	10	Y	FACW	Total Number of Dominant Species Across All Strata: 3 (B)
4 Fraxinus pennsylvanica	10	N	FACW	Percent of Dominant Species
5 Abies balsamea	<u> </u>	 N	FAC	That Are OBL, FACW, or FAC: <u>33</u> (A/B)
6				
7				Prevalence Index worksheet:
/		Tatal Oa	·	Total % Cover of:Multiply by:
	0		ver	OBL species 0 $x_1 = 0$
Sapling/Shrub Stratum (Plot size: 15)				FAC species $5 \times 3 = 15$
1				FACU species $115 \times 4 = 460$
2				$\frac{1}{10} x = \frac{1}{10}$
3				Column Totals: <u>140</u> (A) <u>515</u> (B)
4				
5			·	Prevalence index = B/A = <u>3.6785714285714284</u>
6			·	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)				3 - Prevalence Index is ≤3.0°
1. <u>Dactylis glomerata</u>	75	Y	FACU	data in Remarks or on a separate sheet)
2. Pteridium aquilinum	5	N	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Rubus sp.	2	N		
4.				¹ Indicators of hydric soil and wetland hydrology must
5				Definitions of Verstetion Strates
6			·	Definitions of Vegetation Strata:
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8			·	
0			·	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
3 10			·	
10				of size, and woody plants less than 3.28 ft tall.
10			·	Woody vines – All woody vines greater than 3.28 ft in
12		Tatal Oa	·	height.
20	02		ver	
Woody Vine Stratum (Plot size: <u>30</u>)				
1			·	
2			·	
3			·	Hydrophytic
4			·	Present? Yes No v
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)	road T	ho aroa	his dominated by orchard grass
	access	Tuau. I		a is dominated by orchard grass.

SOIL

Profile Description: (Describe	e to the depth	needed to document the ind	licator or confirm	the absence of indica	tors.)
Depth <u>Matrix</u>	0/2	Redox Features	$T_{VDe}^1 = Loc^2$	Texture	Pomarks
			Type Loc		Remarks
<u> </u>	100				
·					
·					
¹ Type: C=Concentration, D=De	pletion, RM=Re	educed Matrix, MS=Masked S	and Grains.	² Location: PL=Por	e Lining, M=Matrix.
Hydric Soil Indicators:				Indicators for Probl	ematic Hydric Soils ³ :
Histosol (A1)		Polyvalue Below Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)		MLRA 149B)		Coast Prairie Re	edox (A16) (LRR K, L, R)
Black Histic (A3)		Thin Dark Surface (S9) (LR	R R, MLRA 149B)	5 cm Mucky Pea	at or Peat (S3) (LRR K, L, R)
Stratified Lavers (A5)		Loamy Gleved Matrix (F2)	(LKK K, L)	Polyvalue Below	/) (LKK K, L) / Surface (S8) (I RR K, I)
Depleted Below Dark Surfa		Depleted Matrix (F3)		Thin Dark Surfac	ce (S9) (LRR K, L)
Thick Dark Surface (A12)		Redox Dark Surface (F6)		Iron-Manganese	Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)		Piedmont Flood	olain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4)		Redox Depressions (F8)		Mesic Spodic (T	A6) (MLRA 144A, 145, 149B)
Sandy Redox (S5)				Red Parent Mate	erial (F21)
Stripped Matrix (S6)				Very Shallow Da	ark Surface (TF12)
	WILKA 149D)				r Remarks)
³ Indicators of hydrophytic veget	ation and wetla	nd hydrology must be present	, unless disturbed o	or problematic.	
Restrictive Layer (if observed):				
Туре:		_			
Depth (inches):				Hydric Soil Present?	Yes No 🖌
Remarks:					
No hydric soil indicate	ors were o	bserved.			
,					



wasd1015_u_E



wasd1015_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	_ City/County: Ashland Sampling Date: 2020-06-01
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasd1016e_w
Investigator(s): <u>AGG/OTG</u>	_ Section, Township, Range: <u>sec 13 T045N R002W</u>
Landform (hillslope, terrace, etc.): <u>Depression</u>	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.3776</u>	17 Long: <u>-90.551593</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic silt loam, 2 to 6 percent	t slopes, very stony, rocky NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🔽 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significan	tly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🗸 No	Is the Sampled Area
Hydric Soil Present? Yes 🖌 No	within a Wetland? Yes <u>v</u> No
Wetland Hydrology Present? Yes <u>v</u> No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate re The feature is an agricultural wetland with sp	arse reed canary grass present.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living F	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	ils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>v</u> No Depth (inches): <u>2</u>	
Water Table Present? Yes <u>v</u> No Depth (inches): <u>0</u>	
- 1	
Saturation Present? Yes <u>v</u> No Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <u>v</u> No
Saturation Present? Yes <u>v</u> No <u>Depth</u> (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>~</u> No
Saturation Present? Yes _ ✔_ No Depth (inches): 0 (includes capillary fringe)	Wetland Hydrology Present? Yes V No tions), if available:
Saturation Present? Yes _ No Depth (inches): 0 (includes capillary fringe)	Wetland Hydrology Present? Yes <u>v</u> No
Saturation Present? Yes _ ✓ _ No Depth (inches): 0 (includes capillary fringe)	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u>
Saturation Present? Yes Depth (inches): Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The wetland hydrology regime is temporarily flooded.	Wetland Hydrology Present? Yes <u>v</u> No <u></u>
Saturation Present? Yes _ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The wetland hydrology regime is temporarily flooded.	Wetland Hydrology Present? Yes <u>v</u> No <u></u>
Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The wetland hydrology regime is temporarily flooded.	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u>
Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The wetland hydrology regime is temporarily flooded.	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u>
Saturation Present? Yes _ No Depth (inches): 0 (includes capillary fringe)	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u>
Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The wetland hydrology regime is temporarily flooded.	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u>
Saturation Present? Yes _ ✓ _ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The wetland hydrology regime is temporarily flooded.	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u>
Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The wetland hydrology regime is temporarily flooded.	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u>
Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe)	Wetland Hydrology Present? Yes <u>v</u> No <u></u> ions), if available:
Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: The wetland hydrology regime is temporarily flooded.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> ions), if available:

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1016e_w

Trop Stratum (Plot size: 30)	Absolute %	Dominan	t Indicator	Dominance Test worksheet:
	76 COVEL	<u>Species</u> ?	Status	Number of Dominant Species
··			·	That Are OBL, FACW, or FAC: (A)
2		· - <u></u>		Total Number of Dominant
3				
4		·		Percent of Dominant Species That Are OBL. FACW. or FAC: 100 (A/B)
5				
0			<u> </u>	Prevalence Index worksheet:
/		·	·	Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species $5 \times 2 = 10$
1		. <u> </u>		FAC species $()$ $x^3 = ()$
2				FACU species $()$ $x = ()$
3				$\begin{array}{c} \text{UPL species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Otherwise Tatalan} \overline{5} (A) \underline{10} (B) \end{array}$
4.				Column Lotals: <u>5</u> (A) <u>10</u> (B)
5.			·	Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				 1 - Rapid Test for Hydrophytic Vegetation
1				2 - Dominance Test is >50%
		= Total Co	ver	\sim 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Phalaris arundinacea</u>	5	<u> </u>	FACW	data in Remarks or on a separate sheet)
2			<u> </u>	Problematic Hydrophytic Vegetation ¹ (Explain)
3				1
4.				Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5				Definitions of Venetation Strates
6				Definitions of Vegetation Strata:
7			·	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7		·		at breast height (DBH), regardless of height.
ő			- <u> </u>	Sapling/shrub – Woody plants less than 3 in. DBH
9		·	<u> </u>	
10		·		Herb – All herbaceous (non-woody) plants, regardless
11		·	·	
12		· . <u></u>	<u> </u>	Woody vines – All woody vines greater than 3.28 ft in height
	5	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: 30)				
1				
2.				
3				Ludronkutio
			- <u> </u>	Vegetation
4			- <u> </u>	Present? Yes <u>v</u> No
Demorto: (Includo photo numbero horo er en o concreto		= Total Co	ver	
The area is dominated by reed canary	arass w	ith mos	tlv bare	around
The area to dominated by rood canary	grade n		ay bare	ground

SOIL

Profile Desc	ription: (I	Describe t	o the dep	oth needed	to docun	nent the i	indicator of	or confirm	the absence	of indicators.)		
Depth (inches)	Color (Matrix moist)	%	Color (i	Redo:	<u>x Feature</u> %	s Type ¹	\log^2	Texture	Remarks		
0-12	5YR	4/2	95	5YR	4/6	5	C	M	L			
12-20	5YR	4/3	100			0			CL			
		., .					·					
							·					
							·					
							·					
							·					
<u> </u>							·					
							·					
							·					
¹ Type: C=Co	oncentratio	n. D=Depl	etion. RM	=Reduced	Matrix. MS	S=Masked	d Sand Gra	ains.	² Location:	PL=Pore Lining, M=Matrix,		
Hydric Soil	Indicators								Indicators	for Problematic Hydric Soils ³ :		
Histosol	(A1) Dipedon (A2	2)		Polyva		v Surface	(S8) (LRF	RR,	2 cm N	luck (A10) (LRR K, L, MLRA 149B)		
Black Hi	stic (A3)	-)		Thin E	Dark Surfa	ice (S9) (I	LRR R, ML	.RA 149B)) 5 cm M	Coast Prairie Redox (A to) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
Hydroge Stratifier	n Sulfide (/	44) 5)		Loam	y Mucky N	Aineral (F	1) (LRR K ,	, L)	Dark S	Dark Surface (S7) (LRR K, L)		
Depleted	d Below Da	s) rk Surface	e (A11)	Deple	ted Matrix	(F3)	-)		Thin Dark Surface (S9) (LRR K, L)			
Thick Da	ark Surface	(A12)		Redox	Redox Dark Surface (F6)				Iron-Ma	anganese Masses (F12) (LRR K, L, R)		
Sandy iv	leyed Matr	ix (S4)		Redox	Redox Depressions (F8)				Mesic \$	Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy R	edox (S5)								Red Parent Material (F21)			
Stripped Dark Su	Matrix (S6 rface (S7) () IRR R. M	ILRA 149	B)					Other (hallow Dark Surface (TF12) Explain in Remarks)		
3				<i>,</i>						, , ,		
Restrictive I	aver (if ol	ic vegetati	ion and we	etland hydro	blogy mus	t be prese	ent, unless	disturbed	or problematic			
Туре:	•	,										
Depth (ind	ches):								Hydric Soil	Present? Yes 🖌 No		
Remarks:	بر مع ما		ne de ve									
A depiete	ed matr	ix with	redox	was obs	served	•						



wasd1016e_w_E



wasd1016e_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/OTG Ó		
File #:	Date of visit(s):		
wasd1016	2020-06-01		
Location:	Ecological Landsca	ape:	
PLSS: sec 13 T045N R002W	Superior Mineral Range	S	
Lat: <u>46.377617</u> Long: <u>-90.551593</u>	Watershed:		
County Achieved Town (City) (illeges Moreo town	LOTS, TYIEFFORKS		
County: Ashiand Town/City/Village: MOISE town			
Soile:			
Manned Type(s):	N/A		
Gogebic silt loam 2 to 6 percent slopes very stony rocky			
	PEM Seasonally flooded basin		
Field Verified:			
The soils were not verified.	Wetland Size	Wetland Area Impacted	
	0.0342	0.0342	
	Vegetation:		
	Plant Community	Description(s):	
Hydrology:	The area is dom	ninated by reed canary grass	
The wetland hydrology regime is temporarily	with mostly have around		
flooded.		ground.	

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	Ν	N	Used for recreation (hunting, birding, hiking, etc.). List:
2	N	N	Used for educational or scientific purposes
3	Y	Y	Visually or physically accessible to public
4	N	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Ν	N	In or adjacent to RED FLAG areas List:
6	Ν	Ν	Supports or provides habitat for endangered, threatened or special concern species
7	Ν	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Ν	N	Wetland and contiguous habitat >10 acres
2	N	N	3 or more strata present (>10% cover)
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	N	N	100 m buffer – natural land cover <a>>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	Ν	N	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	Ν	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	Ν	N	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	N	N	Wetland is connected or contiguous with perennial stream or lake
2	N	N	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	N	Vegetation is inundated in spring
SP			Shoreline Protection
1	N	N	Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable
2	Ν	N	Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
3	N	N	Densely rooted emergent or woody vegetation
ST	IN	IN	Storm and Floodwater Storage
1	N	N	Basin wetland constricted outlet has through-flow or is adjacent to a stream
2			Water flow through wetland is NOT channelized
3	N	N	Dense persistent vegetation
4	N	N	Evidence of flashy hydrology
5	N	N	Point or non-point source inflow
6	N	N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <10% wetland
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	N	N	Provides substantial storage of storm and floodwater based on previous section
2	N	N	Basin wetland or constricted outlet
3	Y	Y	Water flow through wetland is NOT channelized
4	Ν	Ν	Vegetated wetland associated with a lake or stream
5	Ν	Ν	Dense, persistent vegetation
6	Ν	Ν	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	Y	Y	Stormwater or surface water from agricultural land is major hydrology source
8	Ν	N	Discharge to surface water
9	Ν	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	Ν	Ν	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	Ν	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

WQ-7: The feature is located in a broad swale within a row crop field.

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

Observed	Potential	Species/Habitat/Comments

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Phalaris arundinacea			PEM	Rare

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

The floristic integrity is very low; reed canary grass was the only species observed within the feature.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
Х	Х		М	C	Polluted runoff
					Pond construction
Х	Х		Н	C	Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		M	C	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
			M	C	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
					Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is located within a swale in an agricultural field and is sparsely vegetated.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The floristic integrity is low; reed canary grass was the only plant observed within the feature.
Human Use Values	The feature is located within a row crop field and is plowed through.
Wildlife Habitat	
Fish and Aquatic Life Habitat	
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature holds a small amount of overland flow from the nearby row crop field.
Water Quality Protection	It is not believed that this area helps with improving water quality.
Groundwater Processes	The wetland serve as groundwater recharge.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland Sampling Date: 2020-06-01
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wasd1017s_w</u>
Investigator(s): AGG/OTG	Section, Township, Range: <u>sec 13 T045N R002W</u>
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.37	7666 Long: <u>-90.549045</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic silt loam, 2 to 6 perce	ent slopes, very stony, rocky NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	e of year? Yes 🛛 🖌 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signifi	cantly disturbed? Are "Normal Circumstances" present? Yes 🖌 🖌 No
Are Vegetation, Soil, or Hydrology natura	ally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sho	wing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🗸 No	Is the Sampled Area
Hydric Soil Present? Yes 🔽 No	within a Wetland? Yes <u>v</u> No
Wetland Hydrology Present? Yes <u>v</u> No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate The feature is a small shrub-carr located w	e report.) vithin a roadside ditch.

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) ✓ High Water Table (A2) Aquatic Fauna (B13) ✓ Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C1)	 Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living I Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8)	Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) bils (C6) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes v No Depth (inches): 3 Water Table Present? Yes v No Depth (inches): 0 Saturation Present? Yes v No Depth (inches): 0	Wetland Hydrology Present? Yes No
(Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks: The wetland hydrology regime is saturated. There is standi	tions), if available: ng water present at the time of survey.

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1017s_w

Tree Stratum (Plot size: :3())	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1/	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>			Number of Dominant Species That Are OBL, FACW or FAC: 5 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species <u>5</u> x 1 = <u>5</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>135</u> x 2 = <u>270</u>
1. <u>Salix discolor</u>	25	Y	FACW	FAC species $1 \times 3 = 3$
2. <u>Salix bebbiana</u>	25	Y	FACW	FACU species () $x 4 = ()$
3. <u>Alnus incana</u>	25	Y	FACW	$\begin{array}{c} \text{OPL species} \underline{0} x \text{ 5 = } \\ \text{Column Totals:} 1/1 (A) 278 (B) \end{array}$
4. <u>Spiraea alba</u>	5	N	FACW	
5			·	Prevalence Index = B/A = <u>1.9716312056737588</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	80	= Total Co	ver	∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				\sim 3 - Prevalence Index is $\leq 3.0^{1}$
1. Phalaris arundinacea	25	Y	FACW	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2. Solidago gigantea	25	Ŷ	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Onoclea sensibilis	5	N	FACW	
Scirpus atrovirens	<u> </u>	 N	OBI	¹ Indicators of hydric soil and wetland hydrology must
5.				Definitions of Vasatation Strate:
6				Definitions of Vegetation Strata:
7.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast beight (DBH) regardless of beight
8.				Continued the Marsharlands lass than 2 in DDU
· · ·			· <u> </u>	and greater than or equal to 3.28 ft (1 m) tall.
9				
9				Herb - All berbaceous (non-woody) plants regardless
9 10	- <u></u>		·	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
9 10 11 12	- <u> </u>		·	 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
9 10 11 12	 			 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.
9 10 11 12 Woody Vine Stratum (Plot size: 30)		= Total Co		 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.
9	60	= Total Co	ver	 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.
9	 	= Total Co	ver 	 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.
9	 	= Total Co	ver FAC	 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.
9	 	= Total Co	ver FAC	 Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
9	60	= Total Co	ver FAC	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes _ v _ No
9	 	= Total Co N 	ver ver	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes No
9.	 	= Total Co N 	ver FAC ver	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes No Speckled alder.
9	60 1	= Total Co N = Total Co v specie	ver FAC	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes _ v _ No speckled alder.
9.	60 1	= Total Co N = Total Co v specie	ver FAC ver ver ver	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes _ v _ No speckled alder.
9.	60 1	= Total Co N = Total Co v specie	ver FAC ver	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes v No speckled alder.
9.	60 1	= Total Co N = Total Co v specie	ver FAC	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes _ v _ No speckled alder.
9.	 	= Total Co 	ver FAC ver	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes _ v _ No speckled alder.
9.	 	= Total Co 	ver FAC	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes < No
9.	 	= Total Co N 	ver FAC	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes _ ✓ _ No speckled alder.

Denth	Matriv		Rode	neni ule i	s		i the absence C	
(inches)	Color (moist)	%	Color (moist)	<u>3x reature</u> %	Tvpe ¹	Loc ²	Texture	Remarks
							<u> </u>	
	·							
	· · · ·							
							<u> </u>	
	·					<u> </u>		
							<u> </u>	
							·	
¹ Type: C=C	Concentration D=Dep	letion RM=F	Reduced Matrix M	S=Masker	I Sand Gra	ains	² Location:	PI =Pore Lining M=Matrix
Hvdric Soil	Indicators:						Indicators f	or Problematic Hydric Soils ³ :
History	L(Λ1)		Polyvaluo Polo		(S8) /I DE	D	2 cm M	
	ningdon (A2)	-			(30) (LR	х κ,		
	pipedon (AZ)		WILKA 1490) (CO) (I				value Redox (A16) (LRR K, L, R)
Black F	IISUC (A3)	-		ace (59) (I		LRA 149B) 5 Cm IVIU	UCKY Peat of Peat (53) (LRR K, L, R)
Hydrog	en Sumde (A4)	-		Matrix (F	1) (LRR R	, L)	Dark Su	
Stratifie	d Layers (A5)		_ Loamy Gleyed	Matrix (F2	.)		Polyvalu	Le Below Surface (S8) (LRR K, L)
Deplete	ed Below Dark Surface	e (A11)	_ Depleted Matri	x (F3)			Thin Da	rk Surface (S9) (LRR K, L)
Thick D	ark Surface (A12)	—	_ Redox Dark Su	urface (F6)			Iron-Ma	nganese Masses (F12) (LRR K, L, R)
Sandy	Mucky Mineral (S1)	-	Depleted Dark	Surface (F	7)		Piedmo	nt Floodplain Soils (F19) (MLRA 149B)
Sandy	Gleyed Matrix (S4)	_	_ Redox Depress	sions (F8)			Mesic S	podic (TA6) (MLRA 144A, 145, 149B)
Sandy	Redox (S5)						Red Pa	rent Material (F21)
Strippe	d Matrix (S6)						Very Sh	allow Dark Surface (TF12)
Dark Si	urface (S7) (LRR R, N	ILRA 149B)					_∠ Other (E	Explain in Remarks)
³ Indicators	of hydrophytic vegetat	ion and wetl	and hydrology mu	st be prese	ent, unless	s disturbed	or problematic.	
Restrictive	Layer (if observed):							
Type [.]								
							Hudria Sail E	Propost2 Yos // No
Depth (ir	nches):						Hydric Soli F	resent? res <u>v</u> No
Remarks:								
The soil:	s were not san	npled du	e to the loca	ation of	the we	tland w	ithin a roa	dside ditch. The soils are
assume	d to be hydric l	' hased or	h the nresen	ce of w	etland	hydrol	oav and hy	drophytic vegetation
assume					Cliana	nyurur	ogy and ny	diophytic vegetation.



wasd1017s_w_S



wasd1017s_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/OTG Ó					
File #:	Date of visit(s):					
wasd1017	2020-06-01					
Location:	Ecological Landsc	ape:				
PLSS: sec 13 T045N R002W	Superior Mineral Range	Superior Mineral Ranges				
Lat: <u>46.377666</u> Long: <u>-90.549045</u>	Watershed:					
Or the Arkland True (of A //II Moreo town	LOTS, TYIELFURS					
County: Asniand Town/City/Village: MOISE town						
	WWWI Class:					
Mapped Type(s):	N/A					
Gogebic silt loam, 2 to 6 percent slopes, very stony, rocky	Wetland Type(s):					
	PSS Shrub-Carr					
Field Verified:						
The soils were not verified.	Wetland Size:	Wetland Area Impacted				
	0.0136	0.0136				
	Vegetation:					
	Plant Community	Description(s):				
Hydrology:	The feature is a	shrub-carr community				
The wetland hydrology regime is saturated.	dominated by w	illow species and speckled				
There is standing water present at the time of		niow species and speckled				
	alder.					
Survey.						

SITE MAP

SECTION 1: Functional Value Assessment

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

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

Observed	Potential	Species/Habitat/Comments

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover,
				Abundance)
Alnus incana*			PSS	Patchy
Salix bebbiana*			PSS	Patchy
Salix discolor*			PSS	Patchy
Solidago gigantea			PSS	Patchy
Phalaris arundinacea*			PSS	Rare
Spiraea alba			PSS	Rare
Clematis virginiana			PSS	Barren
Onoclea sensibilis			PSS	Barren
Scirpus atrovirens			PSS	Barren

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

The overall diversity of the feature is low.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells,
					impounded water, increased runoff
					Point source or stormwater discharge
					Polluted runoff
					Pond construction
	Х		Н	С	Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
Х	Х		M	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.
v	Y	×	ц	C	Removal of tree or shrub strata – logging,
^	~	^		U	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 between roads and an agricultural field, and the herb stratum is dominated by reed canary grass.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Species diversity is low and invasive species are present.
Human Use Values	
Wildlife Habitat	It is not believed that this area supports much wildlife.
Fish and Aquatic Life Habitat	
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland holds a minimal amount of runoff from the nearby roads.
Water Quality Protection	The feature is not believed to effect water quality.
Groundwater Processes	The wetland serves as groundwater recharge.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation	<u>Project</u>	City/County: Ashland	Samp	ling Date: <u>2020-06-01</u>
Applicant/Owner: Enbridge			State: Wisconsin San	npling Point: <u>wasd1017_u</u>
Investigator(s): <u>AGG/OTG</u>		Section, Township, Range:	<u>sec 13 T045N R00</u>)2W
Landform (hillslope, terrace, etc.): Sho	ulder	Local relief (concave, convex, n	one): <u>Convex</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentra	I Forests Lat: 46.3776	578 Long: <u>-9</u>	0.549020	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic silt le	oam, 2 to 6 percen	t slopes, very stony, ro	<u>Cky</u> NWI classification:	
Are climatic / hydrologic conditions on the	e site typical for this time of	year? Yes 🖌 No	_ (If no, explain in Remarks	s.)
Are Vegetation, Soil, or H	lydrology significar	ntly disturbed? Are "Norm	al Circumstances" present	?Yes 🖌 No
Are Vegetation, Soil, or H	lydrology naturally	problematic? (If needed	, explain any answers in Re	emarks.)
SUMMARY OF FINDINGS - At	tach site map showi	ng sampling point locat	ions, transects, impo	ortant features, etc.
Hydrophytic Vegetation Present?	Yes 🖌 No	Is the Sampled Area	 I	
Hydric Soil Present?	Yes No 🖌	within a Wetland?	Yes No	<u> </u>
Wetland Hydrology Present?	Yes No	If yes, optional Wetlan	nd Site ID:	
Remarks: (Explain alternative procedur	es here or in a separate re	port.) Iff of a road and is dou	minated by weedy	species
		11 01 a 10au anu 13 001	minated by weedy	species.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	bils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>Ves</u> No <u>V</u> Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes <u>Ves</u> No <u>V</u> Depth (inches): <u>(includes capillary fringe)</u>	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No/ tions), if available:
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective stream gauge)	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No V Depth (inches): Person Depth (inches):	Wetland Hydrology Present? Yes No tions), if available: erved to meet the parameter. The
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: There are not enough indicators of wetland hydrology obse landscape position is not conducive to water retention.	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: Remarks: There are not enough indicators of wetland hydrology obse landscape position is not conducive to water retention.	Wetland Hydrology Present? Yes No tions), if available: erved to meet the parameter. The
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: Remarks: There are not enough indicators of wetland hydrology obse landscape position is not conducive to water retention.	Wetland Hydrology Present? Yes No tions), if available: erved to meet the parameter. The
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: There are not enough indicators of wetland hydrology obse landscape position is not conducive to water retention.	Wetland Hydrology Present? Yes No tions), if available: erved to meet the parameter. The
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: There are not enough indicators of wetland hydrology obse landscape position is not conducive to water retention.	Wetland Hydrology Present? Yes No tions), if available: erved to meet the parameter. The
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: There are not enough indicators of wetland hydrology obse landscape position is not conducive to water retention.	Wetland Hydrology Present? Yes No tions), if available: erved to meet the parameter. The
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: There are not enough indicators of wetland hydrology obse landscape position is not conducive to water retention.	Wetland Hydrology Present? Yes No tions), if available: erved to meet the parameter. The
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: There are not enough indicators of wetland hydrology obse landscape position is not conducive to water retention.	Wetland Hydrology Present? Yes No tions), if available: erved to meet the parameter. The
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: There are not enough indicators of wetland hydrology obse landscape position is not conducive to water retention.	Wetland Hydrology Present? Yes No tions), if available: erved to meet the parameter. The

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1017_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2				Total Number of Deminant
3				Species Across All Strata: (B)
4.				Percent of Dominant Species
5.				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6.				
7				Prevalence Index worksheet:
··	0	= Total Co	ver	$\begin{array}{c c} \hline \hline$
Sapling/Shrub Stratum (Plot size: 15)		10101-00		FACW species $42 \times 2 = 84$
1 Salix hebbiana	10	V		FAC species $2 \times 3 = 6$
2. Eravinus nigra	<u></u>	 		FACU species <u>5</u> x 4 = <u>20</u>
		<u> </u>	<u>FACW</u>	UPL species x 5 =
3				Column Totals: <u>49</u> (A) <u>110</u> (B)
4				Prevalence Index = B/A = 2.2448979591836733
6				Hydrophytic Vegetation Indicators:
7				 1 - Rapid Test for Hydrophytic Vegetation
/	15	- Total Ca		\sim 2 - Dominance Test is >50%
Hark Stratum (Blat size) 5			ver	\checkmark 3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>5</u>)	25	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Phalans alunumacea</u>	 	<u> </u>		Data in Remarks of on a separate sneet)
2. <u>Dactylis glomerata</u>	<u> </u>	<u> </u>	FACU	
3. <u>Carex arctata</u>		<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Agropyron cristatum</u>		<u> </u>		be present, unless disturbed or problematic.
5. <u>Athyrium angustum</u>	2	<u> </u>	FAC	Definitions of Vegetation Strata:
6. <u>Onoclea sensibilis</u>	2	<u> N </u>	FACW	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 3.26 it tail.
12				Woody vines – All woody vines greater than 3.28 ft in height
	42	= Total Co	ver	logn.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes v No
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			· · ·
I he sample plot is located along a road	d and is	domina	ted by v	veedy species.

Profile Des	cription: (Describe t	o the depth	needed to docur	ment the i	ndicator	or confirm	the absence of in	dicators.)
Depth	Matrix		Redo	x Features	<u> </u>			_
<u>(inches)</u>	Color (moist)		Color (moist)	% 				Remarks
	oncentration, D=Deple	etion, RM=R	educed Matrix, M	S=Masked	 Sand Gra		² Location: PL	=Pore Lining, M=Matrix.
Hydric Soil Histoso Histic E Black H Hydroge Stratifie Deplete Thick D Sandy N Sandy N Sandy C Sandy F Sandy C Sandy F Sandy C Sandy F Sandy C Hydroge Bark Su	Indicators: (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) I Matrix (S6) rface (S7) (LRR R, M f hydrophytic vegetati	(A11) (A11) LRA 149B) on and wetla	Polyvalue Belo MLRA 149B Thin Dark Surfa Loamy Mucky N Depleted Matrix Redox Dark Su Depleted Dark Redox Depress	w Surface) ace (S9) (L Mineral (F1 Matrix (F2 x (F3) Irface (F6) Surface (F6) Surface (F8)	(S8) (LRF .RR R, MI)) (LRR K) 7)	R R, _RA 149B) , L)	Indicators for P 2 cm Muck (Coast Prairi 5 cm Mucky Dark Surfac Polyvalue B Thin Dark S Iron-Mangar Piedmont Fl Mesic Spod Red Parent Very Shallor Other (Expla	Problematic Hydric Soils ³ : (A10) (LRR K, L, MLRA 149B) e Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L) elow Surface (S8) (LRR K, L) furface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R) loodplain Soils (F19) (MLRA 149B) ic (TA6) (MLRA 144A, 145, 149B) Material (F21) w Dark Surface (TF12) ain in Remarks)
Type: Depth (in	Layer (if observed):						Hydric Soil Pres	ent? Yes No
Remarks: The soils be non-h	s were not sam hydric based or	pled due	e to the loca dscape posi	tion wit	hin the	e roads of defir	ide area. The hitive hydroph	e soils are assumed to hytic vegetation.



wasd1017_u_N



wasd1017_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Reloc	ation Proi	ect	City/C	county: Iron		Sampling Date: 2020-05-25
Applicant/Owner: Enbridge		eci			State: Wiscons	in Sampling Bale. <u>2020 00 20</u>
Investigator(a): SAM/KDE			Contic	n Tourohin Dongo	0.000 18 T0/5N	
				on, Township, Range.	<u>Sec 10 10431</u>	
Landform (hillslope, terrace, etc.): <u>SIUE SIC</u> thcentral For	<u>ope</u>		ef (concave, convex,	none): <u>INONE</u>	Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA):		Lat:	46.383170	Long: -	90.546941	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebi	<u>c silt loam</u>	<u>n, 6 to 1</u>	8 percent slope	es, very stony,	rocky NWI classific	ation: <u>PFO1C</u>
Are climatic / hydrologic condition	ns on the site	typical for	r this time of year? Y	es 🖌 No	(If no, explain in R	emarks.)
Are Vegetation, Soil	, or Hydrol	logy	significantly distur	bed? Are "Nor	mal Circumstances" p	resent? Yes 🖌 No
Are Vegetation, Soil	, or Hydrol	logy	naturally problema	atic? (If neede	d, explain any answe	rs in Remarks.)
SUMMARY OF FINDING	S – Attach	site ma	ap showing sam	pling point loca	tions, transects	, important features, etc.
Hydrophytic Vegetation Preser Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative Discharge hardwood including sugar mapl	It? Ye Ye Ye procedures he swamp fi e.	es <u>v</u> es <u>v</u> ere or in a eature	No No separate report.) On a side slop	Is the Sampled Are within a Wetland? If yes, optional Wetl be. Includes sn	and Site ID:	_ № upland species
HYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum c Surface Water (A1)	' s: f one is requir	ed; check	all that apply) Water-Stained Leave	s (B9)	Secondary Indica Surface Soil Drainage Pat	tors (minimum of two required) Cracks (B6) terns (B10)
High Water Table (A2)		/	Aquatic Fauna (B13)		Moss Trim Li	nes (B16)
✓ Saturation (A3)		'	Mari Deposits (B15)	r(C1)	Dry-Season V	vater Table (C2)
Sodimont Doposite (P2)		'	Ovidized Phizesphere	UI (UI) as an Living Poots (C	Clayiisti Buli Saturation Vi	ows (Co)
Drift Deposits (B3)		`	Presence of Reduced	l Iron (C4)	Stunted or St	ressed Plants (D1)
Algal Mat or Crust (B4)		· ·	Recent Iron Reductio	n in Tilled Soils (C6)	Geomorphic	Position (D2)
Iron Deposits (B5)			Thin Muck Surface (C	(7)	Shallow Aqui	tard (D3)
Inundation Visible on Aeria	al Imagery (B7	7) <u> </u>	Other (Explain in Ren	narks)	Microtopogra	phic Relief (D4)
Sparsely Vegetated Conca	ave Surface (E	38)			FAC-Neutral	Test (D5)
Field Observations:						
Surface Water Present?	Yes N	No 🖌	Depth (inches):			
Water Table Present?	Yes 🖌 M	No	Depth (inches): 4			
Saturation Present?	Yes 🖌 N	No	Depth (inches): 0	Wetlan	d Hydrology Presen	t? Yes <u><</u> No
Describe Recorded Data (strea	am gauge, mo	nitoring w	ell, aerial photos, pre	vious inspections), if	available:	
Feature with dischard	ne not sti	rona hi	ut evident. Dra	ins towards w	aterbody featu	re
	30, 1101 31				atorbody route	10.

VEGETATION – Use scientific names of plants.

Sampling Point: wirb1002f_w

Trop Stratum (Plot size: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:		
1 Fravinus pigra	<u>% Cover</u>	<u>Species</u>		Number of Dominant Species		
	<u> </u>		EACU	That Are OBL, FACW, or FAC: 4 (A)		
		<u> </u>	<u>FACU</u>	Total Number of Dominant		
3				Species Across Air Strata. (B)		
4				Percent of Dominant Species That Are OBL_EACW_ or EAC: 67 (A/B)		
5						
6				Prevalence Index worksheet:		
7			<u> </u>	Total % Cover of: Multiply by:		
		= Total Cov	/er	OBL species x 1 =5		
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>70</u> x 2 = <u>140</u>		
1. <u>Acer saccharum</u>	25	<u> </u>	<u>FACU</u>	FAC species 14 x 3 = 42		
2. <u>Betula alleghaniensis</u>	5	N	FAC	FACU species $55 \times 4 = 220$		
3.				UPL species $0 \times 5 = 0$		
4.				Column Totals: <u>154</u> (A) <u>417</u> (B)		
5.				Prevalence Index = B/A = <u>2.707792207792208</u>		
6.				Hydrophytic Vegetation Indicators:		
7.				1 - Rapid Test for Hydrophytic Vegetation		
	30	= Total Cov	/er	2 - Dominance Test is >50%		
Horb Stratum (Plot size: 5)				$_$ 3 - Prevalence Index is ≤3.0 ¹		
A Deellingerie umbellete	10	V		4 - Morphological Adaptations ¹ (Provide supporting		
	10			Problematic Hydrophytic Vegetation ¹ (Explain)		
2. <u>Carex scabrata</u>		<u> </u>				
3. <u>Rubus pubescens</u>	5	<u> </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must		
4. Impatiens capensis	5	<u> N </u>	<u>FACW</u>	be present, unless disturbed or problematic.		
5. <u>Rubus idaeus</u>	5	<u> N </u>	FAC	Definitions of Vegetation Strata:		
6. <u>Glyceria striata</u>	5	Y	OBL	Tree – Woody plants 3 in (7.6 cm) or more in diameter		
7. <u>Parthenocissus inserta</u>	5	<u> N </u>	<u>FACU</u>	at breast height (DBH), regardless of height.		
8. <u>Arisaema triphyllum</u>	2	N	FAC	Sapling/shrub – Woody plants less than 3 in DBH		
9. <u>Viola labradorica</u>	2	N	FAC	and greater than or equal to 3.28 ft (1 m) tall.		
10				Herb – All herbaceous (non-woody) plants, regardless		
11				of size, and woody plants less than 3.28 ft tall.		
12				Woody vines – All woody vines greater than 3.28 ft in		
	49	= Total Cov	/er	neight.		
Woody Vine Stratum (Plot size: <u>30</u>)						
1						
2						
3.				Hydrophytic		
4.				Vegetation		
	0	= Total Cov	/er	Present? Yes <u>v</u> No		
Remarks: (Include photo numbers here or on a separate sheet.)						
Black ash community that includes sug	ar mapl	e and o	ccasion	al yellow birch. Yellow trout lily very		
common, particularly where discharge	is faint.	Other m	nesic ha	rdwood species also present in the		

feature.

SOIL

Profile Des	cription: (Describ	e to the dep	oth needed	to docur	nent the	indicator	or confirm	the absence	of indicators.)	
Depth	Matrix			Redo	x Feature	s				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-12	<u>10YR 2/1</u>	100			0			M		
12-20	10YR 2/2	95	5YR	4/6	5	С	М	С		
	<u> </u>		<u> </u>							
								,		
								<u> </u>		
						·				
					·			<u> </u>		
¹ Type: C=C	oncentration, D=De	epletion, RM	=Reduced	Matrix, MS	S=Maske	d Sand Gra	ains.	² Location:	PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:							Indicators	for Problematic Hydric Soils ³ :	
Histosol	l (A1)		Polyva	alue Belov	w Surface	(S8) (LRF	RR,	2 cm M	luck (A10) (LRR K, L, MLRA 149B)	
_∠ Histic E	pipedon (A2)		ML	RA 149B))			Coast F	Prairie Redox (A16) (LRR K, L, R)	
Black H	istic (A3)		Thin [Dark Surfa	ice (S9) (LRR R, ML	_RA 149B)	5 cm M	lucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A4)		Loam	y Mucky N	Aineral (F	1) (LRR K	, L)	Dark Si	urface (S7) (LRR K, L)	
	d Layers (A5) d Dalaw Dark Surfa	00 (111)	Loam	y Gleyed I	Matrix (F2	2)		Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (E12) (LRR K, L, R)		
Depiete	u Below Dark Suria ark Surface (Δ12)	ice (ATT)	Deple Redov	v Dark Su	rface (E6)	N N				
Sandy M	Aucky Mineral (S1)		Deple	ted Dark Su	Surface (F	, =7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)	
Sandy C	Gleved Matrix (S4)		Redox	x Depress	ions (F8)	.,		Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)	
Sandy F	Redox (S5)				()			Red Parent Material (F21)		
Stripped	d Matrix (S6)							Very Shallow Dark Surface (TF12)		
Dark Su	Irface (S7) (LRR R,	MLRA 149	B)					Other (Explain in Remarks)	
2										
³ Indicators o	f hydrophytic veget	ation and w	etland hydro	ology mus	t be pres	ent, unless	s disturbed	or problematic		
Restrictive	Layer (if observed	l):								
Туре:										
Depth (in	ches):							Hydric Soil	Present? Yes <u><</u> No	
Remarks:								L		
Organic	soils present									
_										



wirb1002f_w_E



wirb1002f_w_W

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	KDF/SAM		
File #:	Date of visit(s):		
wirb1002	2020-05-25		
Location:	Ecological Landsca	ape:	
PLSS: <u>sec 18 T045N R001W</u>	Superior Mineral Ranges	3	
Lat: <u>46.383154</u> Long: <u>-90.546929</u>	Watershed: LS13, Tyler Forks		
County: Iron Town/City/Village: Anderson town			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Gogebic silt loam, 6 to 18 percent slopes, very stony, rocky	Wetland Type(s):		
Field Verified:	PFO - hardwood swamp		
Series not verified. Soils were muck above clay	Wetland Size:	Wetland Area Impacted	
with redox present within the bottom 12 inches of	1.1570	1.1570	
the profile.	Vegetation:		
	Plant Community D	Description(s):	
Hydrology:	The feature is a northern hardwood swamp		
The feature is located on a slope with seeps scattered throughout. The	with near-continuous canopy cover dominated		
feature exhibits a high water table at 4 inches below the soil surface and	black ash and sugar maple, and ground cover		
saturation at the surface. There is a small stream present to the east that flows into the wetland, and the feature is adjacent to a perennial stream.	dominated by eastern rough sedge.		

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	Ν	Y	Used for recreation (hunting, birding, hiking, etc.). List: Hunting
2	Ν	Ν	Used for educational or scientific purposes
3	Y	Y	Visually or physically accessible to public
4	Ν	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	Ý	Ý	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 >50%(south) 75% (north) intact
5	Ν	N	Occurs in a Joint Venture priority township
6	Ν	N	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	N	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
0		· ·	pians
0	N	Y	Fall of a large field block that supports area sensitive species 5.45 down
9	N	N	Ephemeral pond with water present 245 days
10	N	N	Standing water provides habitat for amphibians and aquatic invertebrates
10	N	N	Seasonally exposed mudials present
	N	N	Figh and Ametic Life Liphitet
FA	X	Ň	FISH and Aquatic Life Habitat
1	Y	Y	Vetiand is connected or contiguous with perennial stream or lake
2	N	N	Standing water provides nabitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	N	Vegetation is inundated in spring
SP			Shoreline Protection
1	Y	Y	Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable
2	N	Y	Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
			water levels of high flows – If ho, hot applicable
3 0T	N	Y	Sterm and Electivity Sterese
51	X	Ň	Design wetland, constricted outlat, has through flow or is adjacent to a stream
	Y	Ý	Mater flew through wetland is NOT channelized
2	N	Y Y	
3	Y	Y N	Dense, persistent vegetation
4	N	N	Evidence of hashy hydrology
5	N	N	Point or non-point source innow
0	N	N	Impervious surfaces cover > 10% of land surface within the watershed Within a watershed with <10% watershed
/	N	N	Within a watershed with $\leq 10\%$ wetland Detential to hold $\geq 10\%$ of the runoff from contributing area from a 2 year 24 hour storm event.
0	N	N	Votor Quality Protection
1	N 1	NI	Travides substantial storage of storm and floodwater based on providue section
- 1	N	N	Provides substantial storage of storm and hoodwater based on previous section
2	N	N	Mater flow through wetland in NOT channelized
3	N	Y	Vegeteted wetland especieted with a lake or stream
4	N	N	
5	Y	Y	Cigno of evenes putrients, such as alrea blooms, beauty macrophyte growth
0	N	N	Signs of excess numerics, such as algae blooms, neavy macrophyte growin
/	N	N	Stormwater of surface water from agricultural land is major hydrology source
0	Y	Ý	Discharge to suitable water
9	N	N	rvaturarianu cover in Tuum buller area < 50%
GW			Groundwater Processes
1	Y	Y	Springs, seeps or indicators of groundwater present
2	Ν	N	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
4	Y	Y	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

HU-3: Feature is located on county land with potential access from nearby road. ST-3: The herbaceous vegetation is near continuous and likely to fill out throughout the growing season. SP-1: There is a stream present within the western portion of the wetland with minimal standing water present as it diffuses into the wetland. GW-1: Seeps are present within the wetland feature, scattered throughout. GW-4: Top layer of soil is muck.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Avian
Y	Y	American Toad / aquatic habitat present in adjacent stream

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)
Abies balsamea			PFO	Uncommon
Acer saccharum*			PFO	Abundant
Arisaema triphyllum			PFO	Uncommon
Athyrium filix-femina			PFO	Uncommon
Betula alleghaniensis			PFO	Uncommon
Carex gracillima			PFO	Uncommon
Carex leptonervia			PFO	Uncommon
Carex scabrata*			PFO	Common
Erythronium americanum			PFO	Uncommon
Fraxinus nigra*			PFO	Abundant
Glyceria striata			PFO	Uncommon
Impatiens capensis			PFO	Uncommon
Onoclea sensibilis			PFO	Uncommon
Rubus pubescens			PFO	Uncommon
Ulmus americana			PFO	Uncommon

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

The vegetation is comprised of native species, with no invasive species observed within the wetland.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells,
					impounded water, increased runoff
					Point source or stormwater discharge
	Х		L	UC	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		L	UC	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	x		1	UC	Removal of herbaceous stratum – mowing,
	~		-		grading, earthworms, etc.
x	X		М	С	Removal of tree or shrub strata – logging,
				-	unprescribed fire
	-				Human trails – unpaved
	-				Human trails – paved
	V			110	Removal of large woody debris
	X		L	UC	Cover of non-native and/or invasive species
					Orban, commercial or industrial use
					Goli course
	v		1		Becreational use (besting ATV/s, sta)
	^		L		Execution of acil 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 previous logging activities as evidenced by young-growth trees. The surrounding area is impacted by earthworm activity removing herbaceous vegetation and by stressors resulting from a nearby gravel road. There is an ATV trail extending from a road to the west. Sparse invasive species coverage is present within the surrounding area, but not within the wetland.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The wetland is dominated by native species.
Human Use Values	The wetland is located on public land with potential accessiblity to the public via a public gravel road to the west and could be used for hunting purposes.
Wildlife Habitat	The feature provides habitat for avians and amphibians, as observed within the wetland.
Fish and Aquatic Life Habitat	N/A
Shoreline Protection	The wetland is located at the terminus of an ephemeral stream with low potential for shoreline protection.
Flood and Stormwater Storage	The wetland is located on a side slope with near-continuous ground cover adjacent to an ephemeral stream, with a perennial stream just to the west.
Water Quality Protection	See above. The wetland can function to filter discharging water or slow downslope runoff due to dense vegetation, but does not store significant quantities of water.
Groundwater Processes	Discharge hydrology, seeps present. The feature exhibits discharge hydrology with seeps scattered throughout. Soils within the wetland are organic.

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 Pr	oject City/	County: Iron	Sampling Date: 2020-05-25
Applicant/Owner: Enbridge	-	State: V	Visconsin Sampling Point: wirb1002_u
Investigator(s): <u>SAM/KDF</u>	Sect	tion, Township, Range: <u>Sec 18 T</u>	045N R001W
Landform (hillslope, terrace, etc.): <u>Side S</u> Subregion (LRR or MLRA): <u>Northcentral F</u>	<u>Slope</u> Local re ^{-orests} Lat: <u>46.383352</u>	ilief (concave, convex, none): <u>Non</u> Long: <u>-90.54683</u>	Be Slope (%): 3-7% 32 Datum: WGS84
Soil Map Unit Name: Gogebic silt loa	<u>im, 6 to 18 percent slop</u>	<u>pes, very stony, rocky</u> NWI	classification:
Are climatic / hydrologic conditions on the s	ite typical for this time of year?	Yes <u> </u>	ain in Remarks.)
Are Vegetation, Soil, or Hyd	Irology significantly distu	urbed? Are "Normal Circumsta	ances" present? Yes 🔽 No
Are Vegetation, Soil, or Hyd	rology naturally problem	natic? (If needed, explain any	answers in Remarks.)
SUMMARY OF FINDINGS – Atta	ch site map showing sar	mpling point locations, tran	sects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes No Yes No	Is the Sampled Area within a Wetland? Yes	s No
Wetland Hydrology Present?	Yes No	If yes, optional Wetland Site ID:	
Memarks: (Explain alternative procedures Mesic hardwood community and black ash at times. Low	with an interrupted to shrub layer dense.	continuous canopy of s	ugar maple with basswood
HYDROLOGY			
Wetland Hydrology Indicators:		Secondar	y Indicators (minimum of two required)
Primary Indicators (minimum of one is req	uired; check all that apply)	Surfa	ce Soil Cracks (B6)
Surface Water (A1)	Water-Stained Leav	es (B9) Drain	age Patterns (B10)
Saturation (A3)	Aquatic Fauna (B13 Marl Deposits (B15)) Moss	Season Water Table (C2)

	•		•	
	Marl	Deposits	(B15	5)

Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots	(C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6	6) Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:		

Sparsely Vegetated Co	ncave Surface (B8)	FAC-Neutral Test (D5)	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	
Describe Recorded Data (s	tream gauge, monit	oring well, aerial photos, pre	vious inspections), if available:		
Remarks [.]					
No evidence of we	tland hydrolo	gy present. Appear	rs to be well drained and no signs of dis	scharge.	

~

VEGETATION – Use scientific names of plants.

Sampling Point: wirb1002_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1 Acer saccharum	<u></u> 10	V		Number of Dominant Species
	40	I		That Are OBL, FACW, or FAC: (A)
3.				Total Number of Dominant Species Across All Strata:4(B)
4				Percent of Dominant Species
5.				That Are OBL, FACW, or FAC: (A/B)
6.				Dravelance Index workshoet
7.				Total % Cover of: Multiply by:
	40	= Total Co	ver	$\frac{1}{1} \frac{1}{1} \frac{1}$
Sapling/Shrub Stratum (Plot size: 15)				FACW species $2 \times 2 = 4$
1 Ostrva virginiana	20	Y	FACU	FAC species <u>5</u> x 3 = <u>15</u>
2 Acer saccharum	<u> </u>	 	FACU	FACU species <u>92</u> x 4 = <u>368</u>
2. <u>Noor Submaram</u>		I	1700	UPL species x 5 =
3				Column Totals: <u>99</u> (A) <u>387</u> (B)
4 5.				Prevalence Index = B/A = <u>3.9090909090909090909</u>
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	25	= Total Co	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is $≤3.0^1$
1 Frythronium americanum	50	Y		 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
2 Acer saccharum	<u> </u>	 N	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Lonicera canadensis	<u> 10 </u> 10	<u> </u>	FACU	
A Carex pedunculata	<u></u>	 	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must
Allium tricoccum	<u> </u>	<u>N</u>		be present, unless disturbed or problematic.
5. <u>Aman incoccum</u>	<u> </u>	<u> </u>	FACU	Definitions of Vegetation Strata:
			<u>FACU</u>	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
		<u>IN</u>		at breast height (DBH), regardless of height.
8. <u>Fraxinus nigra</u> 9.	Z	<u>IN</u>	FACW	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
	86	= Total Cov	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3.				Hydrophytic
4.				Vegetation
	0	= Total Cov	ver	Present? Yes No V
Remarks: (Include photo numbers here or on a separate	sheet.)			I
Sample recorded in a mesic hardwood	commu	nity that	t include	es yellow trout lily in great abundance.
Other species include basswood, wild l	eeks, ar	nd fly ho	oneysuc	KIE.

Depth (inches) Matrix Color (moist) Redox Features Color (moist) Remarks 0-6 7.5YR 3/2 100 0 SL 6-20 7.5YR 3/3 100 0 SCL
Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks 0-6 7.5YR 3/2 100 0 SL
0-6 7.5YR 3/2 100 0 SL 6-20 7.5YR 3/3 100 0 SCL
<u>6-20</u> 7.5YR 3/3 1000SCL
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Suffice (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Sufface (S7) (LRR K, L)
Stratilieu Layers (AS) Loaniy Gleyed Matrix (F2) Polyvalue Below Surface (So) (LRR K, L)
Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (I RR K, I, R)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5) Red Parent Material (F21)
Stripped Matrix (S6) Very Shallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)
"Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if observed):
Depth (inches): No
Remarks:
Redox features lacking in the profile.



wirb1002_u_E



wirb1002_u_N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	_ City/County: <u>Iron</u> Sampling Date: <u>2020-05-25</u>				
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wirb1003f_w</u>				
Investigator(s): KDF/SAM	_ Section, Township, Range: <u>sec 18 T045N R001W</u>				
Landform (hillslope, terrace, etc.): Side Slope	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>				
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.3831	50 Long: <u>-90.546139</u> Datum: <u>WGS84</u>				
Soil Map Unit Name: Gogebic silt loam, 2 to 6 percen	t slopes, very stony, rocky NWI classification: PFO1C				
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significan	ntly disturbed? Are "Normal Circumstances" present? Yes No				
Are Vegetation, Soil, or Hydrology naturally	Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes v No Hydric Soil Present? Yes v No Wetland Hydrology Present? Yes v No Democlea: (Surplain elternative presedures have arise a compariso present)	Is the Sampled Area within a Wetland? Yes <u>v</u> No If yes, optional Wetland Site ID:				
Feature is located in northern mesic hardwoo	poπ.) od forest with undulating topography.				

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C	3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes <u>v</u> No Depth (inches): <u>8</u>	
Saturation Present? Yes <u>v</u> No Depth (inches): <u>0</u> Wetlar (includes capillary fringe)	nd Hydrology Present? Yes <u>v</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if	available:
Remarks.	

Drainage feature located on a side slope. The hydrologic regime is seasonally saturated with discharge hydrology. The feature exhibits a high water table at 8 inches and saturation at the surface. There is standing water present within the associated ephemeral stream connecting two wetland features.

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wirb1003f_w</u>

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	<u>Species?</u>	<u>Status</u>	Number of Dominant Species	
1. <u>Acer saccharum</u>	25	<u> Y </u>	FACU	That Are OBL, FACW, or FAC: (A)	
2. Fraxinus nigra	25	<u> </u>	FACW	Total Number of Dominant	
3. <u>Betula alleghaniensis</u>	10	<u> N</u>	FAC	Species Across All Strata: (B)	
4				Percent of Dominant Species	
5			·	That Are OBL, FACW, or FAC: <u>50</u> (A/B)	
6				Prevalence Index worksheet:	
7				Total % Cover of:Multiply by:	
	60	= Total Co	ver	OBL species x 1 =1	
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>31</u> x 2 = <u>62</u>	
1. Ostrva virginiana	2	Ν	FACU	FAC species <u>32</u> x 3 = <u>96</u>	
2 Tilia americana	2	N	FACU	FACU species x 4 =116	
3			<u></u>	UPL species x 5 =	
0			·	Column Totals: <u>103</u> (A) <u>285</u> (B)	
4			·	Prevalence Index = B/A = 2.766990291262136	
0			·	Hydrophytic Vegetation Indicators:	
0			·	1 - Rapid Test for Hydrophytic Vegetation	
/				2 - Dominance Test is >50%	
	4	= Total Co	ver	\sim 3 - Prevalence Index is $\leq 3.0^{1}$	
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting	
1. <u>Erythronium americanum</u>	25	<u> </u>		data in Remarks or on a separate sheet)	
2. <u>Deparia cf. acrostichoides</u>	10	<u>N</u>	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)	
3. <u>Athyrium angustum</u>	10	Y	FAC	¹ Indicators of hydric soil and wetland hydrology must	
4. <u>Carex crinita</u>	5	N	OBL	be present, unless disturbed or problematic.	
5. <u>Carex scabrata</u>	5	N	OBL	Definitions of Vegetation Strata:	
6. <u>Onoclea sensibilis</u>	5	N	FACW	Tree Maadu plante 2 in (7 C arr) as many in diamatar	
7. <u>Arisaema triphyllum</u>	1	N	FAC	at breast height (DBH), regardless of height.	
8. Impatiens capensis	1	N	FACW	Sanling/shrub – Woody plants less than 3 in DBH	
9. <u>Viola labradorica</u>	1	N	FAC	and greater than or equal to 3.28 ft (1 m) tall.	
10. <u>Caltha palustris</u>	1	N	OBL	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	
	64	= Total Co	ver	height.	
Woody Vine Stratum (Plot size: 30)		i otal oo			
·			·		
2					
3				Hydrophytic Vegetation	
4			·	Present? Yes <u>v</u> No	
Demoder (lack de state en la la	0	= Total Co	ver		
Remarks: (Include photo numbers here or on a separate	sneet.)	is cano		r dominated by black ash and sugar	
maple, and ground cover dominated by vellow trout lily and graminoids. Ostrich fern and silvery					
spleenwort are abundant within the we	tland ou	tside of	the san	nple plot.	

SOIL

Profile Desc	cription: (Describe t	o the depth	needed to document the indicator or confirm	the absence o	f indicators.)
(inches)	Color (moist)	%	Color (moist) % Type ¹ Loc ²	Texture	Remarks
0-10	10YR 2/1	100	0	М	
				·	
		otion DM-E	Poducod Matrix, MS=Macked Sand Crains	² Legation:	PL-Para Lining M-Matrix
Hvdric Soil	Indicators:			Indicators f	or Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Below Surface (S8) (LRR R.	2 cm Mi	uck (A10) (LRR K. L. MLRA 149B)
→ Histic E	oipedon (A2)	_	MLRA 149B)	Coast P	rairie Redox (A16) (LRR K, L, R)
✓ Black Hi	stic (A3)	_	_ Thin Dark Surface (S9) (LRR R, MLRA 149B)	5 cm Mu	ucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)	—	Loamy Mucky Mineral (F1) (LRR K, L)	Dark Su	rface (S7) (LRR K, L)
Stratified	d Layers (A5) d Dalaw Dark Curfoor		_ Loamy Gleyed Matrix (F2)	Polyvalu	le Below Surface (S8) (LRR K, L)
Deplete	a Below Dark Surface	e (A11)	_ Depleted Matrix (F3) Redox Dark Surface (F6)	Inin Da	rk Sufface (S9) (LRR K, L)
Sandy N	Aucky Mineral (S1)	_	Depleted Dark Surface (F7)	Piedmoi	nt Floodplain Soils (F19) (MLRA 149B)
Sandy G	Gleyed Matrix (S4)		Redox Depressions (F8)	Mesic S	podic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)		,	Red Par	rent Material (F21)
Stripped	l Matrix (S6)			Very Sh	allow Dark Surface (TF12)
Dark Su	rface (S7) (LRR R, M	ILRA 149B)		Other (E	Explain in Remarks)
³ Indicators o	f hydrophytic vegetati	ion and wetla	and hydrology must be present unless disturbed o	or problematic	
Restrictive	Layer (if observed):				
Type: Co	obble				
Denth (in	(10.0)			Hydric Soil F	Present? Yes 🖌 No
Bomarke:	<u>10.0</u>				
Soils are	muck through	out the	profile with restrictive laver of cob	ble at 10 i	nches
	muok in ougi				



wirb1003f_w_W

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	KDF/SAM		
File #:	Date of visit(s):		
wirb1003	2020-05-25		
Location:	Ecological Landscape:		
PLSS: sec 18 T045N R001W	Superior Mineral Bongoo		
		5	
Lat: <u>46.382725</u> Long: <u>-90.547455</u>	Watershed:		
	LS13, Tyler Forks		
County: <u>Iron</u> Town/City/Village: <u>Anderson town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Gogebic silt loam, 6 to 18 percent slopes, very stony, rocky. Gogebic silt	Wetland Type(s):		
loam, 2 to 6 percent slopes, very stony, rocky.	PFO - hardwood swamp		
Field Verified:		•	
Series not verified. Soils were muck throughout	Wetland Size:	Wetland Area Impacted	
the profile with a restrictive cobble layer at 10	0.1189	0.1189	
inches below the surface.	Vegetation:		
	Plant Community Description(s):		
Hydrology:	Hardwood swamp dominated by black ash		
Drainage feature located on a side slope. The hydrologic regime is	and sugar maple, with ground cover dominated by yellow trout lily, ferns, and		
water table at 8 inches and saturation at the surface. There is standing			
water present within the associated ephemeral stream connecting two			
wetland features.	graminoids.		

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty				
1	Ν	Y	Used for recreation (hunting, birding, hiking, etc.). List: Hunting				
2	Ν	N	Used for educational or scientific purposes				
3	Y	Y	Visually or physically accessible to public				
4	Ν	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation				
5	N	N	In or adjacent to RED FLAG areas List:				
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species				
7	N	Ň	In or adjacent to archaeological or cultural resource site				
WH			Wildlife Habitat				
1	Y	Y	Wetland and contiguous habitat >10 acres				
2	Ý	Ý	3 or more strata present (>10% cover)				
3	N	Ň	Within or adjacent to habitat corridor or established wildlife habitat area				
4	Y	Y	100 m buffer – natural land cover >50%(south) 75% (north) intact				
5	N	Ň	Occurs in a Joint Venture priority township				
6	Y	Y	Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex, etc.)				
-		•	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other				
	N	Y	plans				
8	N	Y	Part of a large habitat block that supports area sensitive species				
9	N	N	Ephemeral pond with water present > 45 days				
10	Y	Ý	Standing water provides habitat for amphibians and aquatic invertebrates				
11	N	Ň	Seasonally exposed mudflats present				
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)				
FA			Fish and Aquatic Life Habitat				
1	N	N	Wetland is connected or contiguous with perennial stream or lake				
2	Y	Y	Standing water provides habitat for amphibians and aquatic invertebrates				
3	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system				
4	N	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	N	N	water levels or high flows – if no. not applicable				
3	N	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	Ň	Water flow through wetland is NOT channelized				
3	N	Y	Dense, persistent vegetation				
4	N	Ň	Evidence of flashy hydrology				
5	N	N	Point or non-point source inflow				
6	N	N	Impervious surfaces cover >10% of land surface within the watershed				
7	N	N	Within a watershed with <10% wetland				
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event				
WQ			Water Quality Protection				
1	N	N	Provides substantial storage of storm and floodwater based on previous section				
2	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	Ň	Ý	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	Ň	Natural land cover in 100m buffer area < 50%				
GW			Groundwater Processes				
1	V	V	Springs seeps or indicators of groundwater present				
2		I NI	Location near a groundwater divide or a boddwater wotland				
2			Wotland romains saturated for an extended time period with ne additional water insulta				
3	Y V	Y Y	Wetland soils are organic				
4	Y	Y NI	Wetland is within a wellband protection area				
0	I N	I N					

ST-1: Ephemeral stream feature runs through wetland and serves as drainage.

WH-10: There is no standing water within the wetland, but frogs and toads were observed using wetland area and associated stream at time of survey.

ST-3: Interrupted ground cover throughout the feature. GW-1: Discharge wetland feature associated with ephemeral stream.

WH-6: Interspersion of aquatic habitat from stream with forested wetland.

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

Observed	Potential	Species/Habitat/Comments		
Y	Y	American toads/ aquatic habitat in adjacent stream		
Y	Y	Wood frogs/ aquatic habitat in adjacent stream		
Y	Y	Northern leopard frog / aquatic habitat in adjacent stream		
	Y	Other herpetofauna, avian, 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

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata	All strata present 🖌	All strata present,
	or bare due to	present but	and good	conservative species
	invasive species	reduced native	assemblage of	represented
		species	native species	
NHI plant community	S4	S3	S2	S1-S2 (S2 high quality)
ranking	_	_	_	
Relative frequency of	Abundant 🖌	Common	Uncommon	Rare
plant community in				
watershed				
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)	
Acor cochorum*				Abundance)	
Acer saccharum				Abundani	
Arisaema tripnylium			PFO	Common	
Atnyrium filix-femina*			PFO	Common	
Betula alleghaniensis			PFO	Uncommon	
Caltha palustris			PFO	Uncommon	
Carex crinita			PFO	Common	
Carex leptonervia			PFO	Uncommon	
Carex scabrata			PFO	Common	
Deparia cf. acrostichoides			PFO	Common	
Erythronium americanum*			PFO	Abundant	
Fraxinus nigra*			PFO	Abundant	
Impatiens capensis			PFO	Uncommon	
Matteuccia struthiopteris*			PFO	Common	
Onoclea sensibilis			PFO	Common	
Ostrya virginiana			PFO	Uncommon	
Prenanthes alba			PFO	Uncommon	
Tilia americana			PFO	Rare	
Viola labradorica			PFO	Uncommon	

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

The feature has a diverse assemblage of native species with no observed invasive species.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
_					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells,
					impounded water, increased runoff
					Point source or stormwater discharge
	Х		L	UC	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		L	UC	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	v			C	Removal of herbaceous stratum – mowing,
	^		L	U	grading, earthworms, etc.
x	x		M C Rem		Removal of tree or shrub strata – logging,
~	~		101	0	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
	Х		L	UC	Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):
-					

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is predominately impacted by previous logging activity. The surrounding area is impacted by earthworm activity, roadway stressors, and an ATV trail extending from the road west of the feature.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Diverse assemblage of vegetation within the feature with no invasive species.
Human Use Values	The feature is located on public land and may be accessible to the public for hunting purposes. The wetland is not visible from the road.
Wildlife Habitat	The wetland may provide habitat for avians. Frogs and toads were observed within the wetland and associated stream.
Fish and Aquatic Life Habitat	There is no standing water within feature, but water is present within associated ephemeral stream running through the wetland.
Shoreline Protection	The feature flanks a small ephemeral stream with minor erosion evident. The stream is not influenced by wave action.
Flood and Stormwater Storage	The feature is located on a side slope with interrupted ground cover.
Water Quality Protection	The feature is associated with an ephemeral stream, discharging to surface water.
Groundwater Processes	Discharge feature associated with an ephemeral stream. Organic soils present within the wetland.

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 Relo	cation Proj	ect	City/C	County: Iron		Sampling Date: 2020-05-25		
Applicant/Owner: Enbridge			State:		State: Wiscons	sin Sampling Point: wirb1003_u		
Investigator(s): SAM/KDF Section Township Range: Sec 18					ne: sec 18 T045N	R001W		
Landform (hillslope terrace et	tc) [.] Side Slo	ope	Local relief (concave, convex, none): None Slope (%): 3-7			Slope (%): 3-7%		
Subragion (I PP or MI PA): N	orthcentral For	ests Lat	- 16 383271		00 5/61/3	Objec (%): <u>0 770</u>		
Soil Man Unit Name: Goge	hic silt loan	La	6 percent slope	Long.				
Are elimetia / budrelegia condi	tions on the site	<u>1, 2 10</u>	ion this time of year?		(If no evolution in D			
Are climatic / hydrologic condi	ions on the site	турісаі і	or this time of year?	res <u>v</u> NU		emarks.)		
Are vegetation, Soll	, or Hydro	ogy	significantly distur	rbed? Are N				
Are Vegetation, Soil	, or Hydro	ogy	naturally problema	atic? (If nee	ded, explain any answe	rs in Remarks.)		
SUMMARY OF FINDING	GS – Attach	site n	nap showing san	npling point lo	cations, transects	, important features, etc.		
Lludraphytic Vagatation Drea	ont? Va		No. 14	Is the Sampled A	Area			
Hydrophylic Vegetation Pres Hydric Soil Present?	ent? fe Ye	s	NO	within a Wetland	l? Yes	No <u> </u>		
Wetland Hydrology Present?	Ye	s	No 🖌	If ves. optional W	etland Site ID:			
Remarks: (Explain alternativ	e procedures h	ere or in	a separate report.)					
Mesic hardwood co	mmunity o	f suga	ar maple with o	ccasional bas	sswood and bla	ck ash individuals.		
Leaf duff minimal. S	apling-size	ed bla	ick ash commo	n near the w	etland feature b	ut decreases further		
away from the wetla	and feature	s.						
	0.00				Secondary India	tors (minimum of two required)		
Drimony Indicators (minimum	of one is requir	od: obor	k all that apply)		Secondary Indica			
Surface Water (A1)		ea, chec	Water Stained Leaves (PQ)		Surface Soli	Drainage Patterns (P10)		
Surface Water (AT) High Water Table (Δ2)			Aquatic Fauna (B13)	5 (D9)	Drainage Fa	Moss Trim Lines (B16)		
Saturation (A3)			Marl Deposits (B15)			Dry-Season Water Table (C2)		
Water Marks (B1)			Hvdrogen Sulfide Od	lor (C1)	Cravfish Bur	Crayfish Burrows (C8)		
Sediment Deposits (B2)			Oxidized Rhizospher	res on Living Roots	(C3) Saturation V	Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3)			Presence of Reduced	d Iron (C4)	Stunted or S	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)			Recent Iron Reduction	on in Tilled Soils (C6	6) Geomorphic	Position (D2)		
Iron Deposits (B5)			Thin Muck Surface (0	C7)	Shallow Aqu	Shallow Aquitard (D3)		
Inundation Visible on Ae	rial Imagery (B7	·)	Other (Explain in Rer	marks)	Microtopogra	Microtopographic Relief (D4)		
Sparsely Vegetated Con	cave Surface (E	, <u> </u>		,	FAC-Neutral	Test (D5)		
Field Observations:		,				. ,		
Surface Water Present?	Yes I	No 🖌	_ Depth (inches):					
Water Table Present?	Yes 1	No 🖌	Depth (inches):					
Saturation Present?	Yes N	No 🖌	_ Depth (inches):	Wetl	and Hydrology Preser	t? Yes No∕		
(includes capillary fringe)		nitorina	well aerial photos pre	vious inspections)	if available.			
	cam gauge, mo	intoring	weil, aeriai priotos, pre					
Remarks:								
NO SIGNS OF SUDSULF	ace nydrol	ogy o	r other visual s	igns of wetlai	na nyarology.			
VEGETATION – Use scientific names of plants.

Sampling Point: wirb1003_u

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	<u>Species?</u>	Status	Number of Dominant Species
1. <u>Acer saccharum</u>	40	<u> </u>	FACU	That Are OBL, FACW, or FAC: (A)
2. <u>Fraxinus nigra</u>	5	<u> N </u>	FACW	Total Number of Dominant
3			·	Species Across All Strata:7 (B)
4		. <u></u>		Percent of Dominant Species
5			·	That Are OBL, FACW, or FAC: 29 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	45	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =40
1. Acer saccharum	10	Y	FACU	FAC species <u>12</u> x 3 = <u>36</u>
2. Fraxinus nigra	5	Y	FACW	FACU species <u>76</u> x 4 = <u>304</u>
3 Quercus rubra	<u> </u>	Y	FACU	UPL species <u>5</u> x 5 = <u>25</u>
1			<u> 1700</u>	Column Totals: <u>113</u> (A) <u>405</u> (B)
5.			·	Prevalence Index = B/A = <u>3.58</u>
6.			·	Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
	20	= Total Co	Ver	2 - Dominance Test is >50%
Horb Stratum (Plot size: 5)	_20_	- 10(0100	VCI	3 - Prevalence Index is $\leq 3.0^1$
1 Enthronium americanum	10	V		4 - Morphological Adaptations ¹ (Provide supporting
Acor saccharum	10	 	EACU	Problematic Hydrophytic Vegetation ¹ (Explain)
	10	 		
3. <u>Plaxinus nigra</u>		<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Ables balsamea</u>				be present, unless disturbed or problematic.
5. <u>Mitchella repens</u>		<u> </u>	FACU	Definitions of Vegetation Strata:
6. <u>Carex pedunculata</u>	5	<u> </u>		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Eurybia macrophylla</u>	5	<u> N </u>		at breast height (DBH), regardless of height.
8. <u>Trientalis borealis</u>		<u> N </u>	FAC	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Tilia americana</u>	2	<u> N</u>	<u>FACU</u>	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Circaea canadensis</u>	2	N	<u>FACU</u>	Herb – All herbaceous (non-woody) plants, regardless
11. <i>Maianthemum canadense</i>	2	N	<u>FACU</u>	of size, and woody plants less than 3.28 ft tall.
12			·	Woody vines – All woody vines greater than 3.28 ft in
	58	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2.				
3.				Hydrophytic
4				Vegetation
	0	= Total Co	ver	Present? Yes No <u>~</u>
Remarks: (Include photo numbers here or on a separate	sheet.)	i otai oo		
Immediate area with an interrupted car	nopy of s	sugar m	aple. Bl	ack ash saplings common at this
location but canopy-sized black ash re-	stricted t	to the w	etland.	

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth		Matrix		Redox	x Feature	s					
(inches)	Color (I	moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-7	<u>10YR</u>	2/2	100		0	<u> </u>		SCL			
7-20	5YR	4/4	100		0			CL			
	<u> </u>	., .									
							·	·			
¹ Type: C=C	oncentratior	n, D=Dep	letion, RM	Reduced Matrix, MS	S=Maske	d Sand Gra	ains.	² Location: PL=Por	e Lining, M=M	atrix.	
Hydric Soil	Indicators:							Indicators for Prob	ematic Hydrid	c Soils°:	
Histosol	(A1)			Polyvalue Belov	v Surface	e (S8) (LRF	RR,	2 cm Muck (A10) (LRR K, L, N	ILRA 149B)	
Histic Ep	bipedon (A2	2)		MLRA 149B)				Coast Prairie Re	dox (A16) (LR	(R K, L, R)	
Black Hi	STIC (A3) on Sulfido (/	(4)		Thin Dark Surfa	CE (S9) (I Ainoral (E		LRA 1498) 5 CM MUCKY Pea	at of Peat (S3)	(LRR K, L, R)	
Hyuruge Stratifier	H Sullue (F	14 <i>)</i> 5)		Loamy Gleved M	Matrix (E2	1) (LKK K 2)	, L)	Polyvalue Below	(LKKK, L)		
Oraline	d Below Da	o) rk Surface	e (A11)	Depleted Matrix	(F3)	-)		Thin Dark Surfa	ce (S9) (I RR I	$(\mathbf{L}(\mathbf{K},\mathbf{K},\mathbf{L})$	
Thick Da	ark Surface	(A12)	5 (711)	Redox Dark Sur	face (F6))		Iron-Manganese Masses (F12) (LRR K, L, R)			
Sandy M	lucky Miner	al (S1)		Depleted Dark S	Surface (I	, F7)		Piedmont Flood	Piedmont Floodplain Soils (F19) (MLRA 149B)		
Sandy G	Sleyed Matri	ix (S4)		Redox Depressi	ions (F8)	,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
Sandy F	Redox (S5)							Red Parent Material (F21)			
Stripped	Matrix (S6)						Very Shallow Dark Surface (TF12)			
Dark Su	rface (S7) (LRR R, N	ILRA 149E	8)				Other (Explain in	ו Remarks)		
3 maliantera a	f las salura va las sti						ما المارية ما	l an anablanatia			
Postrictivo	r nyaropnya	c vegetat	ion and we	etiand hydrology mus	t be pres	ent, unless	s disturbed	f or problematic.			
Tunoi	Layer (II Ob	iseiveu).									
Type.								Undria Cail Dragonti			
Depth (in	ches):							Hydric Soli Present	Tes	<u>NO</u>	
Remarks:		P									
No nyari	c soil ind	dicator	s or ree	dox reatures p	resen	t.					



wirb1003_u_N



wirb1003_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation P	roject	_ City/County: Iron	Sampling Date: <u>2020-05-25</u>
Applicant/Owner: <u>Enbridge</u>			_ State: <u>Wisconsin</u> Sampling Point: <u>wirb1004f_w</u>
Investigator(s): KDF/SAM		_ Section, Township, Range: <u>Section</u>	ec 18 T045N R001W
Landform (hillslope, terrace, etc.): Depr	ession	Local relief (concave, convex, nor	ne): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral	Forests Lat: 46.3837		.546030 Datum: WGS84
Soil Map Unit Name: Gogebic silt Ic	am, 2 to 6 percen	<u>t slopes, very stony, roc</u>	ky NWI classification:
Are climatic / hydrologic conditions on the	site typical for this time of	year? Yes 🖌 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hy	drology significar	tly disturbed? Are "Normal	Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hy	drology naturally	problematic? (If needed, e	xplain any answers in Remarks.)
SUMMARY OF FINDINGS - Atta	ach site map showi	ng sampling point locatio	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative procedure The feature is located within woody debris.	Yes <u>v</u> No Yes <u>v</u> No Yes <u>v</u> No is here or in a separate re northern mesic	Is the Sampled Area within a Wetland? If yes, optional Wetland port.)	Yes No Site ID: layer and abundant downed
HYDROLOGY			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is re	quired; check all that appl	<u>y)</u>	Surface Soil Cracks (B6)
Surface Water (A1)	🔽 Water-Staine	ed Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	Aquatic Fau	na (B13)	Moss Trim Lines (B16)
Saturation (A3)	Marl Deposit	s (B15)	Dry-Season Water Table (C2)
Water Marks (B1)	Hydrogen Si	ulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rh	zospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)

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

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

 Yes
 No
 ✓
 Depth (inches):

 Yes
 ✓
 No
 Depth (inches):
 2

Remarks:

Drift Deposits (B3)

___ Iron Deposits (B5)

Field Observations: Surface Water Present?

Water Table Present? Saturation Present?

(includes capillary fringe)

____ Algal Mat or Crust (B4)

____ Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

The hydrologic regime is seasonally saturated with discharge hydrology. Thick, water-stained duff layer is present throughout the sparsely vegetated depression. High water table at 2 inches and saturation to the surface.

Presence of Reduced Iron (C4)

Recent Iron Reduction in Tilled Soils (C6)

____ Thin Muck Surface (C7)

____ Other (Explain in Remarks)

____ Stunted or Stressed Plants (D1)

_ Geomorphic Position (D2)

____ Microtopographic Relief (D4)

FAC-Neutral Test (D5)

Wetland Hydrology Present? Yes _

____ Shallow Aquitard (D3)

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wirb1004f_w</u>

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 Acer saccharum	25	V	FACU	Number of Dominant Species 2 (A)
2 Fravinus nigra	<u> </u>	 		That are OBL, FACW, of FAC: 3 (A)
2. <u>Fraxinus nigra</u>		I	<u>I AOM</u>	Total Number of Dominant Species Across All Strata: 6 (B)
4				Descent of Descinent Operation
5				That Are OBL, FACW, or FAC:
6.				
7				Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
		= Total Cov	/er	OBL species $1 \times 1 = 1$
Sapling/Shrub Stratum (Plot size: 15)				FACW species 36 $x^2 = 72$
1. <u>Fraxinus nigra</u>	10	<u> Y </u>	FACW	FACU species 33 $x = 132$
2. <u>Acer saccharum</u>	5	<u> Y </u>	<u>FACU</u>	$\frac{1100 \text{ species}}{100 \text{ species}} = 0$
3				Column Totals: 77 (A) 226 (B)
4				
5				Prevalence Index = B/A = <u>2.94</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	15	= Total Cov	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				\sim 3 - Prevalence Index is $\leq 3.0^{\circ}$
1. <u>Athyrium angustum</u>	5	Y	FAC	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2. <u>Carex cf. gracillima</u>	2	Y	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Arisaema triphyllum	2	N	FAC	
4. Impatiens capensis	1	N	FACW	Indicators of hydric soil and wetland hydrology must
5 Ervthronium americanum	1	N	<u></u>	
6. Gympocarnium dryonteris	1	 N	FACU	Definitions of vegetation Strata:
 Carex disperma 	 1	<u></u>	OBI	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8				a breast height (bbr), regardless of height.
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
	13	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: 30)				
,,				
2				
3				Hudronhutio
0				Vegetation
- T		- Total Ca		Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	<u> </u>		/ei	
Hardwood swamp feature with interrup	ted to co	ontinuou	is cano	by dominated by black ash and sugar
maple. Patchy ground cover of lady fer	n and gi	raminoid	ds.	
· · ·	2			

SOIL

Profile Desc	ription: (Describe t	the depth	needed to docum	nent the i	indicator	or confirm	the absence of	indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Feature	S Type ¹		Texture	Remarks
		100						Nemarka
	<u>10YR 2/1</u>	100			·			
	. <u></u>			·	·			
				·				
				·	·			
					·			
				·				
				·	·			
							<u> </u>	
				·				
				·	·			
				·				
¹ Type: C=Co	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	S=Masked	d Sand Gra	ains.	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil	indicators:						Indicators fo	r Problematic Hydric Soils":
Histosol	(A1) Ninodon (A2)	-	Polyvalue Belov	w Surface	(S8) (LR F	RR,	2 cm Muc	ck (A10) (LRR K, L, MLRA 149B)
Black Hi	stic (A3)		Thin Dark Surfa	, Ice (S9) (I	RR R. MI	RA 149B)	Coast Pla	cky Peat or Peat (S3) (I RR K, I, R)
Hydroge	n Sulfide (A4)		Loamy Mucky N	/lineral (F	1) (LRR K	, L)	Dark Sur	face (S7) (LRR K, L)
Stratified	Layers (A5)	_	Loamy Gleyed I	Matrix (F2	2)		Polyvalue	e Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	e (A11)	_ Depleted Matrix	(F3)			_∠ Thin Darl	Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)	-	Redox Dark Sui Dopleted Dark S	rface (F6)	7)		Iron-Man	ganese Masses (F12) (LRR K, L, R)
Sandy R	leved Matrix (S4)	_	_ Depleted Dark 3	ions (F8)	()		Mesic Sn	odic (TA6) (MI RA 144A 145, 149B)
Sandy R	edox (S5)	—					Red Pare	ent Material (F21)
Stripped	Matrix (S6)						Very Sha	Illow Dark Surface (TF12)
Dark Su	rface (S7) (LRR R, M	ILRA 149B)					✓ Other (Ex	دplain in Remarks)
31				4 1				
Postrictive I	aver (if observed):	ion and wetla	and hydrology mus	t be prese	ent, uniess	saisturbea	or problematic.	
туре. <u>С.</u>							Hydric Soil Pr	resent? Ves 🖌 No
Depth (ind	ches): <u>4.0</u>						Hydric 301 Fr	
Remarks:	mucky poot th	arougho	ut with a reat	riotivo	aabbla	lovor	t 1 inchoo	The hydrology and
Joins are	mucky pear in	diaata th		ncuve budri		a layer a	at 4 mones.	The hydrology and
dominan	r vegetation in	uicate ti	lese solis ale	e nyan	C.			



wirb1004f_w_SW

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

Evaluator(s):				
KDF/SAM				
Date of visit(s):				
2020-05-25				
Ecological Landsca	ape:			
Superior Mineral Range	S			
	5			
Watershed:				
LS13, Tyler Forks				
WWI Class:				
N/A				
Wetland Type(s):				
PFO - hardwood swamp				
·				
Wetland Size:	Wetland Area Impacted			
0.0268	0.0268			
Vegetation:				
Plant Community D	Description(s):			
Hardwood swamp feature with interrupted to				
continuous conony dominated by black ach				
continuous canopy dominated by black ash				
and sugar maple	e. Sparse ground cover of			
lady fern and gra	aminoids.			
	Evaluator(s): KDF/SAM Date of visit(s): 2020-05-25 Ecological Landsca Superior Mineral Ranges Watershed: LS13, Tyler Forks WWI Class: N/A Wetland Type(s): PFO - hardwood Wetland Size: 0.0268 Vegetation: Plant Community D Hardwood swan continuous cand and sugar maple lady fern and gra			

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	Ν	Y	Used for recreation (hunting, birding, hiking, etc.). List: hunting
2	Ν	N	Used for educational or scientific purposes
3	Y	Y	Visually or physically accessible to public
4	Ν	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	Ň	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	Ý	Ý	3 or more strata present (>10% cover)
3	N	Ň	Within or adjacent to habitat corridor or established wildlife habitat area
4	Y	Y	100 m buffer – natural land cover >50%(south) 75% (north) intact
5	N	Ň	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
1	N	Y	plans
8	N	Y	Part of a large habitat block that supports area sensitive species
9	N	Ň	Ephemeral pond with water present > 45 days
10	N	N	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	N	N	Wetland is connected or contiguous with perennial stream or lake
2	N	N	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	N	Vegetation is inundated in spring
SP			Shoreline Protection
1	N	N	Along shoreline of a stream lake pond or open water area (>1 acre) - if no not applicable
<u> </u>	IN	IN	Potential for erosion due to wind fetch waves beavy hoat traffic erosive soils fluctuating
2	Ν	N	water levels or high flows – if no, not applicable
3	N	N	Densely rooted emergent or woody vegetation
ST	IN		Storm and Floodwater Storage
1	V	~	Basin wetland constricted outlet has through-flow or is adjacent to a stream
2	V	V I	Water flow through wetland is NOT channelized
3	N	N	Dense persistent vegetation
4		N	Evidence of flashy hydrology
5		N	Point or non-point source inflow
6			Impervious surfaces cover >10% of land surface within the watershed
7			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
WO	IN	IN	Water Quality Protection
1	NI	v	Provides substantial storage of storm and floodwater based on previous section
2		ř V	Basin wetland or constricted outlet
2	ř V	ř V	Water flew through wetland is NOT channelized
3	Ý NI	Y NI	Vegeteted wetland essesiated with a lake or stream
4	IN NI	IN N	
5	IN N	IN N	Cigno of evenes putrients, such as along blooms, begins macrophyte growth
7	IN N	IN N	Signs of excess numerics, such as algae blooms, neavy macrophyle growin
- /	IN X	N N	Discharge te surface water nom agricultural land is major hydrology source
0	Y	Y	Discharge to suitable water
9	N	N	rvaturarianu cover in 100m buller area < 50%
GW			Groundwater Processes
1	Y	Y	Springs, seeps or indicators of groundwater present
2	Ν	N	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
4	Y	Y	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

GW-1: The feature exhibits discharge hydrology. GW-4: Soils are mucky peat. ST-3: Sparsely vegetated concave surface likely with increased evapotranspiration.

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

Observed	Potential	Species/Habitat/Comments
	Y	Avian, herpetofauna, 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

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	S37	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 saccharum*				Common
Arisaema triphyllum				Uncommon
Athyrium filix-femina*				Common
Carex cf. gracillima				Uncommon
Carex disperma				Rare
Erythronium americanum				Uncommon
Fraxinus nigra*				Common
Gymnocarpium dryopteris				Rare
Impatiens capensis				Rare

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is relatively unaltered but is influenced by previous logging activity. The surrounding area is impacted by logging, road stressors, and earthworm activity.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Sparsely vegetated depression with conservative native species represented.
Human Use Values	The feature is located on public land with potential hunting use. The wetland is not visible from the road.
Wildlife Habitat	There is potential habitat for avians but the feature is lacking many habitat features within the small depression.
Fish and Aquatic Life Habitat	N/A
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a small basin wetland with sparse vegetation. The wetland is not associated with a waterbody feature and likely does not obtain significant stormwater runoff.
Water Quality Protection	See above.
Groundwater Processes	The feature exhibits discharge hydrology. Soils are organic.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City	/County: <u>Iron</u> Sampling Date: <u>2020-05-25</u>
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wirb1004_u
Investigator(s): SAM/KDF Sec	tion, Township, Range: Sec 18 T045N R001W
Landform (hillslope, terrace, etc.): Side Slope	elief (concave, convex, none): None Slope (%): 3-7%
Subregion (I BR or MI BA). Northcentral Forests Lat: 46.383829	Long: -90.546203 Datum: WGS84
Soil Map Unit Name: Gogebic silt loam 2 to 6 percent slor	Des very stony rocky NWI classification:
Are dimatic / bydrologic conditions on the site typical for this time of year?	V_{00} V No (If no ovalajn in Domarka)
Are Variated in the Call of the set by the set by the set of the s	
Are vegetation, Soil, or Hydrology significantly dist	urbed? Are Normal Circumstances present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally probler	natic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No 🗸	Is the Sampled Area
Hydric Soil Present? Yes No 🖌	within a Wetland? Yes <u>No </u>
Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID:
wirb1004f and wirb1005f.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leav	/es (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13	3) Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide C	dor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosphe	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Presence of Reduct	ion 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 Re	emarks) 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 V Depth (inches):	
Saturation Present? Yes No Ves Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	revious inspections), if available:
Remarks:	
Sample recorded on a slope with no signs of disc	harge. No primary or secondary indicators of
wetland hydrology observed.	

VEGETATION – Use scientific names of plants.

Sampling Point: wirb1004_u

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	<u>Species?</u>	<u>Status</u>	Number of Dominant Species		
1. <u>Acer saccharum</u>	40	Y	<u>FACU</u>	That Are OBL, FACW, or FAC: (A)		
2. <u>Tilia americana</u>	30	Y	<u>FACU</u>	Total Number of Dominant		
3. <u>Fraxinus nigra</u>	10	N	<u>FACW</u>	Species Across All Strata:7 (B)		
4				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC: <u>14</u> (A/B)		
6				Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
	80	= Total Co	ver	$\frac{1}{\text{OBL species}} = 0 \qquad \text{x1} = 0$		
Sapling/Shrub Stratum (Plot size: 15)				FACW species $25 \times 2 = 50$		
1 Acer saccharum	15	Y	FACU	FAC species x 3 =		
2 Fravinus nigra	10	 		FACU species <u>122</u> x 4 = <u>488</u>		
2. Ostrvo virginiano	10			UPL species x 5 =		
		I	<u>FACU</u>	Column Totals: <u>154</u> (A) <u>559</u> (B)		
4			·	Prevalence index = $B/A = 3.6298701298701297$		
5			·			
6				Hydrophytic Vegetation Indicators:		
7			·	1 - Rapid Test for Hydrophytic Vegetation		
	35	= Total Co	ver	2 - 2 - Dominance results > 30%		
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting		
1. <u>Acer saccharum</u>	20	Y	<u>FACU</u>	data in Remarks or on a separate sheet)		
2. Erythronium americanum	10	Y		Problematic Hydrophytic Vegetation ¹ (Explain)		
3. <u>Carex pedunculata</u>	5	N	FAC	1		
4. <u>Caulophyllum thalictroides</u>	5	N		be present, unless disturbed or problematic.		
5. <u>Fraxinus nigra</u>	5	N	FACW	Definitions of Vegetation Strata		
6. Tilia americana	5	Ν	FACU			
7. Vitis riparia	2	Ν	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
8. Maianthemum racemosum	2	N	FACU	Serling/abruh Woody plants loss than 2 in DDU		
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		
	54	= Total Co	ver	height.		
Woody Vino Stratum (Plot size: 30)		- 10101 00	VCI			
1			·			
2			·			
3			·	Hydrophytic Vegetation		
4			·	Present? Yes No <u>~</u>		
	0	= Total Co	ver			
Remarks: (Include photo numbers here or on a separate	sheet.)	d canon	v of sug	ar maple with basswood I eaf duff		
greatly reduced: earthworm activity assumed.						

Profile Desc	cription: (Describe	to the depth	needed to document the indicator or confirm	the absence of	f indicators.)
Depth (inches)	Matrix Color (moist)	<u>%</u>	$\frac{\text{Redox Features}}{\text{Color (moist)}} \qquad \% \qquad \text{Type}^1 \qquad \text{Loc}^2$	Texture	Remarks
<u>0-8</u>	10YR 2/1	100		SCI	Kemano
011	<u>5VP 4/4</u>	100			
0-14	<u> 31K 4/4</u>				
. <u> </u>		· <u> </u>			
		. <u> </u>			
		·			
		·			
		· <u> </u>			
<u> </u>					
¹ Type: C=C	oncentration, D=Dep	letion, RM=R	educed Matrix, MS=Masked Sand Grains.	² Location:	PL=Pore Lining, M=Matrix.
Histosol	(A1)		Polyvalue Below Surface (S8) (I RR R	2 cm Mu	ck (A10) (I RR K, I - MI RA 149B)
Histic E	pipedon (A2)	_	MLRA 149B)	Coast Pr	rairie Redox (A16) (LRR K, L, R)
Black Hi	istic (A3)	_	Thin Dark Surface (S9) (LRR R, MLRA 149B)	5 cm Mu	cky Peat or Peat (S3) (LRR K, L, R)
Stratifie	d Lavers (A5)		Loamy Mucky Mineral (F1) (LKR K, L)	Polvvalu	e Below Surface (S8) (LRR K. L)
Deplete	d Below Dark Surface	e (A11)	_ Depleted Matrix (F3)	Thin Dar	k Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)		_ Redox Dark Surface (F6)	Iron-Man	iganese Masses (F12) (LRR K, L, R)
Sandy N	Gleved Matrix (S4)		_ Depleted Dark Surface (F7) Redox Depressions (F8)	Pleamon Mesic Sr	odic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)			Red Pare	ent Material (F21)
Stripped	Matrix (S6)			Very Sha	allow Dark Surface (TF12)
Dark Su		ILRA 149B)		Other (E	xplain in Remarks)
³ Indicators o	f hydrophytic vegetat	ion and wetla	and hydrology must be present, unless disturbed	or problematic.	
Restrictive	Layer (if observed):				
Туре: <u>С</u>			_	Undria Cail D	nagant2 Yag Ng (
Depth (in	ches): <u>14.0</u>			Hydric Soli P	resent? fes <u>NO v</u>
Soils apr	pear to be well	l drained	Woody root debris present		
		raramoa			





wirb1004_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	t City/County: <u>Iro</u>	n s	Campling Date: <u>2020-05-26</u>
Applicant/Owner: Enbridge		State: Wisconsin	Sampling Point: wirb1005f_w
Investigator(s): KDF/SAM	Section, Townshi	p, Range: <u>sec 18 T045N [</u>	R001W
Landform (hillslope, terrace, etc.): Depressio	n Local relief (concave	, convex, none): <u>Concave</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forest	^s Lat: <u>46.383980</u>	Long: <u>-90.546373</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic silt loam, 6	to 18 percent slopes, very	stony, rocky NWI classificati	ion:
Are climatic / hydrologic conditions on the site typ	ical for this time of year? Yes	No (If no, explain in Ren	narks.)
Are Vegetation . Soil . or Hydrology	significantly disturbed?	Are "Normal Circumstances" pre	sent? Yes 🖌 No
Are Vegetation Soil or Hydrology	naturally problematic?	(If needed, explain any answers	in Remarks.)
SUMMARY OF FINDINGS – Attach si	te map showing sampling po	int locations, transects, i	mportant features, etc.
Hydrophytic Vegetation Present? Yes	✓ No Is the San	pled Area	
Hydric Soil Present? Yes	V No within a W	/etland? Yes <u>v</u>	No
Wetland Hydrology Present? Yes _	✓ No If yes, opti	onal Wetland Site ID:	
upland point with wirb roo41_w.			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicator	rs (minimum of two required)
Primary Indicators (minimum of one is required;	check all that apply)	Surface Soil Cr	acks (B6)
_∠ Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patte	rns (B10)
High Water Table (A2)	🔽 Aquatic Fauna (B13)	Moss Trim Line	es (B16)
Saturation (A3)	Marl Deposits (B15)	Dry-Season Wa	ater Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrov	ws (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living	Roots (C3) Saturation Visit	ole on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stre	ssed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled S	oils (C6) <u>~</u> Geomorphic Po	osition (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquita	rd (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopograph	nic Relief (D4)

Sparsely Vegetated Concave Surface (B8)

Yes <u>v</u> No Depth (inches): <u>6</u>

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

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

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

Field Observations:

Surface Water Present?

(includes capillary fringe)

Water Table Present? Saturation Present? ___ FAC-Neutral Test (D5)

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

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wirb1005f_w</u>

Interstration (Flot size. Store Species / Status Number of Dominant Species 1. Fraxinus nigra 50 Y FACW Number of Dominant Species 2.					
1. Traxinus riigra					
2.					
4.					
5 That Are OBL, FACW, or FAC: (A/B)					
6. Browslance Index workshoot					
7. Total % Cover of: Multiply by:					
50 = Total Cover					
Sapling/Shrub Stratum (Plot size: 15) FACW species $64 \times 2 = 128$					
$\frac{320}{10} = 10$					
1. <u>Fraxinus nigra IU FACVV</u> FACU species $0 \times 4 = 0$					
2 UPL species x 5 =					
3 Column Totals: (A) (B)					
4					
5					
6 Hydrophytic Vegetation Indicators:					
$\underline{10} = \text{Total Cover}$					
Herb Stratum (Plot size: 5)					
1. <u>Fraxinus nigra</u> <u>2</u> <u>Y</u> <u>FACW</u> data in Remarks or on a separate sheet)					
2. <u>Ulmus americana</u> <u>2</u> <u>Y</u> FACW Problematic Hydrophytic Vegetation ¹ (Explain)					
3. <u>Caltha palustris 2 Y OBL</u>					
4 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
5. Definitions of Vegetation Strate:					
6.					
7.					
8 Model and a set of the s					
9 and greater than or equal to 3.28 π (1 m) tail.					
10. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.					
12. Woody vines – All woody vines greater than 3.28 ft in					
6 = Total Cover					
Woody Vine Stratum (Plot size: 30)					
2					
3 Hydrophytic					
4 Present? Yes <u>✓</u> No					
= Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.) The feature is a hardwood swamp (vernal pool) dominated by black ash. Dryopteris carthusiana is					
present within the wetland growing on rotted tree stumps					

SOIL

Donth	cription: (Describe t	to the depth	n needed to docum	nent the indicate	or or confirm	the absence of inc	dicators.)
(inches)	Color (moist)	%	Color (moist)	<u>%</u> Type	¹ Loc ²	Texture	Remarks
0-5	10YR 2/1						
			Reduced Matrix MS			21 ocation: PI =	Pore Lining M=Matrix
Hydric Soil Histosol Histic E Black H Hydroge Stratifier Depletee Thick Da Sandy N Sandy F Strippec Dark Su	Indicators: Indicators: I (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) d Matrix (S6) Inface (S7) (LRR R, M	etton, rtwi-r - - e (A11) _ - - - - - - - - - - - - - - - - - - -	Polyvalue Belov MLRA 149B) Thin Dark Surfa Loamy Mucky M Loamy Gleyed M Depleted Matrix Redox Dark Sur Depleted Dark Sur Redox Depressi	v Surface (S8) (L ce (S9) (LRR R, lineral (F1) (LRR Matrix (F2) (F3) face (F6) Surface (F6) Surface (F7) ions (F8)	RR R, MLRA 149B) K, L)	Indicators for P ✓ 2 cm Muck (Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark Si Iron-Mangar Piedmont Fle Mesic Spodi Red Parent I Very Shallow Other (Explain)	roblematic Hydric Soils ³ : A10) (LRR K, L, MLRA 149B) e Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L) elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) bese Masses (F12) (LRR K, L, R) bodplain Soils (F19) (MLRA 149B) c (TA6) (MLRA 144A, 145, 149B) Material (F21) v Dark Surface (TF12) in in Remarks)
³ Indicators o Restrictive Type: <u>Ca</u> Depth (in	f hydrophytic vegetati Layer (if observed): obble ches): <u>5.0</u>	ion and wetl	and hydrology mus	t be present, unle	ess disturbed	or problematic. Hydric Soil Prese	ent? Yes <u> </u>
Remarks: The soils	s are organic w	vith a res	strictive cobb	le layer at 5	5 inches.		



wirb1005f_w_N



wirb1005f_w_W

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	KDF/SAM		
File #:	Date of visit(s):		
wirb1005	2020-05-26		
Location:	Ecological Landsca	ape:	
PLSS: sec 18 T045N R001W	Superior Mineral Ranges		
Lat: <u>46.384353</u> Long: <u>-90.546142</u>	Watershed:		
	LS13, Tyler Forks		
County: <u>Iron</u> Town/City/Village: <u>Anderson town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Gogebic silt loam, 6 to 18 percent slopes, very stony, rocky. Gogebic silt	Wetland Type(s):		
loam, 2 to 6 percent slopes, very stony, rocky.	PFO - Hardwood swamp (vernal pool)		
Field Verified:			
Series not verified. Soils were organic throughout	Wetland Size:	Wetland Area Impacted	
with a restrictive cobble layer at 5 inches below	0.0400	0.0400	
the surface.	Vegetation:		
	Plant Community Description(s):		
Hydrology:	The feature is a hardwood swamp (vernal pool) dominated by black ash. Dryopteris carthusiana is		
Surface water is present at the time of survey. The hydrologic regime is			
throughout the season. Black ash within the vernal pool exhibit buttressed	present within the wetland growing on a rotted tree		
trunks. Tadpoles are present within the vernal pool.	stump. The feature is predominately unvegetated.		

SITE MAP

SECTION 1: Functional Value Assessment

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

WH-10, FA-2: Vernal pool provides aquatic habitat for frogs and toads. Tadpoles and Wood Frog were observed within the pool. GW-4: Soils are muck throughout.

HU-3: The feature is located on public land accessible to the public, with a road in the buffer area.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Wood frog / aquatic habitat
	Y	Avians, herpetofauna

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

Observed	Potential	Species/Habitat
	Y	Aquatic invertebrates
Y	Y	Tadpoles / aquatic habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
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	S37	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*				Interrupted
Ulmus americana				Barren
Arisaema triphyllum				Barren
Caltha palustris				Barren
Dryopteris carthusiana				Barren

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

The feature is largely unvegetated with relatively bare ground cover, as a result of the vernal pool in the feature. Represented vegetation are native species with no observed invasives.

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

Assessment Area (AA)	Buffer	Historic	Impact	Relative Frequency**	Stressor
7				Trequency	Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells,
					impounded water, increased runoff
					Point source or stormwater discharge
	Х		L	UC	Polluted runoff
	Х		L	UC	Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		L	UC	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	х		1	UC	Removal of herbaceous stratum – mowing,
	~		-		grading, earthworms, etc.
	Х		М	С	Removal of tree or shrub strata – logging,
					Unprescribed fire
					Human trails – unpaved
					Ruman trais – paveu
					Cover of pop potive and/or investive aposice
					Cover of hori-fidure and/or invasive species
					Lirban, commercial or industrial use
					Parking lot
					Golf course
					Gravel nit
	x		1	UC	Recreational use (boating ATVs etc.)
	~		<u> </u>		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 itself is relatively undisturbed. The surrounding area is impacted by previous logging, earthworm activity, road stressors, and an unmarked ATV trail near the road.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Conservative assemblage of species represented within the vernal pool, comprised of native species. The feature is predominately unvegetated.
Human Use Values	The feature is located on public land, but is unlikely to be used for recreational purposes.
Wildlife Habitat	The feature and surrounding area may provide habitat for avians and amphibians.
Fish and Aquatic Life Habitat	Vernal pool provides seasonal habitat for frogs and toads. Tadpoles were observed within the feature at the time of the survey.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a basin wetland that receives stormwater runoff from the surrounding area, but is relatively small.
Water Quality Protection	See above.
Groundwater Processes	Soils are organic and the feature contains a vernal pool, which implies groundwater interactions.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County:	Iron	Sampling Date: 2020-05-26
Applicant/Owner: Enbridge		State: Wisco	nsin Sampling Point: wirb1006f_w
Investigator(s): KDF/SAM	Section, Tow	nship, Range: <u>sec 18 T045</u>	N R001W
Landform (hillslope, terrace, etc.): Side Slope	Eccal relief (con	cave, convex, none): <u>Convex</u>	Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): Northcentral Forest	[,] Lat: 46.384257	Long: <u>-90.546018</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic silt loam, 2	to 6 percent slopes, ve	ry stony, rocky NWI classi	fication: PFO1C
Are climatic / hydrologic conditions on the site typ	cal for this time of year? Yes	No (If no, explain in	Remarks.)
Are Vegetation , Soil , or Hydrology	significantly disturbed?	Are "Normal Circumstances	" present? Yes ✔ No
Are Vegetation Soil or Hydrology	naturally problematic?	(If needed, explain any ansy	vers in Remarks.)
SUMMARY OF FINDINGS – Attach si	e map snowing sampling	point locations, transect	ts, important features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	✓ No Is the within ✓ No within	Sampled Area	∕ No
Wetland Hydrology Present? Yes _	No If yes,	optional Wetland Site ID:	
		Coconden Indi	enters (minimum of two required)
Primary Indicators (minimum of one is required:	chock all that apply)	Surface Sci	bil Cracke (R6)
Surface Water (A1)	Water-Stained Leaves (B9)		
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim	Lines (B16)
Saturation (A3)	Marl Deposits (B15)	Dry-Seaso	n Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish B	urrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Li	ving Roots (C3) Saturation	Visible on Aerial Imagery (C9)
Drift Deposits (B3)	(4) Stunted or	Stressed Plants (D1)	
Algal Mat or Crust (B4)	ed Soils (C6) Geomorph	ic Position (D2)	
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Ac	quitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopoç	graphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutr	al Test (D5)

Sparsely vegetated Col	licave Sullace (Do)	V PAC-Neuliai Test (D5)
Field Observations:		
Surface Water Present?	Yes <u><</u> No <u>Depth</u> (inches): <u>1</u>	_
Water Table Present?	Yes No Depth (inches):	_
Saturation Present? (includes capillary fringe)	Yes <u>v</u> No <u>Depth (inches)</u> : <u>0</u>	_ Wetland Hydrology Present? Yes <u>✓</u> No

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

Remarks:

The feature is a sloped, discharge wetland with pockets of surface water present throughout. The hydrologic regime is seasonally saturated with discharge hydrology. There is a non-contiguous drainageway running through the wetland.

VEGETATION – Use scientific names of plants.

Sampling Point: wirb1006f_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator	Dominance Test worksheet:
1 Acer saccharum	<u>- 70 60001</u> 50	Y	FACU	Number of Dominant Species That Are OBL EACIM or EAC: 6 (A)
2 Fravinus nigra	 25	Y	FACW	$\begin{array}{c} \text{Indiate OBL, FACW, of FAC.} \\ \underline{\textbf{O}} \end{array} $
3		I	<u>17.077</u>	Total Number of Dominant Species Across All Strata: 7 (B)
0			·	
4			·	That Are OBL, FACW, or FAC: 86 (A/B)
5			·	
0			·	Prevalence Index worksheet:
1	75		·	<u>Total % Cover of:</u> <u>Multiply by:</u>
45	_/5_	= Total Co	ver	OBL species $2 \times 1 = 2$
Sapling/Shrub Stratum (Plot size:15)	4.0	Ň		FACW species 52 $x^2 = 104$
1. <u>Fraxinus nigra</u>	10	<u> </u>	FACW	FACU species $51 \times 4 = 204$
2. <u>Ulmus americana</u>	5	<u> </u>	<u>FACW</u>	UPL species $0 \times 5 = 0$
3			·	Column Totals: 110 (A) 325 (B)
4				
5				Prevalence Index = $B/A = 2.95454545454545454546$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	15	= Total Co	ver	∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹
1 Ulmus americana	5	Y	FACW	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2 Ribes hirtellum	<u> </u>	Ŷ	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Athyrium angustum	<u> </u>	v	FAC	
A Coum rivalo	<u> </u>	 N		¹ Indicators of hydric soil and wetland hydrology must
F. Enthronium amoricanum	2			be present, unless disturbed of problematic.
				Definitions of Vegetation Strata:
				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Acer saccharum</u>	1	<u> N </u>	FACU	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 3.26 it tail.
12				Woody vines – All woody vines greater than 3.28 ft in height
	22	= Total Co	ver	noight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4				Vegetation
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Hardwood swamp with near continuous canopy dominated by black ash and sugar maple. Ground cover is variable throughout the wetland. There are microtopographical changes throughout the wetland resulting in small islands dominated by upland vegetation, and shallower pockets are dominated by hydrophytic vegetation. Yellow trout lily, fern species, and graminoids are abundant throughout the wetland.

Profile Desc	cription: (Des	cribe t	o the dep	oth needed	to docun	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth	Matrix		Redox Feature			S					
(inches)	Color (mo	ist)	%	<u>Color (</u>	moist)	%	Type'	Loc ²	Texture	Remarks	
0-8	<u>10YR</u> 2	2/1	100			0			MMI		
8-10	7.5YR 4	1/3	98	5YR	4/6	2	С	Μ	SC		
						·					
						. <u></u>					
						·					
						·			<u> </u>		
						·					
				. <u> </u>		·					
¹ Type: C=C	oncentration, [D=Deple	etion, RM	=Reduced	Matrix, MS	S=Masked	Sand Gr	ains.	² Location	PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:			D 1		o ((00) (1 5)		Indicators for Problematic Hydric Soils":		
Histosol	(A1) ninodon (A2)			Polyva	alue Belov	w Surface	(S8) (LRI	R,	2 CM MUCK (A10) (LRR K, L, MLRA 149B)		
Black H	istic (A3)			Thin [Dark Surfa	, ice (S9) (I	.RR R. MI	LRA 149B)	5 cm Mucky Peat or Peat (S3) (LRR K. I. R)		
Hydroge	en Sulfide (A4)			Loam	y Mucky N	/lineral (F	1) (LRR K	, L)	Dark S	urface (S7) (LRR K, L)	
Stratifie	d Layers (A5)			Loam	y Gleyed I	Matrix (F2	.)		Polyva	lue Below Surface (S8) (LRR K, L)	
Deplete	d Below Dark	Surface	(A11)	Depleted Matrix (F3)					Thin Da	ark Surface (S9) (LRR K, L)	
Thick Da	Thick Dark Surface (A12)				Redox Dark Surface (F6)				Iron-Ma	anganese Masses (F12) (LRR K, L, R)	
Sandy Mucky Mineral (S1)				Depleted Dark Surface (F7) Redox Depressions (F8)					Mesic (Spodic (TA6) (MLRA 144A, 145, 149B)	
Sandy Redox (S5)									Red Parent Material (F21)		
Stripped	Matrix (S6)								Very Shallow Dark Surface (TF12)		
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)						Explain in Remarks)					
³ Indiactora a	fbydrophyticy	voqotati	on and w	otland bydr		the proc	ont unlog	diaturbad	or problematic		
Restrictive	Laver (if obse	rved):			ology mus	t be prese	ent, unies:	sustuibeu			
Type: C	obble	,									
Denth (in	ches): 10 0								Hydric Soil	Present? Yes ✔ No	
Remarks:	crico). <u>10.0</u>										
Soils are	modified	muc	kv min	eral ab	ove sa	ndv cla	av with	a restri	ictive cobb	ble laver at 10 inches.	
Redox is present from 8-10 inches											



wirb1006f_w_E



wirb1006f_w_S

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

WETLAND IDENTIFICATION					
Evaluator(s):					
KDF/SAM					
Date of visit(s):					
2020-05-26					
Ecological Landscape:					
Superior Mineral Pangos					
	5				
Watershed:					
LS13, Tyler Forks					
WWI Class:					
N/A					
Wetland Type(s):					
PFO - Hardwood swamp					
	·				
Wetland Size:	Wetland Area Impacted				
0.7371	0.7371				
Vegetation:					
Plant Community D	Description(s):				
Hardwood swamp with near-continuous canopy dominated by black ash and sugar maple. Ground cover is variable throughout the wetland. There are microtopographical changes throughout the wetland resulting in small islands dominated by upland vegetation; shallower pockets are dominated by hydrophytic vegetation. Yellow trout lily, lady fern, and eastern rough sedge are common throughout the wetland.					
				Evaluator(s): KDF/SAM Date of visit(s): 2020-05-26 Ecological Landsca Superior Mineral Ranges Watershed: LS13, Tyler Forks WWI Class: N/A Wetland Type(s): PFO - Hardwood Wetland Size: 0.7371 Vegetation: Plant Community E Hardwood swamp with nea sugar maple. Ground cove microtopographical change dominated by upland vege hydrophytic vegetation. Ye are common throughout the	

SITE MAP

SECTION 1: Functional Value Assessment

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

ST-1: The feature is a sloped drainage wetland. GW-2,3: Hydrologic regime is seasonally saturated with discharge hydrology. SP-1: Associated with an ephemeral stream.

WQ-8: Discharges to the associated ephemeral stream. WH-6: Interspersion of small upland islands within the forested wetland.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Avians
	Y	Frogs and toads
Y	Y	Deer

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

Observed	Potential	Species/Habitat
SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata	All strata present	All strata present,
	or bare due to	present but	and good	conservative species
	invasive species	reduced native	assemblage of	represented
		species	native species	
NHI plant community	S4	S3	S2	S1-S2 (S2 high quality)
ranking		_		
Relative frequency of	Abundant 🖌	Common	Uncommon	Rare
plant community in				
watershed				
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 saccharum*			PFO	Abundant
Arisaema triphyllum			PFO	Uncommon
Athyrium filix-femina*			PFO	Common
Carex crinita			PFO	Common
Carex leptonervia			PFO	Common
Carex pedunculata			PFO	Common
Carex scabrata*			PFO	Common
Deparia acrostichoides			PFO	Common
Equisetum pratense			PFO	Common
Equisetum sylvaticum			PFO	Common
Erythronium americanum*			PFO	Common
Fraxinus nigra*			PFO	Abundant
Geum rivale			PFO	Common
Glyceria striata			PFO	Common
Impatiens capensis			PFO	Common
Matteuccia struthiopteris			PFO	Common
Onoclea sensibilis			PFO	Common
Ribes hirtellum			PFO	Common
Rubus idaeus			PFO	Common
Rumex orbiculatus			PFO	Rare
Taraxacum officinale			PFO	Uncommon
Ulmus americana			PFO	Uncommon

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

The vegetation is comprised of native species, with a sparse cover of non-native species present near the associated ephemeral stream.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells,
					impounded water, increased runoff
					Point source or stormwater discharge
	Х		L	UC	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		L	UC	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	X				Removal of herbaceous stratum – mowing,
	~			00	grading, earthworms, etc.
x	х		м	С	Removal of tree or shrub strata – logging,
~	~			Ű	unprescribed fire
	Х		L	UC	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
					Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
	ļ				Golt course
					Gravel pit
	Х		L	UC	Recreational use (boating, ATVs, etc.)
	ļ				Excavation or soil grading
	ļ				Other (list below):
	ļ				
	ļ				

* 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 upslope from an unpaved two-track ATV trail. The feature is likely impacted by previous logging activity but is unlikely to be impacted by the trail located down slope. The surrounding area is impacted by road stressors, earthworm activity, and logging.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The feature is comprised of diverse assemblage of native vegetation with no observed invasive species.
Human Use Values	The feature is accessible to the public with the potential to be used for recreational purposes.
Wildlife Habitat	There are pockets of standing water throughout the wetland that may provide temporary habitat for amphibians. Trees and shrubs provide avian habitat.
Fish and Aquatic Life Habitat	Standing water within the wetland may provide temporary habitat for amphibians. There is no potential for fish habitat.
Shoreline Protection	Associated with a small ephemeral stream fed by discharge from the wetland.
Flood and Stormwater Storage	The feature is located on a side slope with drainage patterns, unlikely to hold substantial amounts of flood and stormwater.
Water Quality Protection	See above. The feature discharges to a small ephemeral stream.
Groundwater Processes	The feature is a seasonally saturated discharge wetland.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron Sampling Date:	2020-05-26
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Poir	nt: <u>wirb1007f_w1</u>
Investigator(s): KDF/SAM	Section, Township, Range: Sec 07 T045N R001W	
Landform (hillslope, terrace, etc.): <u>Side Slope</u> Lo Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.38766</u> Soil Map Unit Name: <u>Gogebic silt loam, 6 to 18 percent</u> Are climatic / hydrologic conditions on the site typical for this time of ye Are Vegetation, Soil, or Hydrology significantly Are Vegetation, Soil, or Hydrology naturally pro	bccal relief (concave, convex, none): None Slopes S2 Long: -90.545430 Datur Slopes, very stony, rocky NWI classification:	pe (%): <u>3-7%</u> n: <u>WGS84</u> <u>✓</u> No eatures, etc.
Hydrophytic Vegetation Present? Yes <u>v</u> No <u>Hydrophytic Soil Present?</u> Yes <u>v</u> No <u>Ves v</u> No <u>Ves v</u> No <u>Present?</u> Yes <u>v</u> No <u>No Constraints:</u> (Explain alternative procedures here or in a separate report The feature is located on a slope within mesic changes.	Is the Sampled Area within a Wetland? Yes <u>v</u> No If yes, optional Wetland Site ID: <u>v</u> ort.) hardwood forest with abundant microtopogra	aphical
HYDROLOGY		

Wetland Hydrology Indicato	rs:		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)	tion (A3) Marl Deposits (B15)		Dry-Season Water Table (C2)
Water Marks (B1)		Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)		s (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 (C	C6) Geomorphic Position (D2)
Iron Deposits (B5)		Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aer	ial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Conc	ave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present?	Yes <u>No</u>	✓ Depth (inches):	
Water Table Present?	Yes 🖌 No	Depth (inches): <u>8</u>	
Saturation Present? (includes capillary fringe)	Yes 🖌 No	Depth (inches): 0 We	tland Hydrology Present? Yes <u><</u> No
Describe Recorded Data (stre	am gauge, monito	oring well, aerial photos, previous inspections)), if available:

Remarks:

The feature is a side-hill seep with a drainageway running through the middle of the wetland. The hydrologic regime is seasonally saturated with discharge hydrology. Microtopographical changes result in small upland islands throughout the feature. Small pockets of standing water are scattered throughout.

VEGETATION – Use scientific names of plants.

Sampling Point: wirb1007f_w1

	Absolute	Dominan	Indicator	Dominance Test workshoot
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1. <u>Fraxinus nigra</u>	25	Y	FACW	That Are OBL, FACW, or FAC:6(A)
2. <u>Betula alleghaniensis</u>	25	Y	FAC	Total Number of Dominant
3. <u>Acer saccharum</u>	10	N	<u>FACU</u>	Species Across All Strata: (B)
4. <u>Tilia americana</u>	5	N	FACU	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>75</u> (A/B)
6				Prevalence Index worksheet:
7			·	Total % Cover of: Multiply by:
	65	= Total Co	ver	OBL species <u>10</u> x 1 = <u>10</u>
Sapling/Shrub Stratum (Plot size:15)				FACW species <u>37</u> x 2 = <u>74</u>
1. Fraxinus nigra	5	Y	FACW	FAC species <u>36</u> x 3 = <u>108</u>
2. Acer saccharum	5	Y	FACU	FACU species <u>31</u> x 4 = <u>124</u>
3. Ostrva virginiana	5	Y	FACU	UPL species $0 \times 5 = 0$
4			1/100	Column Totals: <u>114</u> (A) <u>316</u> (B)
5			- <u> </u>	Prevalence Index = B/A = 2.7719298245614037
6			·	Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
··	15	- Total Co	vor	_∠ 2 - Dominance Test is >50%
Horb Stratum (Plot size: 5)		- 10(a) 00	VEI	$_$ 3 - Prevalence Index is ≤3.0 ¹
A Corox originate	10	V		4 - Morphological Adaptations ¹ (Provide supporting
	<u></u>	<u> </u>		Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Acer saccharum</u>				
3. <u>Equisetum scirpoides</u>		<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Rubus pubescens</u>		<u> </u>	FACW	be present, unless disturbed or problematic.
5. <u>Erythronium americanum</u>		<u> </u>		Definitions of Vegetation Strata:
6. <u>Athyrium angustum</u>		<u> N </u>	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Deparia acrostichoides</u>	2	<u> N</u>	FAC	at breast height (DBH), regardless of height.
8. <u>Carex leptonervia</u>	2	<u> N </u>	FAC	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Fraxinus nigra</u>	1	<u> N</u>	FACW	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Aralia nudicaulis</u>	1	N	<u>FACU</u>	Herb – All herbaceous (non-woody) plants, regardless
11. Impatiens capensis	1	N	FACW	of size, and woody plants less than 3.28 ft tall.
12			·	Woody vines – All woody vines greater than 3.28 ft in beight
	36	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1			·	
2				
3				Hydrophytic
4				Vegetation
	0	= Total Co	ver	Present? Tes <u>/</u> NO
Remarks: (Include photo numbers here or on a separate	sheet.)			

The feature is a northern hardwood swamp with an interrupted to continuous canopy dominated by black ash and sugar maple. The canopy at the sample point is dominated by yellow birch and black ash with scattered basswood. Overall ground cover within the wetland is dominated by graminoids and fern species. Upland species are present within the wetland on small, dry mounds within the feature.

Profile Desc	ription: (Desc	cribe to the dep	th needed to docur	ment the	indicator	or confirm	the absence of i	ndicators.)
Depth	Ma	trix	Redo	x Feature	S1	. 2		_
(inches)	Color (mois	<u>st) %</u>	Color (moist)	%	Туре	Loc	Texture	Remarks
0-12	<u>10YR 2</u>	<u>/1 100</u>		0				
12-14	7.5YR 3	/3 100		0			S	
·								
. <u> </u>							·	
							. <u> </u>	
							· · · · · · · · · · · · · · · · · · ·	
	. <u></u>							
¹ Type: C=C	oncentration, D	=Depletion, RM	Reduced Matrix, MS	S=Masked	d Sand Gra	ains.	² Location: Pl	L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:			o (Indicators for	Problematic Hydric Soils":
HISTOSOI	(A1) Dinedon (A2)		Polyvalue Belov	w Surface	(S8) (LRI	к κ,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
Black Hi	stic (A3)		Thin Dark Surfa	/ ace (S9) (I	LRR R. MI	LRA 149B)	5 cm Muck	v Peat or Peat (S3) (LRR K. L. R)
Hydroge	en Sulfide (A4)		Loamy Mucky M	Mineral (F	1) (LRR K	, L)	Dark Surfa	ace (S7) (LRR K, L)
Stratified	d Layers (A5)		Loamy Gleyed	Matrix (F2	2)		Polyvalue	Below Surface (S8) (LRR K, L)
Deplete	d Below Dark S	Surface (A11)	Depleted Matrix	k (F3)			Thin Dark	Surface (S9) (LRR K, L)
Thick Da	ark Surface (A1	2) S1)	Redox Dark Su	Ifface (F6) Surface (F) =7)		Iron-Mang	anese Masses (F12) (LRR K, L, R)
Sandy N Sandy O	Bleved Matrix (S	54)	Redox Depress	sions (F8)	')		Mesic Spo	dic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)	,		()			Red Parer	nt Material (F21)
Stripped	Matrix (S6)						Very Shall	ow Dark Surface (TF12)
Dark Su	rface (S7) (LRF	R R, MLRA 1498	3)				Other (Exp	plain in Remarks)
³ Indicators o	f hydronhytic yr	agetation and we	atland hydrology mus	at ha nrae	ont unlos	e disturbod	or problematic	
Restrictive	Laver (if obser	ved):	stand nydrology mat	st be pres		sustaibea		
Type: Co	obble							
Denth (in	ches): 14 0						Hydric Soil Pre	esent? Yes ✔ No
Remarks:	(100). <u>14.0</u>							
The hvdr	ic soils are	e sandv mu	uckv mineral a	above s	sand w	ith a res	strictive cob	ole laver at 14 inches
below the	e soil surfa	ace.						



wirb1007f_w1_E



wirb1007f_w1_N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: <u>Iron</u> Sampling Date: <u>2020-05-26</u>
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wirb1007f_w2
Investigator(s): <u>KDF/AGG</u>	Section, Township, Range: <u>Sec 07 T045N R001W</u>
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.391</u>	265 Long: <u>-90.545500</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Tula-Gogebic complex, 0 to 6	percent slopes, stony NWI classification: PFO1C
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes 🖌 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significa	antly disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturall	y problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ring sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>v</u> No	Is the Sampled Area
Hydric Soil Present? Yes _ ✔ No	Within a Wetland? Yes <u>V</u> NO
Wetland Hydrology Present? Yes <u> Ves No</u>	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate in The feature is located within mesic hardwood	report.) od 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) ✓ Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Oxidized Rhizospheres on Living I Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc Iron Deposits (B5) Thin Muck Surface (C7) Other (Explain in Remarks) Other (Explain in Remarks)	Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Second Plants (D1) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches): 1 Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) Yes No Depth (inches): 0	Wetland Hydrology Present? Yes <u></u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks: The hydrologic regime is seasonally saturated with dischar throughout the feature. Small streams flow through the wet	ge hydrology. Seeps are present land area.

VEGETATION – Use scientific names of plants.

Sampling Point: wirb1007f_w2

	Absolute	Dominan	t Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u>)	<u>% Cover</u>	Species?		Number of Dominant Species
1. <u>Fraxinus nigra</u>		<u> </u>	FACW	That Are OBL, FACW, or FAC: 4 (A)
2. <u>Acer saccharum</u>	25	<u> Y </u>	FACU	Total Number of Dominant
3. <u>Tilia americana</u>	5	<u> N </u>	FACU	Species Across All Strata:6_ (B)
4. <u>Ostrya virginiana</u>	1	<u> N </u>	<u>FACU</u>	Percent of Dominant Species
5				That Are OBL, FACW, or FAC:67 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
	81	= Total Co	over	OBL species x 1 =2
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>62</u> x 2 = <u>124</u>
1. <u>Ostrva virginiana</u>	5	Y	FACU	FAC species7 x 3 =21
2.				FACU species <u>36</u> x 4 = <u>144</u>
3				UPL species $0 \times 5 = 0$
а				Column Totals: <u>127</u> (A) <u>311</u> (B)
T				Prevalence Index = B/A = 2.4488188976377954
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
/				2 - Dominance Test is >50%
	5	= Total Co	over	\sim 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Equisetum pratense</u>	10	Y	FACW	data in Remarks or on a separate sheet)
2. <u>Caltha palustris</u>	10	<u> </u>	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Osmunda claytoniana</u>	5	Y	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Glyceria striata</u>	5	N	OBL	be present, unless disturbed or problematic.
5. <u>Carex crinita</u>	5	N	OBL	Definitions of Vegetation Strata:
6. Chrysosplenium americanum	2	N	OBL	Tere Marchards Olin (7.0 err) er reen in diemeter
7. <u>Rubus pubescens</u>	2	N	FACW	at breast height (DBH), regardless of height.
8. <u>Athyrium angustum</u>	2	N	FAC	Sapling/chrub – Woody plants less than 3 in DBH
9. Carex arctata	1	Ν		and greater than or equal to 3.28 ft (1 m) tall.
10. Impatiens capensis	0	N	FACW	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
14.	42	- Total Co	wor	height.
Weady Vine Stratum (Plat size: 30)		- 10(a) 00		
1				
2				
3				Hydrophytic
4				Present? Yes <u>v</u> No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)	vinotod	blook	and auger maple. Cround cover is
dominated by forn encoine, march mark	upy uon	maled	Jow how	anu suyar mapie. Ground cover IS
uominateu by terri species, marsh man	iyolu, ar	iu mea		

Profile Dese	cription: (D	escribe t	to the dep	th needed	to docun	nent the i	indicator	or confirm	the absence	of indicators.)	
Depth		Matrix			Redo	x Feature	s	0			
(inches)	<u>Color (r</u>	noist)	%	Color (I	moist)	%	Type'	Loc ²	Texture	Remarks	
0-8	<u>10YR</u>	2/1	100			0	·		MMI		
8-20	5YR	4/6	95	5YR	5/8	5	С	Μ	SL		
						·	·				
						· . <u></u>	·				
							·				
						·	·				
			<u> </u>				·				
						·	·				
$\frac{1}{1}$ Type: C=C		D=Den	etion PM:	-Reduced	Matrix MS	S=Maskor	d Sand Gr	aine	² Location	· PL=Pore Lining M=Matrix	
Hydric Soil	Indicators:	i, D-Depi		-iteuuceu i				airi5.	Indicators	for Problematic Hydric Soils ³ :	
Histosol	l (A1)			Polyva	alue Belov	w Surface	(S8) (LR F	R,	2 cm N	/uck (A10) (LRR K, L, MLRA 149B)	
Histic E	pipedon (A2)		ŃL	RA 149B))	. , .		Coast	Prairie Redox (A16) (LRR K, L, R)	
Black H	istic (A3)			Thin E	Dark Surfa	ice (S9) (I	LRR R, MI	LRA 149B)	5 cm N	/lucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A	4)		Loam	y Mucky N	/lineral (F	1) (LRR K	, L)	Dark S	surface (S7) (LRR K, L)	
Stratifie	d Layers (At) k Surfaar	(11)	Loam	y Gleyed I	Matrix (F2	2)		Polyva	lue Below Surface (S8) (LRR K, L)	
Depiete	u below Dai ark Surface	K SUNACE (A12)	e (ATT)	Depie	v Dark Su	rface (E6)			Inin Dark Surface (S9) (LRR K, L)		
∠ Sandv M	Aucky Miner	al (S1)		Deple	ted Dark St	Surface (FO)	-7)		Piedmont Floodplain Soils (F12) (MR R 149B)		
Sandy C	Gleyed Matri	x (S4)		Redox	x Depress	ions (F8)	.,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy F	Redox (S5)								Red Parent Material (F21)		
Stripped	d Matrix (S6)								Very Shallow Dark Surface (TF12)		
Dark Su	ırface (S7) (I	_RR R, N	ILRA 149E	3)					Other ((Explain in Remarks)	
³ Indicators o	of hydrophyti		ion and we	tland bydr		t ha pros	ont unloca	e disturbod (or problematic	X.	
Restrictive	l aver (if ob	served).			ology mus	t be prese		s distuibed (
Type [.]	_ujo: (.: 05										
Dopth (in	aboa):								Hydric Soil	Present? Yes ✓ No	
	cries).										
The hydr	ric soils ·	aro ma	odified	mucky	minora		o sand	ly loam	with rodo	y present below 8 inches	
THE Hyu	10 30113 0		Junieu	писку	minera		e sanu	ly IOann	with redu	x present below o incres.	





wirb1007f_w2_W

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	KDF/SAM		
File #:	Date of visit(s):		
wirb1007	2020-05-26		
Location:	Ecological Landsca	ipe:	
PLSS: sec 07 T045N R001W	Superior Mineral Ranges		
		-	
Lat: <u>46.387703</u> Long: <u>-90.545374</u>	Watershed:		
	LSTS, Tyler Forks		
County: Iron Town/City/Village: Anderson town			
Soils:	WWI Class:		
Mapped Type(s):	ТЗК		
Gogebic silt loam, 6 to 18 percent slopes, very stony, rocky. Gogebic silt loam, 2 to 6 percent	Wetland Type(s):		
siopes, very storry, rocky. Fulle-Gogebic complex, o to o percent slopes, storry.	PFO - Hardwood swamp		
Field Verified:			
Series not verified. Soils were a sandy modified	Wetland Size:	Wetland Area Impacted	
mucky mineral above sand with a restrictive	7.3352	7.3352	
cobble laver at 14 inches.	Vegetation:		
	Plant Community D	escription(s):	
Hydrology:	The feature is a northe	ern hardwood swamp with an interrupted	
The feature is a side-hill seep with a drainage way running through the	to continuous canopy	dominated by black ash and sugar	
middle of the wetland. The hydrologic regime is seasonally saturated with	maple. Overall ground	cover within the wetland is dominated	
islands throughout the feature. Small pockets of standing water are	by graminoids and ferr	n species. Upland species are present	
scattered throughout.	within the wetland on s	small upland islands within the feature.	

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	Ν	Y	Used for recreation (hunting, birding, hiking, etc.). List: Hunting
2	Ν	Ν	Used for educational or scientific purposes
3	Y	Y	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	Ý	Ý	3 or more strata present (>10% cover)
3	N	Ň	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	Ν	N	Occurs in a Joint Venture priority township
6	Y	Y	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7			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	Ν	N	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	Ν	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	IN	IN	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	Ν	Y	Water flow through wetland is NOT channelized
3	Y	Y	Dense, persistent vegetation
4	N	N	Evidence of flashy hydrology
5	N	Y	Point or non-point source inflow
6	N	N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with 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 <u>or</u> constricted outlet
3	N	Y	Water flow through wetland is NOT channelized
4	Y	Y	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	N	N	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	Ν	Ν	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
4	Y	Y	Wetland soils are organic
5	Ν	Ν	Wetland is within a wellhead protection area

HU-3: The feature is located on public land. ST-1: The feature is located on a slope and is unlikely to store significant amounts of flood and stormwater, but is associated with multiple ephemeral and intermittent streams. ST-5: The wetland is located downslope from an ATV trail and has the potential to receive non-point source flow from activities associated with the trail.

GW-1: The feature is a side-hill seep with discharge hydrology.

WQ-8: Discharges to multiple small streams.

WH-6: Interspersion of upland islands within the forested wetland.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Wood frog/ aquatic habitat provided within seepage areas
Y	Y	American Toad / aquatic habitat provided in seepage areas
	Y	Avian, mammals, herpetofauna

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

Observed	Potential	Species/Habitat
	Y	Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Fraxinus nigra*			PFO	Patchy
Acer saccharum*			PFO	Rare
Carex crinita*			PFO	Rare
Carex bromoides*			PFO	Rare
Carex scabrata			PFO	Rare
Erythronium americanum*			PFO	Rare
Acer rubrum			PFO	Rare
Athyrium filix-femina			PFO	Rare
Betula alleghaniensis			PFO	Rare
Deparia acrostichoides			PFO	Rare
Caltha palustris			PFO	Barren
Carex leptonervia			PFO	Barren
Chrysosplenium americanum			PFO	Barren
Glyceria striata			PFO	Barren
Impatiens capensis			PFO	Barren
Osmunda claytoniana			PFO	Barren
Osmunda claytoniana			PFO	Barren
Ostrya virginiana			PFO	Barren
Rubus pubescens			PFO	Barren
Aralia nudicaulis			PFO	Barren
Aralia nudicaulis			PFO	Barren
Arisaema triphyllum			PFO	Barren
Brachyelytrum erectum			PFO	Barren
Carex arctata			PFO	Barren
Corylus cornuta			PFO	Barren
Equisetum pratense			PFO	Barren
Equisetum scirpoides			PFO	Barren
Geum canadense			PFO	Barren

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

The wetland vegetation is comprised of a diverse assemblage of native species with sparse ground cover of non-native species within pockets of the feature. Additional species: Lysimachia ciliata (Plant Communities: PFO, Abundance: Barren), Maianthemum canadense (Plant Communities: PFO, Abundance: Barren), Mitella nuda (Plant Communities: PFO, Abundance: Barren), Myosotis sp. (Plant Communities: PFO, Abundance: Barren), Onoclea sensibilis (Plant Communities: PFO, Abundance: Barren), Packera aurea (Plant Communities: PFO, Abundance: Barren), Polystichum braunii (Plant Communities: PFO, Abundance: Barren), Prunella vulgaris (Plant Communities: PFO, Abundance: Barren), Prunus virginiana (Plant Communities: PFO, Abundance: Barren), Rumex orbiculatus (Plant Communities: PFO, Abundance: Barren), Solidago gigantea (Plant Communities: PFO, Abundance: Barren), Symphyotrichum puniceum (Plant Communities: PFO, Abundance: Barren), Taraxacum officinale (Plant Communities: PFO, Abundance: Barren)

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells,
					impounded water, increased runoff
					Point source or stormwater discharge
Х	Х		L	UC	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		L	UC	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	X		М		Removal of herbaceous stratum – mowing,
	~		101	00	grading, earthworms, etc.
x	x		М	UC	Removal of tree or shrub strata – logging,
					unprescribed fire
	Х		M	UC	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
Χ	Х		L	UC	Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
	N N			110	
	Х		L	UC	Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is located downslope from an existing ATV trail and likely receives runoff after rain events. The feature is impacted by logging activity, evidenced by recently cut trees, and sparse cover of non-native species. The surrounding area is impacted by the ATV trail and associated stressors, as well as earthworm activity and recent logging.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The feature is comprised of a diverse assemblage of native species with sparse occurrences of non-native ground cover.
Human Use Values	The feature is located on public land and has the potential to be used for hunting.
Wildlife Habitat	Diverse features included within the wetland, including canopy and understory structure for avians, as well as seepage areas providing habitat for amphibians.
Fish and Aquatic Life Habitat	Surface water provides temporary habitat for aquatic invertebrates and amphibians as indicated by observations of toads and frogs within the wetland near seeps. There is no habitat for fish.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a sloped wetland and likely receives runoff from the ATV trail located upslope but is unlikely to hold substantial amounts of flood/stormwater.
Water Quality Protection	See above. The feature is associated with small streams.
Groundwater Processes	The feature is a discharge wetland with seeps present throughout. The hydrologic regime is seasonally saturated.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampli	ng Date: <u>2020-05-26</u>
Applicant/Owner: Enbridge		State: Wisconsin Sam	pling Point: <u>wirb1007_u1</u>
Investigator(s): <u>KDF/OTG</u>	Section, Township, R	ange: <u>sec 07 T045N R00</u>	1W
Landform (hillslope, terrace, etc.): Rise	Local relief (concave, cor	nvex, none): <u>Convex</u>	Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.3873	300 Lo	ng: <u>-90.545800</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic silt loam, 6 to 18 percent	<u>nt slopes, very sto</u>	ny, rocky NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time o	f year? Yes 🖌 No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	ntly disturbed? Are	"Normal Circumstances" present?	Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If n	needed, explain any answers in Rei	marks.)

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

Hydrophytic Vegetation Present?	Yes	No <u>r</u>	Is the Sampled Area
Hydric Soil Present?	Yes	No <u>r</u>	within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No 🖌	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedu	res here or in a	i separate report.)	
Upland area located within	mesic ha	rdwood 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 Soi	ils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes <u>No</u> Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspecti	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ ✓ _ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No _ ✓ ions), if available:
Saturation Present? Yes No _ ✓ _ Depth (inches): [includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection of the stream gauge) Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No _ ✓ ions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No _ ✓ ions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ ✓ _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos,	Wetland Hydrology Present? Yes No _ ✓ ions), if available:
Saturation Present? Yes No _ ✓ _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect) Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ ✓ _ Depth (inches): [includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ ✓ _ Depth (inches): [includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect. Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No

VEGETATION – Use scientific names of plants.

Sampling Point: wirb1007_u1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 Acer saccharum	<u></u> 75	V	FACU	Number of Dominant Species That Are OBL EACIM or EAC: 1 (A)
2 Tilia americana	 10	 N	FACU	
3				Total Number of Dominant Species Across All Strata: 6 (B)
о				
				That Are OBL, FACW, or FAC: 17 (A/B)
5				
0				Prevalence Index worksheet:
1				Total % Cover of:Multiply by:
		= Total Cov	/er	OBL species $()$ $x_1 = 0$
Sapling/Shrub Stratum (Plot size: 15))		Ň		FACW species 3 x 2 - 10
1. <u>Ostrya virginiana</u>	20	<u> </u>	FACU	FACU species $125 \times 4 = 500$
2. <u>Acer saccharum</u>	5	<u> Y </u>	FACU	UPL species $0 \times 5 = 0$
3				Column Totals: <u>130</u> (A) <u>510</u> (B)
4				
5				Prevalence index = $B/A = \frac{3.923076923076923}{2.000}$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	_25	= Total Cov	/er	2 - Dominance Lest is >50%
Herb Stratum (Plot size: 5)				$3 - \text{Prevalence index is } \leq 3.0$
1. <u>Erythronium americanum</u>	10	Y		data in Remarks or on a separate sheet)
2. <u>Fraxinus nigra</u>	5	Y	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Cardamine concatenata</u>	5	N	<u>FACU</u>	1
4. <u>Allium tricoccum</u>	5	Y	FACU	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Acer saccharum</u>	5	N	<u>FACU</u>	Definitions of Vegetation Strata
6				
7.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8.				Senling/ehruh Weedy plants loss than 2 in DDU
9.				and greater than or equal to 3.28 ft (1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12			. <u> </u>	Woody vines – All woody vines greater than 3.28 ft in
	.30	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: 30)				
(1 lot size)				
1				
2				
3				Hydrophytic Vegetation
4				Present? Yes No 🗸
Demarka: (Include abeta numbera bara ar en e constata	<u> </u>	= Total Cov	/er	
Mesic hardwood system dominated by	sugar n	naple wi	th ironw	ood prevalent in the understory.
	5	- 1		, , , , , , , , , , , , , , , , , , , ,

Profile Des	cription: (Describe	to the depth	needed to docum	nent the	indicator or confirm	the absence of indic	ators.)
Depth	Matrix		Redo	x Feature	S		
(inches)	Color (moist)		Color (moist)	%	Type' Loc ²	Texture	Remarks
0-7	<u>10YR 3/2</u>	100		0		SIL	
7-15	10YR 3/4	100		0		SI	
					·		
		<u> </u>					
					· ·		
					·		
						·	
					·		
					· ·		
					·	·	
¹ Type: C=C	oncentration, D=Dep	letion, RM=R	educed Matrix, MS	S=Masked	d Sand Grains.	² Location: PL=Po	re Lining, M=Matrix.
Hydric Soil	Indicators:					Indicators for Prob	elematic Hydric Soils ³ :
Histoso	I (A1)	_	Polyvalue Below	v Surface	(S8) (LRR R,	2 cm Muck (A1	0) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)		MLRA 149B)			Coast Prairie R	edox (A16) (LRR K, L, R)
Black H	listic (A3)	_	_ Thin Dark Surfa	ce (S9) (l	LRR R, MLRA 149B)	5 cm Mucky Pe	at or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)	_	_ Loamy Mucky N	Ineral (F	1) (LRR K, L)	Dark Surface (S	57) (LRR K, L)
Stratifie	d Layers (A5)		_ Loarny Gleyed I Doplotod Matrix		<u>(</u>)	Thin Dark Surfa	
Depiete Thick D	ark Surface (A12)	= (ATT)	_ Depleted Math	face (E6)		Iron-Manganes	P Masses (F12) (IRR K I R)
Sandy M	Mucky Mineral (S1)		Depleted Dark \$	Surface (F		Piedmont Floor	Iplain Soils (F19) (MLRA 149B)
Sandy (Gleved Matrix (S4)	_	Redox Depress	ions (F8)	.)	Mesic Spodic (ΓA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)			()		Red Parent Ma	terial (F21)
Stripped	d Matrix (S6)					Very Shallow D	ark Surface (TF12)
Dark Su	urface (S7) (LRR R, M	ILRA 149B)				Other (Explain i	n Remarks)
2							
Indicators c	of hydrophytic vegetat	ion and wetla	and hydrology mus	t be pres	ent, unless disturbed	or problematic.	
Restrictive	Layer (If observed):						
Type: <u>C</u>	obble						
Depth (in	iches): <u>15.0</u>					Hydric Soil Present	? Yes No 🖌
Remarks:				.			
No indica	ators of hydric	soil were	e observed.	Soils a	are silt loam ab	pove sandy loar	n.



wirb1007_u1_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	_ City/County: <u>Iron</u> Sampling Date: <u>2020-05-26</u>
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wirb1007_u2</u>
Investigator(s): AGG/OTG	Section, Township, Range: <u>Sec 07 T045N R001W</u>
Landform (hillslope, terrace, etc.): Head Slope	ocal relief (concave, convex, none): <u>Convex</u> Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.39155</u>	02 Long: <u>-90.545828</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Tula-Gogebic complex, 0 to 6 pe	ercent slopes, stony NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	/ear? Yes 🔽 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	ly disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes No <u>v</u>
Remarks: (Explain alternative procedures here or in a separate rep The sample point is located on a slope within	ort.) mesic hardwoods dominated by sugar maple.
HYDROLOGY	

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

VEGETATION – Use scientific names of plants.

Sampling Point: wirb1007_u2

Trac Stratum (Dist size: 20)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1 Approx papeharum	<u>% Cover</u>	<u>Species</u> ?		Number of Dominant Species
1. <u>Acer sacchardin</u>	<u> </u>	I		That Are OBL, FACW, or FAC: (A)
2. <u>Flaxinus nigra</u>	10	N		Total Number of Dominant
		IN		Species Across Air Strata.
4			·	Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B)
5				
o				Prevalence Index worksheet:
/			·	Total % Cover of: Multiply by:
		= Total Co	ver	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15)	_			FACW species 14 $x_2 = 28$
1. <u>Ostrya virginiana</u>	5	<u> </u>	FACU	FACU species $72 \times 4 = 288$
2. <u>Quercus rubra</u>	5	<u> Y </u>	<u>FACU</u>	$\frac{1}{200}$
3. <u>Tilia americana</u>	1	N	<u>FACU</u>	Column Totals: <u>113</u> (A) <u>397</u> (B)
4			·	
5				Prevalence Index = $B/A = \frac{3.5132743362831858}{2}$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	11	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)				3 - Prevalence Index is ≤3.0°
1. <u>Erythronium americanum</u>	25	Y		data in Remarks or on a separate sheet)
2. <u>Osmunda claytoniana</u>	10	Y	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Carex cf gracillima</u>	5	N	FACU	1
4. <u>Athvrium angustum</u>	5	N	FAC	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Equisetum pratense</u>	2	N	FACW	Definitions of Vegetation Strata
6. Carex pedunculata	2	N	FAC	Deminions of Vegetation of ata.
7. Fraxinus nigra	2	N	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height
8. Maianthemum racemosum	1	N	FACU	
9 Quercus rubra	1	N	FACU	and greater than or equal to 3.28 ft (1 m) tall.
10 Mitchella repens	1	N	FACU	Herb - All herbaceous (non-woody) plants, regardless
11 Pyrola elliptica	 1	 N	FACU	of size, and woody plants less than 3.28 ft tall.
12 Cornus alternifolia	<u> </u>	<u> </u>	FACU	Woody vines – All woody vines greater than 3.28 ft in
	57	- Total Co		height.
Weady Vina Stratum (Plataiza: 30)			VEI	
(Plot size. <u>50</u>)				
l			·	
2				
3			·	Hydrophytic Vegetation
4			·	Present? Yes No <u>v</u>
Demortos (Includo aboto purchara bara er en el susta	<u> </u>	= Total Co	ver	
The sample plot is located within a mes	sneet.) sic hardv	wood fa	rest dor	ninated by sugar maple. The sample
plot is representative of the surrounding	g area.			

Profile Desc	cription: (D	escribe	to the dep	th needed to docun	nent the	indicator	or confirm	the absence o	of indicator	rs.)	
Depth		Matrix		Redox	x Feature	S					
(inches)	Color (r	noist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-8	<u>10YR</u>	2/2	100		0	<u> </u>		<u> </u>			
8-20	10YR	3/3	100		0			CI			
	<u> </u>	0,0	100			·					
								·			
						·					
								·			
						<u> </u>					
<u> </u>								21 11			
	oncentration	n, D=Depi	etion, RM=	Reduced Matrix, MS	S=Maske	d Sand Gr	ains.		PL=Pore L	_ining, M=Ma	itrix.
				Debuglue Delev							
Histosol	(A1) ninodon (A2	`		Polyvalue Belov	v Surrace	(58) (LR I	κĸ,		UCK (A1U) (I Proirio Rodo	LRR K, L, M	LRA 149B)
HISUC E	pipedon (AZ)		Thin Dark Surfa	ce (SQ) (PA 140B)	5 cm M	ucky Peat o	or Post (S3) ((IPPKIP)
<u> </u>	en Sulfide (A	(4)		Loamy Mucky M	lineral (F	1) (LRR K	(.L)	Dark Si	ucky i cat c	(LRR K. L)	, EIXIX IX, E, IX)
Stratifie	d Lavers (A5	5)		Loamy Gleved I	Matrix (F2	2)	·, _/	Polvvalu	ue Below S	urface (S8) (LRR K. L)
Deplete	d Below Dar	k Surface	e (A11)	Depleted Matrix	(F3)	,		Thin Da	rk Surface	(S9) (LRR K	(, L)
Thick Da	ark Surface	(A12)	· · ·	Redox Dark Su	face (F6))		Iron-Ma	nganese M	asses (F12)	(LRR K, L, R)
Sandy N	/lucky Miner	al (S1)		Depleted Dark S	Surface (I	=7)		Piedmo	nt Floodpla	in Soils (F19) (MLRA 149B)
Sandy G	Sleyed Matri	x (S4)		Redox Depress	ions (F8)			Mesic S	Spodic (TA6) (MLRA 144	4A, 145, 149B)
Sandy F	Redox (S5)							Red Pa	rent Materia	al (F21)	
Stripped	Matrix (S6))						Very Sh	allow Dark	Surface (TF	12)
Dark Su	rface (S7) (I	LRR R, N	ILRA 149E	5)				Other (E	Explain in R	Remarks)	
3											
Indicators o	f hydrophyti	c vegetat	ion and we	tland hydrology mus	t be pres	ent, unles	s disturbed	or problematic.			
Restrictive	Layer (if ob	served):									
Туре:											
Depth (in	ches):							Hydric Soil F	Present?	Yes	No 🖌
Remarks:											
No hydri	c soil ind	dicator	s were	observed.							
<u> </u>											



wirb1007_u2_N



wirb1007_u2_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iror	1	Sampling Date: <u>2020-05-25</u>	
Applicant/Owner: Enbridge		St	ate: Wisconsin Sampling Point: wird1002f_w	
Investigator(s): AGG/OTG	Section, Township	, Range: Sec	07 T045N R001W	
Landform (hillslope, terrace, etc.): Depression	Local relief (concave.	convex. none):	Concave Slope (%): 0-2%	
Subregion (I BB or MI BA). Northcentral Forests	46 301056	Long: -90 54	L5836 Datum: WGS84	
Soil Man Linit Name: Tula-Gogebic complex	1 0 to 6 percent clopes	stony	NW/L classification: PEO1C	
Are alignetic / hudralagic complex	$\frac{1}{10000000000000000000000000000000000$			
Are climatic / hydrologic conditions on the site typical ic	or this time of year? res 1			
Are vegetation, Soli, or Hydrology	significantly disturbed?	Are Normal Circ	umstances present? Yes <u>v</u> No	
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, expla	in any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site m	ap showing sampling poi	nt locations,	transects, important features, etc.	
Hydrophytic Vegetation Present? Yes ✓ Hydric Soil Present? Yes ✓ Wetland Hydrology Present? Yes ✓ Remarks: (Explain alternative procedures here or in a The wetland is a shallow depression	No Is the Sam No No If yes, optic a separate report.) nal hardwood swamp de	pled Area (etland? onal Wetland Site	Yes No HD: y black ash. There are small	
pools of standing water present thro	ughout the feature. It is	s a discharg	e feature fed by seepage.	
HYDROLOGY				
Wetland Hydrology Indicators:		Sec	ondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check	k all that apply)		Surface Soil Cracks (B6)	
Surface Water (A1)	Water-Stained Leaves (B9)	—	Drainage Patterns (B10)	
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lines (B16)	
Saturation (A3)	Mari Deposits (B15)	—	Dry-Season Water Table (C2)	
Water Marks (B1)	Aydrogen Suilide Odor (CT)		Crayiish Burrows (C8)	
Drift Deposite (P3)	Prospect of Poducod Iron (C4)	ROOIS (C3)	Stunted or Strossed Plants (D1)	
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Sc	oils (C6)	Geomorphic Position (D2)	
Iron Deposits (B5)	Thin Muck Surface (C7)		Shallow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (D5)	
Field Observations:		<u> </u>		
Surface Water Present? Yes 🖌 No	Depth (inches) [.] 1			
Water Table Present? Yes v No	Depth (inches): 0			
Saturation Present? Yes <u>v</u> No <u>v</u>	Depth (inches): 0	Wetland Hydro	ology Present? Yes 🔽 No	
(includes capillary fringe)	vell aerial photos, previous inspec	tions) if available	<u>o</u> .	
Describe Recorded Data (Stream gauge, monitoring w	ven, aenai photos, previous hisped	aons), ii availabi	2.	
Demoder				
The wetland hydrology regime is sat	turated. There are sma	ll pockets o	f inundation present	
throughout the feature. The feature i	is fed by seepage.			

VEGETATION – Use scientific names of plants.

Sampling Point: wird1002f_w

Trop Stratum (Plot size: 30)	Absolute	Dominar	t Indicator	Dominance Test worksheet:
1 Fravinus nigra	<u>50</u>	V		Number of Dominant Species
1. <u>Traxinus nigra</u>	<u></u>	 		That Are OBL, FACW, or FAC: (A)
		IN		Total Number of Dominant
5				
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
5		·		
6		<u> </u>		Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	60	= Total Co	over	OBL species 16 x1 = 16 540W species 440 x2 220
Sapling/Shrub Stratum (Plot size: <u>15</u>)				FACW species 119 $x^2 = 238$
1. <u>Fraxinus nigra</u>	10	<u> </u>	FACW	FACU species $3 \times 4 = 12$
2. <u>Acer rubrum</u>	5	<u>Y</u>	FAC	UPL species $0 \times 5 = 0$
3. <u>Corylus cornuta</u>	2	<u> N </u>	<u>FACU</u>	Column Totals: <u>158</u> (A) <u>326</u> (B)
4		<u> </u>		
5				Prevalence Index = $B/A = \frac{2.0632911392405062}{2.0632911392405062}$
6		<u> </u>		Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	17	= Total Co	over	\sim 2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)				✓ 3 - Prevalence Index is ≤3.0°
1. <u>Carex bromoides</u>	50	Y	FACW	data in Remarks or on a separate sheet)
2. Glyceria striata	10	Ν	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Carex crinita	5	N	OBL	
4. Athvrium angustum	5	N	FAC	Indicators of hydric soil and wetland hydrology must
5 Rubus pubescens	5	N	FACW	Definitions of Venetation Strates
6 Equisetum pratense	2	N	FACW	Definitions of Vegetation Strata:
7 Onoclea sensibilis	2	<u> </u>	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8 Symphyotrichum puniceum	_ <u></u> 1	<u> </u>	OBI	at breast height (DDF), regardless of height.
Tarayacum officinale	_ <u> </u>	 N		Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
	•		1700	
				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
12	01			height.
20	_ 01	= 1 otal Co	over	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2		<u> </u>		
3		- <u> </u>		Hydrophytic
4				Present? Yes <u>v</u> No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate The feature is a hardwood swamp don	sheet.)	oy sedg	jes and b	olack ash.

Profile Deso Depth	cription: (D	Describe 1 Matrix	to the dep	th needed	to docur Redo	ment the i	ndicator	or confirm	the absence	of indicato	rs.)	
(inches)	Color (r	moist)	%	Color (I	moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-6	<u>10YR</u>	2/1	100			0			SIL			
6-20	5YR	4/4	90	5YR	5/8	10	С	Μ	С			
										_		
			letion PM	=Reduced	Matrix M	S=Macked	Sand Gr	ains	² Location:	PI =Pore	Lining M=Matr	rix.
Hydric Soil	Indicators:			-iteuuceu				ams.	Indicators	for Probler	natic Hydric S	Soils ³ :
Histosol	l (A1)			Polyva	alue Belov	w Surface	(S8) (LR	R R,	2 cm M	luck (A10) (LRR K, L, ML	RA 149B)
Histic E	pipedon (A2	2)		ML	RA 149B)			Coast Prairie Redox (A16) (LRR K, L, R)			
Black H	istic (A3)			Thin E	Dark Surfa	ace (S9) (L	.RR R, M	LRA 149B)	5 cm M	lucky Peat	or Peat (S3) (L	RR K, L, R)
Hydroge Stratifie	en Sulfide (A	(4) 5)		Loam	y Mucky N v Gleved	Mineral (F1 Matrix (F2) (LRR K	., L)	Dark Si Polyval	urface (S7)	(LRR K, L) Surface (S8) (L	
Oraline	d Below Dai	s) rk Surface	e (A11)	Loani	ted Matrix	(F3))		Thin Da	ark Surface	(S9) (LRR K.	L)
Thick D	ark Surface	(A12)	- ()	Redox	x Dark Su	rface (F6)			 Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) 			
Sandy M	Mucky Miner	al (S1)		Deple	ted Dark	Surface (F	7)					
Sandy C	Gleyed Matri	x (S4)		Redox	x Depress	ions (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
Sandy F	Redox (S5)	\							Very Shallow Dark Surface (TF12)			
Dark Su	urface (S7) (, LRR R. N	ILRA 1491	3)					Other (Explain in F	Remarks)	2)
		,		-,						_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	tomanic)	
³ Indicators o	of hydrophyti	c vegetat	ion and we	etland hydro	ology mus	st be prese	ent, unles	s disturbed	or problematic			
Restrictive	Layer (if ob	served):										
Туре:												
Depth (in	iches):								Hydric Soil	Present?	Yes 🖌	No
Remarks:												
A red cla	ay layer	with re	edox wa	as obse	rved b	elow 6	inches	S.				
l												
1												
1												
1												
1												



wird1002f_w_S



wird1002f_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/OTG			
File #:	Date of visit(s):			
wird1002	2020-05-25			
Location:	Ecological Landsca	Ecological Landscape:		
PLSS: sec 07 T045N R001W	Superior Mineral Range	S		
		-		
Lat: <u>46.391956</u> Long: <u>-90.545836</u>	Watershed:			
Country Iron Town (City) (illogo: Anderson town	LOTO, TYIEFT OIKS			
County: <u>Iton</u> Town/City/Village. <u>Anderson town</u>				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	ТЗК			
Tula-Gogebic complex, 0 to 6 percent slopes, stony. Gogebic silt loam, 18	Wetland Type(s):			
to 35 percent slopes, very stony, rocky.	PFO - Hardwood swamp			
Field Verified:		·		
Series not verified. Soils were a silty loam over a	Wetland Size:	Wetland Area Impacted		
reduced reddish clay.	0.0621	0.0621		
	Vegetation:			
	Plant Community D	Description(s):		
Hydrology:	The feature is a hardwood swamp dominated			
The wetland hydrology regime is saturated. There are	by sedges and black ash.			
small pockets of inundation present throughout the	,			
reature. The hydrology of the feature is fed by seepage.				

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	Ν	Y	Used for recreation (hunting, birding, hiking, etc.). List: Hunting
2	Ν	Ν	Used for educational or scientific purposes
3	Ν	Y	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	Ý	Ý	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 >50%(south) 75% (north) intact
5	Ν	N	Occurs in a Joint Venture priority township
6	Ν	Y	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	N	v	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
		I V	plans
ŏ	Y	Y	Fait of a large nabilal block that supports area sensitive species
9	N	N	Epitemetal pond with water present 240 days
10	Y	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudilats present
	N	N	Fish and Agustia Life Habitat
	N 1	N	Visit and Aquatic Life Habitat
1	N	N	Standing water provides behitst for emphibions and equatio invertebrates
2	Y	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Vegeteties is inundeted in apring
4	Y	Y	Shereline Protection
3P	N 1	N	Shoreline Protection
	N	N	Along shoreline of a stream, lake, point of open water area (21 acre) - if no, not applicable
2	Ν	N	water levels or high flows – if no, not applicable
3	N	N	Densely rooted emergent or woody vegetation
ST			Storm and Floodwater Storage
1	Y	Y	Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Ý	Ý	Water flow through wetland is NOT channelized
3	Ý	Ý	Dense, persistent vegetation
4	N	N	Evidence of flashy hydrology
5	N	N	Point or non-point source inflow
6	N	N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <10% wetland
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	N	N	Provides substantial storage of storm and floodwater based on previous section
2	Y	Y	Basin wetland or constricted outlet
3	Ý	Ý	Water flow through wetland is NOT channelized
4	N	Ň	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	N	Ň	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	N	Stormwater or surface water from agricultural land is major hydrology source
8	N	Y	Discharge to surface water
9	N	Ň	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			Wetland remains saturated for an extended time period with no additional water inputs
4	I NI	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

HU-4: There was no pollution or degradation observed.

FA-2: There are many small to medium sized pockets of standing water present throughout the feature.

ST-1: The feature is shallow and depressional.

- WQ-1: It is assumed that the feature does not hold a lot of storm water because the hydrology of the feature is fed by seepage.
- WH-2: All three strata are present at greater than 10% cover throughout the feature with the tree and ground layers present at greater than 50%.

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

Observed	Potential	Species/Habitat/Comments				
Y	Y	Deer tracks				
Y	Y	throated green warbler, ovenbird, black and white warbler, red eyed vireo, rose breasted gro				
Y	Y	Insects				
Y	Y	Amphibians (American toad)				
	Y	Other avian species, mammals, herpetofauna				

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

Observed	Potential	Species/Habitat
	Y	Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Carex bromoides*			PFO	Patchy
Fraxinus nigra*			PFO	Patchy
Acer rubrum			PFO	Rare
Athyrium filix-femina			PFO	Rare
Carex crinita			PFO	Rare
Glyceria striata			PFO	Rare
Acer saccharum			PFO	Barren
Carex leptonervia			PFO	Barren
Corylus cornuta			PFO	Barren
Equisetum pratense			PFO	Barren
Onoclea sensibilis			PFO	Barren
Osmunda claytoniana			PFO	Barren
Prunella vulgaris			PFO	Barren
Prunus virginiana			PFO	Barren
Rubus pubescens			PFO	Barren
Arisaema triphyllum			PFO	Barren
Brachyelytrum erectum			PFO	Barren
Carex arctata			PFO	Barren
Equisetum sylvaticum			PFO	Barren
Geum canadense			PFO	Barren
Impatiens capensis			PFO	Barren
Lysimachia ciliata			PFO	Barren
Maianthemum canadense			PFO	Barren
Mitella nuda			PFO	Barren
Packera aurea			PFO	Barren
Solidago gigantea			PFO	Barren
Symphyotrichum puniceum			PFO	Barren
Taraxacum officinale			PFO	Barren

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

The overall diversity of the wetland is average, with a good assemblage of native species. There are few non-natives present.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
_					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells,
					impounded water, increased runoff
					Point source or stormwater discharge
					Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
					Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
v	v		1		Removal of herbaceous stratum – mowing,
~	^		L	00	grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
					unprescribed fire
	Х		L	UC	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
					Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The feature is small and fairly undisturbed by stressors.
SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The feature is an average small black ash swamp.
Human Use Values	Could be used for recreation but is not easily accessible.
Wildlife Habitat	All 3 strata are present. Multiple species of birds observed in the direct vicinity.
Fish and Aquatic Life Habitat	Small pockets of inundation present that provides habitat for insects and amphibians.
Shoreline Protection	N/A
Flood and Stormwater Storage	The hydrology is fed by seepage.
Water Quality Protection	Does not hold much water because it is a discharge feature.
Groundwater Processes	The feature is fed by seepage and there are many seepage wetlands in the area.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Proje	<u>ct</u> City/Co	unty: Iron	Samp	ling Date: <u>2020-05-25</u>
Applicant/Owner: <u>Enbridge</u>		Sta	ate: <u>Wisconsin</u> Sar	npling Point: <u>wird1001f_w</u>
Investigator(s): <u>AGG/OTG</u>	Sectior	n, Township, Range: <u>SEC (</u>	<u>)7 T045N R0(</u>)1W
Landform (hillslope, terrace, etc.): Depressi	ON Local relie	f (concave, convex, none):	Concave	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Fores	^{;ts} Lat: <u>46.392211</u>	Long: <u>-90.54</u>	5449	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic silt loam,	18 to 35 percent slope	<u>es, very stony, rocky</u>	NWI classification:	
Are climatic / hydrologic conditions on the site ty	pical for this time of year? Ye	s 🗹 No (If no	, explain in Remarks	3.)
Are Vegetation, Soil, or Hydrolog	gy significantly disturb	ed? Are "Normal Circ	umstances" present	? Yes 🖌 No
Are Vegetation, Soil, or Hydrolog	gy naturally problemat	ic? (If needed, explai	in any answers in Re	emarks.)
SUMMARY OF FINDINGS – Attach	site map showing sam	oling point locations,	transects, imp	ortant features, etc.
Hydrophytic Vegetation Present? Yes	✓ No	Is the Sampled Area		
Hydric Soil Present? Yes	✓ No	within a Wetland?	Yes 🖌 No	<u></u>
Wetland Hydrology Present? Yes	No	If yes, optional Wetland Site	ID:	
Remarks: (Explain alternative procedures here	or in a separate report.)	an dominated by bl	ack ach	
	mai natuwoou swan	ip dominated by bi	ack asii.	

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) _ Ceomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No <u>v</u> Depth (inches):	
Water Table Present? Yes <u>v</u> No Depth (inches): <u>3</u>	
Saturation Present? Yes <u>v</u> No <u>Depth (inches)</u> : <u>2</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>v</u> No
Saturation Present? Yes Includes capillary fringe) Depth (inches): 2 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection)	Wetland Hydrology Present? Yes <u>~</u> No tions), if available:
Saturation Present? Yes _ ✓ No Depth (inches): 2	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes _ ✓ No Depth (inches): 2 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes <u>~</u> No tions), if available:
Saturation Present? Yes _ No Depth (inches): 2	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> No <u>v</u> No <u>v</u>
Saturation Present? Yes _ No Depth (inches): 2	Wetland Hydrology Present? Yes <u>v</u> No <u>tions</u>), if available:
Saturation Present? Yes _ No Depth (inches): 2	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> No <u>v</u> tions), if available:
Saturation Present? Yes _ ✓ No Depth (inches): 2	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> No <u>v</u> tions), if available:
Saturation Present? Yes _ No Depth (inches): 2	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> No <u>v</u> No <u>v</u> No <u>v</u> No <u>v</u>
Saturation Present? Yes _ No Depth (inches): 2 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The wetland hydrology regime is saturated. The feature is a	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> No <u>v</u> No <u>v</u> No <u>v</u>
Saturation Present? Yes _ No Depth (inches): 2	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> No <u>v</u> tions), if available:
Saturation Present? Yes _ ✓ _ No Depth (inches): 2 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The wetland hydrology regime is saturated. The feature is a	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> tions), if available:
Saturation Present? Yes v No Depth (inches): 2 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The wetland hydrology regime is saturated. The feature is a	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> tions), if available:
Saturation Present? Yes <u>v</u> No <u>Depth (inches): 2</u> (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The wetland hydrology regime is saturated. The feature is a	Wetland Hydrology Present? Yes <u>v</u> No <u>tions</u>), if available:
Saturation Present? Yes v No Depth (inches): 2 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The wetland hydrology regime is saturated. The feature is a	Wetland Hydrology Present? Yes <u>v</u> No <u>tions</u>), if available:

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wird1001f_w</u>

Trop Stratum (Blat size: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1 Eroxinus nigro	<u>% Cover</u>	<u>Species</u> ?		Number of Dominant Species
	<u> </u>	 		That Are OBL, FACW, or FAC: 5 (A)
	<u></u>	<u>IN</u>		Total Number of Dominant
3. <u>Acer rubrum</u>			FAC	Species Across All Strata: <u> </u>
4				Percent of Dominant Species
5			·	
6			·	Prevalence Index worksheet:
7			·	Total % Cover of: Multiply by:
	65	= Total Co	ver	OBL species <u>5</u> x 1 = <u>5</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>69</u> x 2 = <u>138</u>
1. <u>Fraxinus nigra</u>	10	Y	FACW	FAC species 45 x 3 = 135
2. <u>Acer rubrum</u>	10	Y	FAC	FACU species x 4 =
3				$\begin{array}{c} \text{UPL species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Column Tatalay} \underline{140} (A) \underline{270} (B) \end{array}$
4				$\begin{array}{c} \text{Column rotals.} \\ \underline{} \\$
5.				Prevalence Index = B/A = 2.3361344537815127
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
·	20	- Total Co	vor	_∠ 2 - Dominance Test is >50%
Horb Stratum (Plot size: 5)	_20		VEI	$_$ 3 - Prevalence Index is ≤3.0 ¹
<u>Heid Stratum</u> (Plot size. <u>5</u>)	10	V		4 - Morphological Adaptations ¹ (Provide supporting
	10	<u> </u>		Data in Remarks of on a separate sneet)
2. <u>Athyrium angustum</u>		<u> </u>		
3. <u>Equisetum sylvaticum</u>	5	<u> </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Carex scabrata</u>	5	<u> N </u>	OBL	be present, unless disturbed or problematic.
5. <u>Onoclea sensibilis</u>	2	<u> N</u>	<u>FACW</u>	Definitions of Vegetation Strata:
6. <u>Rubus pubescens</u>	2	N	FACW	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
	34	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1				
··				
2			·	
3			·	Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
Pomarka: (Include photo numbers here or on a consiste	U	= I otal Co	ver	
The feature is a hardwood swamp dom	inated b	y black	ash. La	ady fern and interrupted fern are
dominant in the ground layer. The vege	etation a	t the sa	mple po	bint is generally representative of the
surrounding wetland.				<u> </u>

Profile Des	cription: (Describe t	o the de	oth needed to doc	ument the	indicator	or confirm	the absence	of indicators.)
Depth	Matrix		Rec	lox Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc ²	Texture	Remarks
0-7	<u>10YR 2/1</u>	96	<u>10YR 4/4</u>	4	C	M	CL	
					·			
1							2	
Type: C=C	oncentration, D=Depl	etion, RN	I=Reduced Matrix, I	NS=Maske	d Sand Gra	ains.	Location:	PL=Pore Lining, M=Matrix.
			Debaselus Del	0				
Histoso	I (A1)			ow Surrace	e (58) (LR F	КΚ,	2 cm M	UCK (A10) (LRR K, L, MLRA 149B)
HISUC E	listic (A3)		Thin Dark Su	D) face (SQ) (PA 140B)	Coast F	ucky Peat or Peat (S3) (IPP K I P)
Hvdroge	en Sulfide (A4)		Loamy Mucky	Mineral (F		.1)	, 5 cm M Dark Si	r = (33) (1 RR K, 1)
Stratifie	d Lavers (A5)		Loamy Gleve	d Matrix (F2	2)	, _/	Polyval	ue Below Surface (S8) (LRR K. L)
Deplete	d Below Dark Surface	e (A11)	Depleted Mat	rix (F3)	-,		Thin Da	ark Surface (S9) (LRR K, L)
Thick D	ark Surface (A12)	()	Redox Dark S	Surface (F6))		Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Sandy M	Mucky Mineral (S1)		Depleted Darl	k Surface (I	F7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy 0	Gleyed Matrix (S4)		Redox Depres	ssions (F8)			Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)						Red Pa	rent Material (F21)
Stripped	d Matrix (S6)						Very Sł	nallow Dark Surface (TF12)
Dark Su	urface (S7) (LRR R, M	LRA 149	B)				Other (Explain in Remarks)
31 11 1								
Indicators of	or nydropnytic vegetati	on and w	etiand hydrology m	ust be pres	ent, unless	s disturbed	or problematic	
Restrictive	Layer (IT observed):							
Туре: <u>R</u>	ocks							
Depth (in	iches): <u>7</u>						Hydric Soil	Present? Yes <u><</u> No
Remarks:							•	
A dark s	urface layer wi	th red	ox was obser	ved. Sc	oils wer	e not sa	ampled de	eper due to large rocks in
the soil.								
1								



wird1001f_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/OTG Ó		
File #:	Date of visit(s):		
wird1001	2020-05-25		
Location:	Ecological Landsca	ape:	
PLSS: <u>sec 07 T045N R001W</u>	Superior Mineral Range	S	
Lat: <u>46.392211</u> Long: <u>-90.545449</u>	LS13. Tyler Forks		
County: Iron Town/City/\/illage: Anderson town			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Gogebic silt loam, 18 to 35 percent slopes, very stony, rocky	Wetland Type(s):		
	PFO - hardwood swamp		
Field Verified:			
Series not verified. Soils were a clay loam over a	Wetland Size:	Wetland Area Impacted	
restrictive layer of cobble.	0.0527	0.0527	
	Vegetation:		
	Plant Community D	Description(s):	
	The feature is a small hardwood swamp		
The wetland hydrology regime is saturated. The	dominated by bl	ack ash.	
feature is a recharge wetland. There are small			
pockets of inundation throughout the feature.			

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	Ν	Y	Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding, hiking
2	Ν	N	Used for educational or scientific purposes
3	Ν	Y	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	Ý	Ý	3 or more strata present (>10% cover)
3	N	Ň	Within or adjacent to habitat corridor or established wildlife habitat area
4	Y	Y	100 m buffer – natural land cover >50%(south) 75% (north) intact
5	N	Ň	Occurs in a Joint Venture priority township
6	Y	Y	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
-		-	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
	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	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	N	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
2	N	N	water levels or high flows – if no, not applicable
3	Ν	Ν	Densely rooted emergent or woody vegetation
ST			Storm and Floodwater Storage
1	Y	Y	Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Y	Y	Water flow through wetland is NOT channelized
3	Y	Y	Dense, persistent vegetation
4	N	N	Evidence of flashy hydrology
5	Y	Y	Point or non-point source inflow
6	Ν	N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <10% wetland
8	Ν	Y	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	Ν	Y	Provides substantial storage of storm and floodwater based on previous section
2	Y	Y	Basin wetland <u>or</u> constricted outlet
3	Y	Y	Water flow through wetland is NOT channelized
4	Ν	N	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	Ν	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	Ν	N	Stormwater or surface water from agricultural land is major hydrology source
8	Ν	N	Discharge to surface water
9	Ν	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	Ν	Ν	Springs, seeps or indicators of groundwater present
2	Ν	Ν	Location near a groundwater divide or a headwater wetland
3	Y	Ý	Wetland remains saturated for an extended time period with no additional water inputs
4	Ν	Ν	Wetland soils are organic
5	Ν	N	Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

HU-1: The feature has the potential for hunting and birding.

HU-3: Located on public land but it is not easy to access. HU-4: No pollution or degradation observed.

WH-10: Frogs were observed within the feature.

- WH-2: All three strata were observed within the feature.
- WH-6: The feature is part of a PFO/PEM complex. WQ-1: The feature holds the storm water runoff from a nearby ephemeral waterbody.

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	Y	Insects
Y	Y	Amphibians

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

Observed	Potential	Species/Habitat
	Y	Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Fraxinus nigra*			PFO	Interrupted
Carex crinita			PFO	Rare
Populus tremuloides			PFO	Rare
Acer rubrum			PFO	Rare
Corylus cornuta			PFO	Rare
Equisetum pratense			PFO	Rare
Rubus pubescens			PFO	Rare
Tilia americana			PFO	Rare
Athyrium filix-femina			PFO	Barren
Carex leptonervia			PFO	Barren
Erythronium americanum			PFO	Barren
Osmunda cinnamomea			PFO	Barren
Osmunda claytoniana			PFO	Barren
Pyrola elliptica			PFO	Barren
Carex arctata			PFO	Barren
Carex scabrata			PFO	Barren
Epilobium ciliatum			PFO	Barren
Equisetum sylvaticum			PFO	Barren
Geum canadense			PFO	Barren
Onoclea sensibilis			PFO	Barren
Prunella vulgaris			PFO	Barren
Taraxacum officinale			PFO	Barren

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

The vegetation community is found abundantly throughout the area. There is a good assemblage of native species present.

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

Assessment Area (AA)	Buffer	Historic	Impact	Relative Frequency**	Stressor
7				. loquonoy	Filling berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells.
					impounded water, increased runoff
					Point source or stormwater discharge
					Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
					Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	х		1	UC	Removal of herbaceous stratum – mowing,
			_		grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
	V			110	Unprescribed fire
	X		L		Human trails – unpaved
					Ruman indus – paveo
					Cover of pop potivo opd/or investivo oposioo
					Cover of non-native and/or invasive species
					Parking lot
					Golf course
					Gravel nit
					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)

There are no major disturbances present within the feature.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	There are no invasive species present, and the plant community consists of entirely native species. The plant community type is very abundant in the area.
Human Use Values	Has potential for uses such as hunting, but it is not easily accessible.
Wildlife Habitat	All 3 strata are present and the area is relatively undisturbed.
Fish and Aquatic Life Habitat	Some small pools can provide habitat for amphibians.
Shoreline Protection	N/A
Flood and Stormwater Storage	Shallow basin wetland that doesn't hold large quantities of water, and does not receive significant stormwater runoff.
Water Quality Protection	The feature is a shallow basin wetland that doesn't hold much water.
Groundwater Processes	Shallow recharge wetland not associated with any seeps or springs.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron Sampling Date: 2020-05-25
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wird1001_u</u>
Investigator(s): AGG/OTG	Section, Township, Range: <u>Sec 07 T045N R001W</u>
Landform (hillslope, terrace, etc.): Base Slope	Local relief (concave, convex, none): <u>Convex</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Morthcentral Forests Lat: 46.392	096 Long: <u>-90.545507</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic silt loam, 18 to 35 perce	ent slopes, very stony, rocky NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes 🖌 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significa	antly disturbed? Are "Normal Circumstances" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally	y problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes No	within a Wetland? Yes <u>No</u>
Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate r The sample point is located in a mesic hards sample point is shared with wetland wird100	report.) wood forest between two wetlands on a hill. The upland D2f.

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	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🗸 Depth (inches):	
Saturation Present? Yes No 🖌 Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	Wetland Hydrology Present? Yes No .tions), if available:
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	Wetland Hydrology Present? Yes No
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No V Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No V Depth (inches): Uncludes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No V Depth (inches): Uncludes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No <u>v</u> Depth (inches): <u>(includes capillary fringe)</u> Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No V Depth (inches): Uncludes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No

VEGETATION – Use scientific names of plants.

Sampling Point: wird1001_u

	Absolute	Dominant	Indicator	Dominance Test workshoot
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1. <u>Quercus rubra</u>	25	Y	<u>FACU</u>	That Are OBL, FACW, or FAC: (A)
2. <u>Acer saccharum</u>	25	Y	<u>FACU</u>	Total Number of Dominant
3. <u>Tilia americana</u>	10	Ν	FACU	Species Across All Strata: <u>5</u> (B)
4. <u>Ostrva virginiana</u>	5	Ν	FACU	Percent of Dominant Species
5.				That Are OBL, FACW, or FAC: <u>20</u> (A/B)
6				
7				Prevalence Index worksheet:
··	65	- Total Ca		
	00		ver	$\begin{array}{c} \text{OBE species} \\ \text{EACW species} \\ \text{OBE species} $
Sapling/Shrub Stratum (Plot size: 15)	_	Ň		FAC species $11 \times 3 = 33$
1. <u>Ostrya virginiana</u>	5	<u> Y </u>	<u>FACU</u>	FACU species $79 \times 4 = 316$
2				$\frac{1}{1} \frac{1}{1} \frac{1}$
3				Column Totals: 90 (A) 349 (B)
4				
5	<u> </u>			Prevalence Index = B/A = <u>3.877777777777777777</u>
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	5	= Total Cov		2 - Dominance Test is >50%
Horb Stratum (Plataiza: 5)				3 - Prevalence Index is $≤3.0^1$
1. Carex pedunculata	10	Y	FAC	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2 Mitchella repens	5	Y	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Majanthemum canadense	2	<u> </u>	FACU	
Maianthemum recomosum	2	 		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Ivialantinemum racemosum</u>	<u> </u>			be present, unless disturbed or problematic.
5. <u>Thernalis borealls</u>			FAC	Definitions of Vegetation Strata:
6. <u>Erythronium americanum</u>		<u> </u>		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8				at breast height (DBH), regardless of height.
9.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				Herb - All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
10				Woody vines – All woody vines greater than 3.28 ft in
12				height.
20			ver	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes No V
	0	= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)	-1 I		den ner mende The second states
I ne area is a mesic hardwood forest de	ominate	a by rec	a oak an	a sugar maple. The ground cover is
sparse with Carex pedunculata domina	nt.			

Profile Desc	cription: (Describe	to the dept	h needed to docun	nent the i	indicator	or confirm	the absence	of indicators.)
Depth	Matrix	·	Redox	<u>k Feature</u>	<u>s</u> 1	. 2		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type	Loc	Texture	Remarks
0-4	<u>10YR 4/3</u>	100		0			SI	
		· ·			·			
·								
		· ·						
		· ·			·			
		· ·						
. <u>.</u>								
¹ Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	S=Masked	Sand Gr	ains.	² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators	for Problematic Hydric Soils":
Histosol	(A1)		Polyvalue Belov	v Surface	(S8) (LR	R R,	2 cm N	Auck (A10) (LRR K, L, MLRA 149B)
HISTIC E	pipedon (A2)		MLRA 149B) Thin Dark Surfa	co (S0) (I		DA 140B)	Coast	Aucky Post or Post (S3) (I PP K I P)
Hvdroge	en Sulfide (A4)	•	Loamy Mucky M	lineral (F	1) (LRR K	LKA 1490) . L)	Dark S	Surface (S7) (LRR K. L)
Stratified	d Layers (A5)	•	Loamy Gleyed N	Matrix (F2	!)	, _/	Polyva	Ilue Below Surface (S8) (LRR K, L)
Deplete	d Below Dark Surface	e (A11)	Depleted Matrix	(F3)	,		Thin D	ark Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)		Redox Dark Sur	face (F6)			Iron-M	anganese Masses (F12) (LRR K, L, R)
Sandy N	/lucky Mineral (S1)		Depleted Dark S	Surface (F	7)		Piedm	ont Floodplain Soils (F19) (MLRA 149B)
Sandy G	Gleyed Matrix (S4)		Redox Depressi	ions (F8)			Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)						Red Pa	arent Material (F21)
Stripped	Matrix (S6)		\				Very S	Shallow Dark Sufface (TF12)
Dark Su		149D)					
³ Indicators o	f hvdrophvtic vegetat	tion and we	tland hvdrology mus	t be prese	ent. unles	s disturbed	or problematio	2.
Restrictive	Layer (if observed):				,			
Type: Co	obble							
Dopth (in	chos): 1						Hvdric Soil	Present? Yes No 🗸
Deptil (III	ches). <u>4</u>							
No bydri	c soil indicator	e woro	observed in th	no firet	1 inch	as Sai	le could n	ot be sampled further due
to o root	riotivo ophilo l			10 11 3		163. 001		or be sampled further due
io a resi		ayer.						



wird1001_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	ity/County: <u>Iron</u> Sampling Date: <u>2020-05-25</u>						
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wirb009f_xw						
Landform (hillslope terrace etc.): Depression	$\frac{1}{1000} = \frac{1}{1000} = 1$						
Outraction (Inisiope, tenace, etc.). Depression	Heler (concave, convex, none). <u>COncave</u> Siope (70). <u>C-270</u>						
Subregion (LRR or MLRA): Lat: <u>40.39306</u>	Long: <u>-90.545324</u> Datum: <u>WGS84</u>						
Soil Map Unit Name: GOGEDIC SIIT IOAM, 6 to 18 percent	OPES, VERY STONY, FOCKY NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of ye	? Yes _ ✔ No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrology significantly	sturbed? Are "Normal Circumstances" present? Yes <u>v</u> No						
Are Vegetation, Soil, or Hydrology naturally pro	ematic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing	ampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes _ No Hydric Soil Present? Yes _ No Wetland Hydrology Present? Yes _ No	Is the Sampled Area within a Wetland? Yes <u>v</u> No If yes, optional Wetland Site ID:						
dominated by quaking aspen. There are small is fed by an ephemeral stream and is drained b	ockets of inundation present throughout. The feature another ephemeral stream.						
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	Paves (B9) Drainage Patterns (B10)						
 High Water Table (A2) Aquatic Fauna 	(13) Moss Trim Lines (B16)						
Saturation (A3)	15) Dry-Season Water Table (C2)						
Water Marks (B1) Hydrogen Sulfic	Odor (C1) Crayfish Burrows (C8)						
Sediment Deposits (B2) Oxidized Rhizor	heres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)						
Drift Deposits (B3) Presence of Re	uced Iron (C4) Stunted or Stressed Plants (D1)						
Algal Mat or Crust (B4) Recent Iron Re	uction in Tilled Soils (C6) Geomorphic Position (D2)						
Iron Deposits (B5) Thin Muck Surfa	e (C7) Shallow Aquitard (D3)						
Inundation Visible on Aerial Imagery (B7) Other (Explain i	Remarks) Microtopographic Relief (D4)						
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? Yes No 🖌 Depth (inches)							
Water Table Present? Yes <u>v</u> No Depth (inches)	3						
Saturation Present? Yes <u>v</u> No <u>Depth (inches)</u>	3 Wetland Hydrology Present? Yes <u>v</u> No						
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photo	previous inspections), if available:						
Remarks:							
The wetland hydrology regime is saturated. Th	re are small pockets of standing water present						
throughout the feature. The hydrology is fed by	stormwater and runoff from a nearby ephemeral						
waterbody.							

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wirb009f_xw</u>

Trop Stratum (Plot cize: 30)	Absolute	Dominan	t Indicator	Dominance Test worksheet:		
1 Populus tremuloides	<u></u> 10	V		Number of Dominant Species		
2. Fravinus nigra	<u>40</u> 20			That Are OBL, FACW, or FAC: (A)		
 Acer rubrum 	10	 N	FAC	Total Number of Dominant Species Across All Strata: 7 (B)		
4				Percent of Deminent Crossics		
5				That Are OBL, FACW, or FAC:(A/B)		
6						
7			<u> </u>	Prevalence Index worksheet:		
·	70	- Total Co	vor	OPL species 20 × 1 = 30		
Copling/Chrub Stratum (Distaire) 15	_/0_	- 10(a) 00		EACW species $40 \times 2 = 80$		
<u>Saping/Sirub Stratum</u> (Piot size. 15)	10	V		FAC species $90 \times 3 = 270$		
1. <u>Acer rubrum</u>	10	<u>ľ</u>		FACU species $0 \times 4 = 0$		
2. <u>Populus tremuloides</u>	10	<u> </u>	FAC	UPL species $0 \times 5 = 0$		
3. <u>Fraxinus nigra</u>	5	<u> </u>	<u>FACW</u>	Column Totals: <u>160</u> (A) <u>380</u> (B)		
4			·			
5			<u> </u>	Prevalence index = $B/A = 2.375$		
6			<u> </u>	Hydrophytic Vegetation Indicators:		
7				1 - Rapid Test for Hydrophytic Vegetation		
	25	= Total Co	ver	\sim 2 - Dominance Lest is >50%		
Herb Stratum (Plot size: 5)				\sim 3 - Prevalence index is \leq 3.0		
1. <u>Carex crinita</u>	25	Y	OBL	data in Remarks or on a separate sheet)		
2. <u>Athyrium angustum</u>	10	N	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)		
3. Carex leptonervia	10	Y	FAC			
4. Equisetum svlvaticum	5	N	FACW	Indicators of hydric soil and wetland hydrology must		
5 Caltha palustris	5	N	OBI	Definitions of Venetation Strates		
6 Ruhus pubescens	5	N		Definitions of Vegetation Strata:		
7. Equisetum pratense	<u> </u>	<u>N</u>	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter		
°		IN	<u>1 AOW</u>	at breast height (DBH), regardless of height.		
o			·	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.		
10			·			
10			·	of size, and woody plants less than 3.28 ft tall.		
12			<u></u>	Woody vines – All woody vines greater than 3.28 ft in		
12.	65	- Total Ca		height.		
Weady Vina Stratum (Plataiza: 30)		- 10(a) 00				
(Flot size. <u>50</u>)						
l			·			
2			<u> </u>			
3			·	Hydrophytic		
4			· . <u></u>	Present? Yes <u>v</u> No		
		= Total Co	ver			
Remarks: (Include photo numbers here or on a separate	sheet.) Vinatod k	w anak	ina asne	and black ash. The ground layer of		
the feature is dominated by sedges and	d ferns	y yuun	ing aspe	sh ana blaok aon. The ground layer of		
and realise to dominiated by bedges and	. 101110.					

Profile Desc	cription: (Describe t	o the de	pth needed to docum	ent the i	ndicator	or confirm	the absence of ir	ndicators.)
Depth (inchos)	<u>Matrix</u>	0/_	Color (moist)	Features			Toxturo	Pomarka
								Remarks
0-10	<u>10YR 2/1</u>	95	<u>10YR 4/4</u>			IVI		
							<u> </u>	
							- <u></u>	
							<u> </u>	
							<u> </u>	
							- <u></u>	
¹ Type: C=C	oncentration D=Depl	etion RM	I=Reduced Matrix MS	=Masked	Sand Gr	ains	² Location: PL	=Pore Lining M=Matrix
Hydric Soil	Indicators:	0	<u> </u>		euna en		Indicators for	Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Below	Surface	(S8) (LR	RR,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
Histic Ep	oipedon (A2)		MLRA 149B)				Coast Prair	rie Redox (A16) (LRR K, L, R)
Black Hi	stic (A3)		Thin Dark Surfac	ce (S9) (L	RR R, M	LRA 149B) 5 cm Muck	y Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)		Loamy Mucky M	Ineral (F1) (LRR K	, L)	Dark Surfa	ce (S7) (LRR K, L)
Stratilied	d Layers (A5) d Below Dark Surface	Δ11)	Loarny Gleyed N	/iatrix (F2 (F3))		Thin Dark 9	Selow Sufface (S8) (LRR K, L)
Thick Da	ark Surface (A12)	, (411)	 Redox Dark Sur 	(F6)			Iron-Manga	anese Masses (F12) (LRR K. L. R)
Sandy N	lucky Mineral (S1)		Depleted Dark S	Surface (F	7)		Piedmont F	Floodplain Soils (F19) (MLRA 149B)
Sandy G	Gleyed Matrix (S4)		Redox Depressi	ons (F8)	,		Mesic Spoo	dic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)						Red Parent	t Material (F21)
Stripped	Matrix (S6)						Very Shallo	bw Dark Surface (TF12)
Dark Su	rface (S7) (LRR R, M	LRA 149	B)				Other (Exp	lain in Remarks)
³ Indicators o	f hydrophytic vegetati	on and w	etland hydrology must	be prese	ent, unless	s disturbed	or problematic.	
Restrictive	Layer (if observed):							
Type: <u>R</u> o	ocks							
Depth (in	ches): <u>10</u>						Hydric Soil Pres	sent? Yes <u><</u> No
Remarks:								
A dark su	urface layer wi	th red	ox was observe	ed. So	ils cou	ld not b	e dug deepe	er due to the presence of
large roc	ks in the soil p	orofile.						
-								
1								



wirb009f_xw_E



wirb009f_xw_N

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	AGG/OTG		
File #:	Date of visit(s):		
wirb009_x	2020-05-25		
Location:	Ecological Landsca	ape:	
PLSS: sec 07 T045N R001W	Superior Mineral Range	e	
		5	
Lat: <u>46.393014</u> Long: <u>-90.545276</u>	Watershed:		
	LS13, Tyler Forks		
County: <u>Iron</u> Town/City/Village: <u>Anderson town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	ТЗК		
Gogebic silt loam, 6 to 18 percent slopes, very stony, rocky	Wetland Type(s):		
	PFO - hardwood swamp		
Field Verified:			
Series not verified. Soils were a clay loam above	Wetland Size:	Wetland Area Impacted	
a restrictive layer of cobble.	0.7793	0.7793	
·	Vegetation:	·	
	Plant Community Description(s):		
Hydrology:	The feature is a	hardwood swamp dominated	
The hydrologic regime is saturated, with pockets of inundation	by black ash and quaking aspen, with a		
present throughout the feature. The wetland is fed by recharge			
discharges into another small enhemeral stream	typical assemblage of species for this plant		
	community.		

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	Ν	Y	Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding, hiking
2	Ν	Ν	Used for educational or scientific purposes
3	Ν	Y	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	Ň	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	Ý	Ý	3 or more strata present (>10% cover)
3	N	Ň	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	Ν	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
'	IN	Y	plans
8	N	Y	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present >45 days
10	Y	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	N	N	Wetland is connected or contiguous with perennial stream or lake
2	Y	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	Y	Vegetation is inundated in spring
SP			Shoreline Protection
1	N	N	Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable
2	N	N	Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
2			water levels or high flows – If no, not applicable
<u>्</u> र	N	N	Storm and Eleadwater Storage
51	X	Ň	Design wetland constricted outlat has through flow or is adjacent to a stream
	Y	Ý	Mater flew through wetland is NOT channelized
2	Y	Y Y	
3	Y	Y N	Dense, persistent vegetation
4	N	N	Evidence of hashy hydrology
5	Y	Y N	Point or non-point source innow
0	N	N	Impervious surfaces cover > 10% of land surface within the watershed Within a watershed with <10% watershed
/	N	N	Villing a water sheu with $\leq 10\%$ welland Detential to hold $>10\%$ of the runoff from contributing area from a 2 year 24 hour storm event.
0	Y	Y	Water Quality Protection
1	V	v	Provides substantial storage of storm and floodwater based on providus section
2	ř V	ř V	Resin wetland or constricted outlet
2	ř V	ř V	Water flew through wetland is NOT channelized
3	ř V	ř V	Vegetated wetland associated with a lake or stream
-	I V	ř V	Dense, persistent vegetation
6	Ť NI	ľ NI	Signe of excess nutrients, such as algae blooms, beaut macrophyto growth
7	IN NI	IN N	Signs of excess numerics, such as algae blooms, neavy macrophyle growin
/ Q			Discharge to surface water from agricultural land is major flydrology source
0	IN N	Y	Notural land cover in 100m buffer area < 50%
S C M	IN	IN IN	Groundwater Processes
GVV		N 1	Christian acons or indicators of aroundwater present
1	N	N	Springs, seeps or indicators of groundwater present
2	N	N	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
4	N	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

- HU-1: The feature has the potential for hunting and birding. HU-3: Located on public land but it is not easy to access.
- HU-3: No pollution or degradation observed.
- WH-10: Frogs were observed within the feature.
- WH-2: All three strata were observed within the feature.
- WH-6: The feature is part of a PFO/PEM complex. ST-5: There is an ephemeral water body that flows into the feature.
- WQ-1: The feature holds the storm water runoff from a nearby ephemeral waterbody.

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	Birds in the trees		
	Y	Mammals		
	Y	Reptiles could use small pools of standing water		
Y	Y	Insects		
Y	Y	Frogs		

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

Observed	Potential	Species/Habitat
	Y	Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Populus tremuloides*			PFO	Patchy
Carex crinita*			PFO	Patchy
Fraxinus nigra			PFO	Rare
Acer rubrum			PFO	Rare
Athyrium filix-femina			PFO	Rare
Caltha palustris			PFO	Rare
Corylus cornuta			PFO	Rare
Equisetum pratense			PFO	Rare
Equisetum sylvaticum			PFO	Rare
Rubus pubescens			PFO	Rare
Carex arctata			PFO	Barren
Carex leptonervia			PFO	Barren
Carex pedunculata			PFO	Barren
Carex scabrata			PFO	Barren
Erythronium americanum			PFO	Barren
Rubus idaeus			PFO	Barren
Solidago flexicaulis			PFO	Barren
Solidago gigantea			PFO	Barren
Tilia americana			PFO	Barren
Trillium cernuum			PFO	Barren
Actaea rubra			PFO	Barren
Carex stipata			PFO	Barren
Caulophyllum thalictroides			PFO	Barren
Dryopteris carthusiana			PFO	Barren
Fragaria virginiana			PFO	Barren
Galium asprellum			PFO	Barren
Juncus effusus			PFO	Barren
Lysimachia ciliata			PFO	Barren

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

The area is a well developed hardwood swamp dominated by a good assemblage of native species and very few non-natives or invasives observed. Additional species: Maianthemum canadense (Plant Communities: PFO, Abundance: Barren), Maianthemum racemosum (Plant Communities: PFO, Abundance: Barren), Prenanthes alba (Plant Communities: PFO, Abundance: Barren), Prunus virginiana (Plant Communities: PFO, Abundance: Barren), Prunus virginiana (Plant Communities: PFO, Abundance: Barren), Pyrola elliptica (Plant Communities: PFO, Abundance: Barren), Ranunculus abortivus (Plant Communities: PFO, Abundance: Barren), Saxifraga pensylvanica (Plant Communities: PFO, Abundance: Barren), Taraxacum officinale (Plant Communities: PFO, Abundance: Barren)

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
				1.1040.01105	Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells.
					impounded water, increased runoff
					Point source or stormwater discharge
					Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
					Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	х		1	UC	Removal of herbaceous stratum – mowing,
			_		grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
	V			110	Unprescribed fire
	X		L		Human trails – unpaved
					Ruman indus – paveo
	V				Cover of pop potivo opd/or investivo oposioo
	~		L		Cover of non-native and/or invasive species
					Lithan commercial or industrial use
					Parking lot
					Golf course
					Gravel nit
					Recreational use (boating ATVs etc.)
					Excavation or soil grading
					Other (list below):
		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 area is relatively undisturbed and located within a large area of forest.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The area is dominated by an average assemblage of native species. Few invasive or non-natives were observed.
Human Use Values	Has the potential to be used for a variety of activities but is not easily accessible to the public.
Wildlife Habitat	Feature has the potential to support a variety of wildlife, including deer, bears, birds, insects, amphibians, and reptiles.
Fish and Aquatic Life Habitat	The feature is adjacent to/associated with several ephemeral streams. Small pools provide habitat for amphibians but it appears that they dry up later in the growing season.
Shoreline Protection	N/A
Flood and Stormwater Storage	Stores stormwater runoff from a nearby ephemeral waterbody.
Water Quality Protection	The feature is a small recharge basin feature that doesn't provide much water quality protection.
Groundwater Processes	The feature exhibits groundwater recharge, and discharges some water into an ephemeral stream.

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: Iror	Sampling Date: 2020-05-2
Applicant/Owner: Enbridge		State: Wisconsin Sampling Point: wirb009f_
Investigator(s): AGG/OTG	Section, Township	o, Range: <u>sec 07 T045N R001W</u>
Landform (hillslope, terrace, etc.): Rise	Local relief (concave,	convex, none): Convex Slope (%): 0-20
Subregion (I BB or MI BA). Northcentral Forests	6.393018	Long: -90 545250 Datum: WGS84
Soil Man Linit Name: Gogebic silt Joam 6 to 18	nercent slones verv s	stony rocky NWI classification:
Are alimetic / budgelaric conditions on the site tunical for th	is time of upon? More we have	
Are climatic / hydrologic conditions on the site typical for th	Is time of year? Yes <u>v</u> f	
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" present? Yes <u>/</u> No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling poi	nt locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	No 🖌 Is the Sam	pled Area
Hydric Soil Present? Yes	No 🖌 within a W	etland? Yes No 🖌
Wetland Hydrology Present? Yes	No 🖌 If yes optic	onal Wetland 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)
Surface Water (A1) Wa	iter-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	uatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Ma	rl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hyd	drogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxi	dized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Pre	sence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Re	cent Iron Reduction in Tilled Sc	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5) In Ini	n Muck Sufface (C7)	Snallow Aquitard (D3) Microtopographic Boliof (D4)
Sparsely Vegetated Concave Surface (B8)		EAC-Neutral Test (D5)
Field Observations:	I	
Surface Water Present? Yes No 🗸 De	epth (inches):	
Water Table Present? Yes No 🗸 De	epth (inches):	
Saturation Present? Yes No De	epth (inches):	Wetland Hydrology Present? Yes No

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

Remarks:

No indicators of wetland hydrology were observed.

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wirb009f_xu</u>

Trac Stratum (Diataiza) 20	Absolute	Dominan	t Indicator	Dominance Test worksheet:
(Plot size: <u>50</u>)	<u>% Cover</u>	<u>Species</u>		Number of Dominant Species
	<u>25</u>			That Are OBL, FACW, or FAC: 2 (A)
	<u> </u>	 		Total Number of Dominant
. <u>Ostrya virginiana</u>		IN	<u>FACU</u>	Species Across All Strata (B)
4				Percent of Dominant Species That Are OBL EACW, or EAC: 40 (A/B)
5				
6			·	Prevalence Index worksheet:
7			<u> </u>	Total % Cover of: Multiply by:
	60	= Total Co	over	OBL species 0 x1 = 0
Sapling/Shrub Stratum (Plot size: 15)	_			FACW species $0 \times 2 = 0$
1. <u>Ostrya virginiana</u>	5	<u> </u>	FACU	FAC species $55 \times 4 = 220$
2. <u>Acer rubrum</u>	5	<u> </u>	FAC	UPL species $0 \times 5 = 0$
3				Column Totals: 85 (A) 310 (B)
4				
5				Prevalence Index = $B/A = 3.6470588235294117$
6				Hydrophytic Vegetation Indicators:
7			. . 	1 - Rapid Test for Hydrophytic Vegetation
	10	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is $\leq 3.0^{\circ}$
1. Ervthronium americanum	50	Y		4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2. Pteridium aquilinum	10	N	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Mitchella repens	5	N	FACU	
4				¹ Indicators of hydric soil and wetland hydrology must
5				
6				Definitions of Vegetation Strata:
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8				
0				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
3 10			<u></u>	
10				of size, and woody plants less than 3.28 ft tall.
11			·	Woody vines – All woody vines greater than 3.28 ft in
12	65			height.
20	00	= Total Co	over	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes No ✓
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)			· · · · · · · · ·
The area is a medic hardwood forest d	ominate	d by re	d oak ar	nd red maple. The ground layer is
dominated by yellow trout lily with brack	ken tern	Interm	ixed.	

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix		Redo	x Feature	S					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-9	<u>10YR 2/2</u>	100		0			SIL			
9-20	10YR 3/3	100		0			SICL			
	<u></u>				·					
				·	·		·			
				·						
·				·			·			
·				·	·		·			
							·			
<u> </u>				·	·					
				·			·			
¹ Type: C=C	oncentration. D=Depl	etion. RM=F	Reduced Matrix. MS	S=Maske	d Sand Gra	ains.	² Location: PL=Pore	e Lining, M=Matrix,		
Hydric Soil	Indicators:		·····, ····				Indicators for Problematic Hydric Soils ³ :			
Histosol	l (A1)		Polyvalue Below	w Surface	(S8) (LRF	RR,	2 cm Muck (A10) (LRR K, L, MLRA 149B)			
Histic E	pipedon (A2)		MLRA 149B))	. , .		Coast Prairie Re	dox (A16) (LRR K, L,	R)	
Black H	istic (A3)	_	Thin Dark Surfa	ice (S9) (I	LRR R, MI	LRA 149B)	5 cm Mucky Pea	t or Peat (S3) (LRR K	K, L, R)	
Hydroge	en Sulfide (A4)	_	Loamy Mucky M	/lineral (F	1) (LRR K	, L)	Dark Surface (S7	') (LRR K, L)		
Stratifie	d Layers (A5)		Loamy Gleyed I	Matrix (F2	2)		Polyvalue Below	Surface (S8) (LRR K	Σ, L)	
Deplete	d Below Dark Surface	e (A11)	_ Depleted Matrix	(F3)			Thin Dark Surface (S9) (LRR K, L)			
Thick Da	ark Surface (A12)	-	Redox Dark Sui Depleted Dark Sui	fface (F6)) - \		Iron-Manganese Masses (F12) (LRR K, L, R)			
Sandy N	Nucky Mineral (ST)	-	_ Depleted Dark 3	Surface (F	-7)		Pleamont Floodplain Solis (F19) (MLRA 149B) Mesic Spedic (TA6) (MLRA 144A, 145, 149B)			
Sandy E	Peday (S5)	_	_ Redux Depress				Red Parent Material (F21)			
Stripped	Matrix (S6)						Very Shallow Da	rk Surface (TE12)		
Dark Su	Inface (S7) (LRR R. M	ILRA 149B)					Other (Explain in	Remarks)		
		,					<u> </u>	,		
³ Indicators o	of hydrophytic vegetat	ion and wetl	and hydrology mus	t be pres	ent, unless	s disturbed	or problematic.			
Restrictive	Layer (if observed):									
Туре:										
Depth (in	ches).						Hydric Soil Present?	Yes No	~	
Remarks:										
No hydri	c soil indicator	s were (hserved							
i to nyan		0 1010								



wirb009f_xu_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: <u>Ashland</u>	Sampling Date: <u>2020-06-02</u>						
Applicant/Owner: Enbridge	State	: Wisconsin Sampling Point: wasd1020e_w						
Investigator(s): AGG/OTG	Section, Township, Range: <u>Sec 11</u>	T045N R002W						
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): <u>C</u>	DICAVE Slope (%): 0-2%						
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.3</u>	93684 Long: <u>-90.570</u>	264 Datum: WGS84						
Soil Map Unit Name: Amasa-Karlin complex, esk	er, 2 to 18 percent slopes	VI classification:						
Are climatic / hydrologic conditions on the site typical for this tir	me of year? Yes 🖌 No (If no, e	xplain in Remarks.)						
Are Vegetation, Soil, or Hydrology sign	ificantly disturbed? Are "Normal Circum	istances" present? Yes No						
Are Vegetation, Soil, or Hydrology natu	urally problematic? (If needed, explain a	any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.								
Hydrophytic Vegetation Present? Yes <u>v</u> No No No	Is the Sampled Area within a Wetland?	/es ✔ No						

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes 🖌 No Yes 🖌 No	within a Wetland? Yes <u><</u> No
Wetland Hydrology Present?	Yes 🖌 No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedu The wetland is located wit	ures here or in a separate report.) hin a depression in a pla	inted corn field.

HYDROLOGY

Wetland Hydrology Indicator	'S:			Secondary Indicators (minimum of two required)				
Primary Indicators (minimum o	f one is required; chec		Surface Soil Cracks (B6)					
Surface Water (A1)			Drainage Patterns (B10)					
High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)				
Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)				
Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)				
Sediment Deposits (B2)		Oxidized Rhizospheres on Living	Roots (C3)	Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Sc	oils (C6)	Geomorphic Position (D2)				
Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)				
Inundation Visible on Aeria	al Imagery (B7)	Other (Explain in Remarks)		Microtopographic Relief (D4)				
Sparsely Vegetated Conca	ave Surface (B8)			FAC-Neutral Test (D5)				
Field Observations:								
Surface Water Present?	Yes No 🖌	Depth (inches):						
Water Table Present?	Yes No 🖌	Depth (inches):						
Saturation Present? (includes capillary fringe)	Yes 🖌 No	Wetland H	-lydrology Present? Yes _ ✓ No					
Describe Recorded Data (strea	am gauge, monitoring	well, aerial photos, previous inspec	tions), if ava	ailable:				
Domortica								
The wetland hydrolog	av regime is ter	moorarily flooded There	e is surf:	ace saturation present at the time				
of euryov	gy loginio ie te.	inportanty needed. There	0 10 00.11					
OI Suivey.								

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1020e_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 25 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Cov	/er	OBL species 2 x 1 = 2
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =0
1				FAC species x 3 =
··				FACU species x 4 =
2				UPL species x 5 =
3				Column Totals: <u>2</u> (A) <u>2</u> (B)
4 5.				Prevalence Index = B/A = <u>1.00</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
·		- Total Car		2 - Dominance Test is >50%
E S			/er	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:)	2	V		4 - Morphological Adaptations ¹ (Provide supporting
2 Soirpus on		 		Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Sciipus sp.</u>		<u> </u>		
3. <u>Carex sp.</u>		<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Persicaria sp.</u>	2	<u> Y </u>		be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
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	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: 30)				
1				
2				
2				
S				Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
		= Total Cov	/er	
The area is a planted corn field New p	lant aro	wth is sr	oarse a	nd primarily hydrophytic
	lant gro			

SOIL

Profile Desc	cription: (Describ	e to the de	oth needed	to docun	nent the i	ndicator	or confirm	the absence o	f indicators.)
Depth Matrix Redox Features									
(inches)	Color (moist)	%	Color (n	noist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	7.5YR 3/2	90	2.5YR	3/6	10	С	Μ	CL	
					·	·			
					·				
					·	·			
					·				
	anoantration D-D		-Doducod N	Actrix MC		Sand Cr	aina	² l contion:	BL-Boro Liping M-Matrix
Hydric Soil	Indicators:					Sanu Gr	airi5.	Indicators for	or Problematic Hydric Soils ³
Histosol	(A1)		Polya	lua Balov	v Surface	(S8) (I P	D	2 cm Mu	
Histic Fr	ninedon ($\Delta 2$)		I Olyva	24 149R)			х іх ,	Coast P	rairie Redox (A16) (IRR K I R)
Black Hi	istic (A3)		Thin D	ark Surfa	, nce (S9) (L		RA 149B)	5 cm Mi	icky Peat or Peat (S3) (I RR K , I , R)
Hydroge	en Sulfide (A4)		Loamy	Mucky N	/lineral (F1) (LRR K	, L)	Dark Su	rface (S7) (LRR K, L)
Stratified	d Layers (A5)		Loamy	Gleyed I	Matrix (F2))	, ,	Polyvalu	le Below Surface (S8) (LRR K, L)
Deplete	d Below Dark Surfa	ace (A11)	Deplet	ed Matrix	(F3)	,		Thin Da	rk Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)	()	Redox	Dark Su	rface (F6)			Iron-Mar	nganese Masses (F12) (LRR K, L, R)
Sandy N	Aucky Mineral (S1)		Deplet	ed Dark S	Surface (F	7)		Piedmor	nt Floodplain Soils (F19) (MLRA 149B)
Sandy C	Gleyed Matrix (S4)		Redox	Depress	ions (F8)			Mesic S	podic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)							Red Par	ent Material (F21)
Stripped	d Matrix (S6)							Very Sh	allow Dark Surface (TF12)
Dark Su	rface (S7) (LRR R,	MLRA 149	B)					Other (E	Explain in Remarks)
³ Indicators o	f hydrophytic veget	ation and w	etland hydro	logy mus	st be prese	nt, unless	s disturbed	or problematic.	
Restrictive	Layer (if observed	l):							
Туре:									
Depth (in	ches):							Hydric Soil P	Present? Yes <u><</u> No
Remarks:									
A dark d	lav loam with	redov	vas obse	arvod					
			103 0030	nvcu.					



wasd1020e_w_E



wasd1020e_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/OTG		
File #:	Date of visit(s):		
wasd1020	2020-06-02		
Location:	Ecological Landsca	ape:	
PLSS: sec 11 T045N R002W	North Central Forest		
Lat: <u>46.393684</u> Long: <u>-90.570264</u>	Watershed:		
A second s	LS13, Tyler Forks		
County: <u>Ashland</u> Town/City/Village: <u>NOrSe town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Amasa-Karlin complex, esker, 2 to 18 percent slopes	Wetland Type(s):		
	PEM - temporarily flooded basin		
Field Verified:			
Series not verified. Soils were a reduced clay	Wetland Size:	Wetland Area Impacted	
loam throughout the profile.	0.1646	0.1646	
	Vegetation:		
	Plant Community E	Description(s):	
Hydrology:	The area is a pla	anted corn field. There are few	
The wetland hydrology regime is temporarily	new growth plants present that are		
flooded. There is saturation to the surface	hydrophytic		
present at the time of survey.			
ľ			

SITE MAP

SECTION 1: Functional Value Assessment

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

HU-3: The feature is visible from the nearby road. WQ-7: The feature is located within a corn field. WH-10: Amphibians were observed in the feature, but there is no standing water and likely no significant 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	Y	Amphibians

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

Observed	Potential	Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Carex sp.*			PEM	Barren
Persicaria sp.*			PEM	Barren
Scirpus sp.*			PEM	Barren
Zea mays*			PEM	Barren

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

Low diversity of species present, typical representation of a sparsely vegetated agricultural wetland with annual species present.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor	
					Filling, berms (non-impounding)	
	Х		L	С	Drainage – tiles, ditches	
	х		М	С	Hydrologic changes - high capacity wells, impounded water, increased runoff	
					Point source or stormwater discharge	
Х	Х		М	C	Polluted runoff	
					Pond construction	
Х	Х		Н	С	Agriculture – row crops	
					Agriculture – hay	
					Agriculture – pasture	
	Х		M	C	Roads or railroad	
					Utility corridor (above or subsurface)	
					Dams, dikes or levees	
					Soil subsidence, loss of soil structure	
					Sediment input	
x	x		н		Removal of herbaceous stratum – mowing,	
~	~			00	grading, earthworms, etc.	
					Removal of tree or shrub strata – logging,	
					unprescribed fire	
					Human trails – unpaved	
					Human trails – paved	
					Removal of large woody debris	
X	Х		M	C	Cover of non-native and/or invasive species	
					Residential land use	
					Urban, commercial or industrial use	
					Parking lot	
					Golf course	
					Gravel pit	
-					Recreational use (boating, ATVs, etc.)	
					Excavation or soil grading	
					Other (list below):	

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The feature is an agricultural wetland located within buffer distance of a road.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Low diversity of species present.
Human Use Values	No observed human uses.
Wildlife Habitat	Amphibians were observed, but the feature provides no significant habitat.
Fish and Aquatic Life Habitat	
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature holds runoff from the surrounding agricultural field.
Water Quality Protection	The feature has low potential to affect water quality.
Groundwater Processes	Groundwater recharge feature.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	_ City/County: Ashland	Samplir	ng Date: <u>2020-06-02</u>
Applicant/Owner: Enbridge		_ State: Wisconsin Samp	oling Point: wasd1020_u
Investigator(s): AGG/OTG	_ Section, Township, Range: SI	ec 11 T045N R002	2W
Landform (hillslope, terrace, etc.): Rise	Local relief (concave, convex, nor	ne): <u>Concave</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.3934	.96 Long: -90	.570562	Datum: WGS84
Soil Map Unit Name: Amasa-Karlin complex, esker, 2	2 to 18 percent slopes	NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	vear? Yes 🖌 No	(If no, explain in Remarks.)	
Are Vegetation Soil or Hydrology significan	tly disturbed? Are "Normal	Circumstances" present?	Yes No 🖌
Are Vegetation Soil or Hydrology naturally	problematic? (If needed e	explain any answers in Ren	narks)
SUMMARY OF FINDINGS – Attach site map showin	ng sampling point locatio	ons, transects, impoi	rtant features, etc.
Hydrophytic Vegetation Present? Yes No _	Is the Sampled Area		
Hydric Soil Present? Yes No 🖌	within a Wetland?	Yes <u>No</u>	<u> </u>
Wetland Hydrology Present? Yes No	_ If yes, optional Wetland	Site ID:	
Remarks: (Explain alternative procedures here or in a separate re	port.)	unland sample no	int is shared
with wotland wasd1021o		upianu sample po	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (min	imum of two required)
Primary Indicators (minimum of one is required; check all that appl	<u>y)</u>	Surface Soil Cracks (I	B6)
Surface Water (A1) Water-Staine	ed Leaves (B9)	Drainage Patterns (B	10)
High Water Table (A2) Aquatic Faur	าล (B13)	Moss Trim Lines (B16	(ز
Saturation (A3) Marl Deposit	s (B15)	Dry-Season Water Ta	ible (C2)
Water Marks (B1) Hydrogen Su	ılfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhi	zospheres on Living Roots (C3)	Saturation Visible on	Aerial Imagery (C9)
Drift Deposits (B3) Presence of	Reduced Iron (C4)	Stunted or Stressed F	lants (D1)
Algal Mat or Crust (B4) Recent Iron	Reduction in Tilled Soils (C6)	Geomorphic Position	(D2)
Iron Deposits (B5) Thin Muck S	urface (C7)	Shallow Aquitard (D3))
Inundation Visible on Aerial Imagery (B7) Other (Expla	in in Remarks)	Microtopographic Rel	ief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5	;)
Field Observations:			
Surface Water Present? Yes No 🖌 Depth (inch	es):		
Water Table Present? Yes No Depth (inch	es):		

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

Yes _____ No ____ Depth (inches): _____

Remarks:

Saturation Present?

No indicators of wetland hydrology were observed.

No

Wetland Hydrology Present? Yes _

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1020_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Indicator	Dominance Test worksheet:
1	<u>_/0 00vci</u>		Number of Dominant Species
·			Inat Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			Species Across All Strata: (B)
4			Percent of Dominant Species
5			That Are OBL, FACW, or FAC: (A/B)
6			Prevalence Index worksheet:
7.			Total % Cover of: Multiply by:
		- Total Covor	1000000000000000000000000000000000000
Orgeling (Ohmeth Othertung (Distributed of 15))			$\frac{ODE species}{O} = \frac{O}{x^2} = 0$
<u>Sapling/Shrub Stratum</u> (Plot size: 15)			$FAC \text{ species } 0 \qquad x^2 = 0$
1			$FACU \text{ species} \qquad 0 \qquad x4 = 0$
2			$\frac{112}{112} \text{ species } 0 spec$
3			$\begin{array}{c} \text{Colump Totals:} \\ \ Colump To$
4			
5.			Prevalence Index = B/A =
6			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
/			2 - Dominance Test is >50%
	0	= Total Cover	$3 - Prevalence Index is \leq 3.0^{1}$
Herb Stratum (Plot size: <u>5</u>)			4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Zea mays</u>	5	Y	data in Remarks or on a separate sheet)
2			Problematic Hydrophytic Vegetation ¹ (Explain)
3.			
1			¹ Indicators of hydric soil and wetland hydrology must
			be present, unless disturbed of problematic.
5		<u> </u>	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
12.	 F		height.
		= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1			
2			
3			Hydrophytic
4.			Vegetation
	0	= Total Cover	Present? Yes No V
Remarks: (Include photo numbers here or on a separate	sheet)		
The sample plot is located within a plan	nted cori	n field.	

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix		Redox	k Feature	S				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹ Loc ²	Texture	Remarks		
0-12	<u>7.5YR 2.5/3</u>	100		0		SL			
12-20	5YR 3/4	100		0		FS			
		<u> </u>							
					- <u></u>				
		· ·							
								<u> </u>	
					- <u></u>				
1 Type: C=C	oncentration D=Denl	etion RM=	Reduced Matrix MS	S=Masker	d Sand Grains	² Location: PL	=Pore Lining M=Ma	trix	
	Indicators:					Indicators for	Problematic Hydric	Soils ³ :	
Histosol	(A1)		Polyvalue Below	v Surface	(S8) (I RR R	2 cm Muck	(A10) (I RR K. I. MI	RA 149B)	
Histic Er	pipedon (A2)		MLRA 149B)		(00) (,	Coast Prair	rie Redox (A16) (LRF	K. L. R)	
Black Hi	stic (A3)		Thin Dark Surfa	ce (S9) (LRR R, MLRA 149	B) 5 cm Muck	y Peat or Peat (S3) (LRR K, L, R)	
Hydroge	n Sulfide (A4)		Loamy Mucky N	lineral (F	1) (LRR K, L)	Dark Surfa	ce (S7) (LRR K, L)		
Stratified	d Layers (A5)		Loamy Gleyed M	Matrix (F2	2)	Polyvalue E	3elow Surface (S8) (I	_RR K, L)	
Depleted	d Below Dark Surface	e (A11)	Depleted Matrix	(F3)		Thin Dark S	Surface (S9) (LRR K,	, L)	
Thick Da	ark Surface (A12)		Redox Dark Sur	face (F6))	Iron-Manga	anese Masses (F12)	(LRR K, L, R)	
Sandy M	lucky Mineral (S1)		Depleted Dark S	Surface (I	=7)	Piedmont F	Piedmont Floodplain Soils (F19) (MLRA 149B)		
Sandy G	Bleyed Matrix (S4)		Redox Depressi	ions (F8)		Mesic Spoo	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy R	edox (S5)					Red Parent	t Material (F21)	10)	
Stripped	IVIALITIX (SO)		١			Very Shallo	JW Dark Surface (TF)	i Z)	
Daik Su	$Hace\left(S^{\prime}\right)\left(LKKK,W\right)$	ILKA 1490)						
³ Indicators of	f hydrophytic vegetati	ion and we	tland hydrology mus	t be pres	ent, unless disturb	ed or problematic.			
Restrictive I	Layer (if observed):		, ,,						
Туре:									
Depth (ind	ches):					Hydric Soil Pres	sent? Yes	No <u> </u>	
Remarks:									
No hydrio	c soil indicator	s were	observed.						
-									



wasd1020_u_NW



wasd1020_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relo	cation Project	Citv/0	County: Ashland	Sam	- Ipling Date: 2020-06-02	
Applicant/Owner: Enbridg	e		<u>, , , , , , , , , , , , , , , , , , , </u>	State: Wisconsin Sa	ampling Point: wasd1022e_w	
Investigator(s): AGG/OT(Secti	ion Townshin Range [.] S	ec 11 T045N R0)02\V/	
Landform (hillslone, terrace, e	te): Depression		lief (concave, convex, no		Slope (%): 0-2%	
Cubracian (LDD or MLDA): N	orthcentral Forests			570701	Stope (70). <u>0-270</u>	
Subregion (LRR or MLRA):		Lat: <u>40.393313</u>	Long: <u>-90</u>			
Soil Map Unit Name: Penc	e-Gogebic com	iplex, 2 to 6 perc	<u>ent slopes, stony</u>	NWI classification:	·	
Are climatic / hydrologic condi	tions on the site typica	al for this time of year?	Yes 🖌 No	(If no, explain in Remar	ks.)	
Are Vegetation, Soil	, or Hydrology _	significantly distu	rbed? Are "Norma	I Circumstances" preser	nt? Yes No	
Are Vegetation, Soil	, or Hydrology _	naturally problem	atic? (If needed, e	explain any answers in F	Remarks.)	
SUMMARY OF FINDIN	GS – Attach site	e map showing san	npling point locatio	ons, transects, im	portant features, etc.	
Hydrophytic Vegetation Pres Hydric Soil Present?	ent? Yes Yes	No No	Is the Sampled Area within a Wetland?	Yes 🖌 I	No	
Wetland Hydrology Present	Yes	✓ No	If yes, optional Wetland	Site ID:		
HYDROLOGY						
Wetland Hydrology Indicat	ors:			Secondary Indicators (minimum of two required)	
Primary Indicators (minimum	i of one is required; ch	heck all that apply)		Surface Soil Crack	(s (B6)	
Surface Water (A1)	-	Water-Stained Leave	led Leaves (B9) Drainage Patterns (B10)			
\sim Algri Water Table (A2)	-	Marl Denosits (B15)	ia (B13) Moss Trim Lines (B16)			
Water Marks (B1)	-	Hvdrogen Sulfide Oc	B15) Dry-Season Water Table (C2) te Odor (C1) Cravfish Burrows (C8)			
Sediment Deposits (B2)	- -	Oxidized Rhizospher	hizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3)	-	Presence of Reduce	of Reduced Iron (C4) Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4)	-	Recent Iron Reduction	Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)			
Iron Deposits (B5)		Thin Muck Surface (C7)	Shallow Aquitard (D3)	
Inundation Visible on Ae	rial Imagery (B7)	Other (Explain in Rei	marks)	Microtopographic	Relief (D4)	
Sparsely Vegetated Cor	icave Sufface (B8)				(D5)	
Surface Water Present?	Yes No	Depth (inches):				
Water Table Present?	Yes 🖌 No	Depth (inches): 5				
Saturation Present?	Yes 🖌 No	Depth (inches): 4	Wetland H	lydrology Present?	Yes 🖌 No	
Describe Recorded Data (sti	ream gauge, monitorir	ng well, aerial photos, pre	evious inspections), if ava	ilable:		
	J J	5 • • • • • • • • • •	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
The wetland hydrol	oav reaime is t	temporarily flood	ed.			
	- 97 - 9					

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1022e_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan	t Indicator	Dominance Test worksheet:
1	<u>/// Cover</u>			Number of Dominant Species That Are OBL EACIV. or EAC: 1 (A)
2				
3			·	Total Number of Dominant Species Across All Strata: (B)
4				Percent of Dominant Species
5			<u> </u>	That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6				Prevalence Index worksheet:
7			<u> </u>	Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =50
1				FAC species x 3 =
··			·	FACU species <u>10</u> x 4 = <u>40</u>
2			<u></u>	UPL species x 5 =
3			·	Column Totals: <u>35</u> (A) <u>90</u> (B)
45				Prevalence Index = B/A = 2.5714285714285716
6.				Hydrophytic Vegetation Indicators:
7			- <u></u>	1 - Rapid Test for Hydrophytic Vegetation
/:			<u></u>	2 - Dominance Test is >50%
_		= Total Co	ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. Phalaris arundinacea	25	<u> </u>	<u>FACW</u>	data in Remarks or on a separate sheet)
2. <u>Taraxacum officinale</u>	5	N	<u>FACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Trifolium pratense</u>	5	N	<u>FACU</u>	¹ Indicators of hydric coil and watland hydrology must
4			. <u></u>	be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6			<u> </u>	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7			<u> </u>	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			. <u></u>	Herb – All herbaceous (non-woody) plants, regardless
11			<u> </u>	of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	35	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1				
2			<u> </u>	
2				
S			<u> </u>	Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
Demonitor (include abote numbers here er en e concrete	<u> </u>	= Total Co	ver	
In the vegetated area of the feature re-	sneet.) ed cana	rv aras	s is dom	inant
		ry gras	5 15 0011	

SOIL

Profile Desc	cription: (Describe	to the dep	oth needed to	docume	ent the i	ndicator o	or confirm	the absence	of indicators.)
Depth	Depth Matrix Redox Features								
(inches)	Color (moist)	%	Color (mo	oist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	<u>7.5YR 3/2</u>	95	7.5YR	4/6	5	C	M	SCL	
						<u> </u>			
Type: C=C	oncentration, D=Dep	pletion, RM	=Reduced Ma	atrix, MS=	Masked	Sand Gra	ains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soll	indicators:		Daharah	Delaw	.			Indicators	
HISTOSOI	(A1) Dipedon (A2)		Polyvalu	IE BEIOW 3	Surface	(58) (LRR	К,	2 cm IV	1UCK (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRP K L P)
Black Hi	istic (A3)		Thin Da	k Surface	e (S9) (L	.RR R. ML	RA 149B)	00ast 1 5 cm N	fucky Peat or Peat (S3) (LRR K. L. R)
Hydroge	en Sulfide (A4)		Loamy N	/ucky Min	neral (F1) (LRR K,	L)	Dark S	urface (S7) (LRR K, L)
Stratified	d Layers (A5)		Loamy C	Gleyed Ma	atrix (F2))		Polyva	lue Below Surface (S8) (LRR K, L)
Depleted	d Below Dark Surfac	ce (A11)	Depleted	d Matrix (F	=3)			Thin Da	ark Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)		Redox D	ark Surfa	ice (F6)	_`		Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Sandy N	Aucky Mineral (S1)		Depleted	d Dark Su	rface (F	7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy 6	Pedax (S5)			epression	IS (FO)			Wesics	Spould (1A0) (MERA 144A, 143, 149B) arent Material (E21)
Stripped	Matrix (S6)							Verv S	hallow Dark Surface (TF12)
Dark Su	rface (S7) (LRR R,	MLRA 149	B)					Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegeta	ation and w	etland hydrolo	gy must b	be prese	ent, unless	disturbed	or problematic	
Restrictive	Layer (if observed)	:							
Туре: <u>Со</u>	obble								
Depth (in	ches): <u>4.0</u>							Hydric Soil	Present? Yes <u><</u> No
Remarks:			_						
A dark si	urface layer w	ith red	ox was ob	serve	d. The	ere are	large r	ocks pres	sent in the soil which
prevent f	urther digging	j .							



wasd1022e_w_N



wasd1022e_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/OTG			
File #:	Date of visit(s):			
wasd1022	2020-06-02			
Location:	Ecological Landsca	ape:		
PLSS: sec 11 T045N R002W	North Central Forest			
Lat: <u>46.395308</u> Long: <u>-90.572787</u>	Watershed:			
County Achieved Town (City) (illeges Moreo town	LOTO, Tyler TORS			
County: <u>Ashland</u> Town/City/Village: MOISE town				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	T3/S3K			
Pence-Gogebic complex, 2 to 6 percent slopes, stony. Amasa-Karlin	Wetland Type(s):			
complex, esker, 2 to 18 percent slopes.	PEM - temporarily flooded basin			
Field Verified:	•			
Series not verified. Soils were a silty clay loam	Wetland Size:	Wetland Area Impacted		
over a cobble restrictive layer.	0.6654	0.6654		
	Vegetation:			
	Plant Community E	Description(s):		
Hydrology:	In the vegetated	l area of the feature reed		
The wetland hydrology regime is temporarily	canary grass is	dominant.		
flooded due to the farmed nature of the feature.				

SITE MAP

SECTION 1: Functional Value Assessment

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

HU-5: This feature is outside of the buffer area, but is somewhat close by. The wetland likely shares no hydrology with this RED FLAG area. WQ-7: The feature is located along the downslope edge of an agricultural field where all of the water runs off.

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

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Phalaris arundinacea*			PEM	Patchy
Taraxacum officinale			PEM	Barren
Trifolium pratense			PEM	Barren

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

The only species present are weedy agricultural field plants.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The feature is located on the edge of an agricultural field and is highly disturbed by the associated stressors.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Very low diversity and dominated by non-native species.
Human Use Values	No discernible uses.
Wildlife Habitat	No observed wildlife habitat within the survey area.
Fish and Aquatic Life Habitat	
Shoreline Protection	N/A
Flood and Stormwater Storage	Holds runoff from the surrounding agricultural field.
Water Quality Protection	Does not appear to effect water quality of the area. The feature is not densely vegetated.
Groundwater Processes	Groundwater recharge feature.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	_ City/County: <u>Ashland</u>	Sampling	g Date: <u>2020-(</u>	<u>)6-02</u>
Applicant/Owner: Enbridge		State: Wisconsin Sampl	ling Point: wasd1	022_u
Investigator(s): AGG/OTG	Section, Township, Range: <u>Se</u>	c 11 T045N R002	W	
Landform (hillslope, terrace, etc.): Talf	Local relief (concave, convex, non	e): <u>None</u>	Slope (%): <u>C</u>	-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.3949	999 Long: <u>-90</u>	.572892	_ Datum: <u>WGS</u>	384
Soil Map Unit Name: Amasa-Karlin complex, esker, 2	2 to 18 percent slopes	NWI classification:		
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes <u><</u> No (f no, explain in Remarks.)		
Are Vegetation, Soil, or Hydrology significant	ntly disturbed? Are "Normal	Circumstances" present?	Yes No	~
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, ex	xplain any answers in Rem	arks.)	
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point location	ns, transects, import	tant features,	etc.

Hydrophytic Vegetation Present?	Yes	No <u>v</u>	Is the Sampled Area
Hydric Soil Present?	Yes	No <u>v</u>	within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No <u>v</u>	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed	lures here or in a	a separate report.)	ling agricultural field.
The sample point is repre	Sentative o	f the surrounc	

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 Soi	ils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes <u>No</u> Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspecti	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ ✓ _ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No _ ✓ ions), if available:
Saturation Present? Yes No _ ✓ _ Depth (inches): [includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection of the stream gauge) Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No _ ✓ ions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No _ ✓ ions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ ✓ _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos, previous inspection of the second data (stream gauge, monitoring well, aerial photos,	Wetland Hydrology Present? Yes No _ ✓ ions), if available:
Saturation Present? Yes No _ ✓ _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect) Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ ✓ _ Depth (inches): [includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ ✓ _ Depth (inches): [includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect. Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No _ ✓ ions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1022_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1	<u>/// 00/01</u>	000000		Number of Dominant Species
2				$\begin{array}{c} \text{That Ale OBL, FACW, of FAC.} \\ \underline{\textbf{U}} \\ \end{array} $
3				Total Number of Dominant Species Across All Strata: 1 (B)
4.				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15)				FACW species $0 \times 2 = 0$
				FAC species $0 \times 3 = 0$
· ·			<u> </u>	FACU species $30 \times 4 = 120$
2				UPL species $0 \times 5 = 0$
3				Column Totals: 30 (A) 120 (B)
4				$\frac{1}{2} = \frac{1}{2} = \frac{1}$
5				
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹
1. Torovocum officinala	25	V		4 - Morphological Adaptations ¹ (Provide supporting
		<u>I</u>		Drablemetic Lludrenbutic Vegetetics ¹ (Eveloin)
2. <u>I rifolium pratense</u>	5	<u> </u>	FACU	
3. <u>Zea mays</u>	1	N		¹ Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree Weady plants 2 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				
12				woody vines – All woody vines greater than 3.28 ft in height.
	31	= Total Co	ver	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2.				
3				Hydrophytic
1				Vegetation
4				Present? Yes No 🗸
		= I otal Co	ver	
The area is dominated by agricultural y	sheet.) voods in	cluding	red clos	ver and dandelion
The area is dominated by agricultural v	veeus III	ciuuling		

SOIL

Profile Des	cription: (Describe t	o the depth	n needed to docum	nent the i	ndicator or c	onfirm	the absence	of indicators	5.)	
Depth	Matrix		Redox	Features	3					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹ L	.oc ²	Texture		Remarks	
0-5	7.5YR 2.5/3	100		0			CL			
					·	•				
					·					
						·				<u> </u>
					·	•				<u></u>
1					·					
'Type: C=C	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	=Masked	Sand Grains	-	² Location:	PL=Pore Li	ning, M=Matri	X.
Hydric Soil	Indicators:						Indicators	for Problema	atic Hydric S	oils":
Histosol	l (A1)	-	Polyvalue Below	/ Surface	(S8) (LRR R,		2 cm N	luck (A10) (L l	RR K, L, MLF	RA 149B)
Histic E	pipedon (A2)		MLRA 149B)				Coast I	Prairie Redox	(A16) (LRR	K, L, R)
Black H	istic (A3)	-	Thin Dark Surfa	ce (S9) (L	.RR R, MLRA	149B)	5 cm M	lucky Peat or	Peat (S3) (LI	RR K, L, R)
Hydroge	en Sulfide (A4)	-	Loamy Mucky N	lineral (F1) (LRR K, L)		Dark S	urface (S7) (L	RR K, L)	
Stratifie	d Layers (A5)		Loamy Gleyed N	Aatrix (F2)		Polyval	ue Below Su	rface (S8) (L F	RR K, L)
Deplete	d Below Dark Surface	e (A11)	_ Depleted Matrix	(F3)			Thin Da	ark Surface (S	59) (LRR K, I	_)
Thick D	ark Surface (A12)	-	Redox Dark Sur	face (F6)			Iron-Ma	anganese Ma	sses (F12) (L	.RR K, L, R)
Sandy N	Mucky Mineral (S1)	-	Depleted Dark S	Surface (F	7)		Piedmo	ont Floodplair	1 Soils (F19) (MLRA 149B)
Sandy C	Gleyed Matrix (S4)	_	Redox Depressi	ons (F8)			Mesic S	Spodic (TA6)	(MLRA 144A	, 145, 149B)
Sandy F	Redox (S5)						Red Pa	arent Material	(F21)	
Stripped	d Matrix (S6)						Very S	hallow Dark S	Surface (TF12	2)
Dark Su	irface (S7) (LRR R, M	LRA 149B)					Other (Explain in Re	marks)	
³ ladiaatana a	f buda abudia waatati	الأمين أمرمهم			unt contana dia	المحماسية.				
Protectors of	nydrophytic vegetat	on and weti	and hydrology mus	t be prese	ent, unless dis	sturbed	or problematic			
Restrictive	Layer (if observed):									
Type: <u>R</u>	ocks									
Depth (in	ches): <u>5.0</u>						Hydric Soil	Present?	Yes	No 🖌
Remarks:										
No hvdri	c soil indicator	s were o	observed. So	ils cou	ld not be	dua d	deeper di	ie to a la	ver of lar	ae rocks
present	at 5 inches								,	90 . 0 0
present	at 5 mones.									



wasd1022_u_E



wasd1022_u_N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron Sampling Date: 2020-06-08
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wirb051e_xw
Investigator(s): DMP/ARK	Section, Township, Range: sec 05 T045N R001W
Landform (hillslope, terrace, etc.): Depression	cal relief (concave, convex, none); Concave Slope (%); 0-2%
Subregion (I BB or MI BA). Northcentral Forests Lat: 46 40302	1 Long: -90.526796 Datum: WGS84
Soil Man Unit Name: Gogebic silt loam 2 to 6 percent	slopes very stony rocky NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	$\frac{1}{10000}$ Vos $\frac{1}{10000}$ (If no ovolain in Pomarks)
Are kinnalic / hydrologic conditions on the site typical for this time of ye	
Are vegetation, Soil _ v , or Hydrology significantly	alsturbed? Are "Normal Circumstances present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally pro	blematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes <u>v</u> No
Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate repo	rt.)
The wetland sample plot was taken within a bo	rrow pit. Vegetative cover is low and the soils were
unable to be fully assessed due to a restrictive	rock layer.
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 Sulfi	de Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizo	spheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Re	educed Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Re	duction in Tilled Soils (C6)
Iron Deposits (B5)	ace (C7) Shallow Aguitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain	in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	EAC-Neutral Test (D5)
Field Observations:	<u></u> (7.6 (6.6 (2.6))
Surface Water Present? Yes V No Depth (inches): 4
Water Table Present? Yes No 🗸 Depth (inches):
Saturation Present? Yes No 🖌 Depth (inches): Wetland Hydrology Present? Yes No
(includes capillary fringe)	a provinue inspections) if evoluble:
Describe Recorded Data (stream gauge, monitoring weil, aenai priot	s, previous inspections), il avaliable.
Remarks:	-
I he hydrologic regime is seasonally saturated	I here was standing water observed throughout the
feature.	

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wirb051e_xw</u>

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1			·	That Are OBL, FACW, or FAC: (A)
23			·	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
4			·	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species <u>14</u> x 1 = <u>14</u>
Sapling/Shrub Stratum (Plot size:15)				FACW species9 x 2 =18
1. <u>Salix petiolaris</u>	2	N	FACW	FAC species x 3 =
2		_		FACU species x 4 =
3.				UPL species $0 \times 5 = 0$
4.				Column Lotals: <u>23</u> (A) <u>32</u> (B)
5				Prevalence Index = B/A = <u>1.391304347826087</u>
6			·	Hydrophytic Vegetation Indicators:
7			·	 1 - Rapid Test for Hydrophytic Vegetation
·		- Total Ca		∠ 2 - Dominance Test is >50%
Lieth Charterny (Dist size) 5			vei	$_$ 3 - Prevalence Index is ≤3.0 ¹
1. <u>Phalaris arundinacea</u>	5	Y	FACW	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
2. <u>Carex crinita</u>	5	Y	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Scirpus cyperinus</u>	5	Y	OBL	
4. <u>Caltha palustris</u>	2	N	OBL	be present, unless disturbed or problematic.
5. Lycopus americanus	2	Ν	OBL	Definitions of Vegetation Strata
6. Onoclea sensibilis	2	N	FACW	Deminions of Vegetation of ata.
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8.				Sepling/obrub Woody plants loss than 2 in DPH
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
	21	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1				
2			·	
3			·	Undrankutia
0			·	Vegetation
- T		- Total Ca		Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	sheet)		vei	
The vegetation is representative of the thin soils over rock.	wetland	l. The v	egetativ	e cover is low due to inundation and

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth		Matrix		Redo	x Feature	s			
(inches)	<u>Color (r</u>	noist)	%	Color (moist)	%	Type'	Loc ²	Texture Remarks	
0-3	5YR	3/3	100		0			SICL	
									_
·					·	·		·	
						·		·	—
									_
						·			—
						·			
									_
									_
¹ Type: C=C		D=Den	etion RM=	Reduced Matrix M	S=Masker	d Sand Gr	ains	² Location: PL=Pore Lining M=Matrix	_
Hvdric Soil	Indicators:	i, D Dopi					unio.	Indicators for Problematic Hydric Soils ³ :	
Histosol	(A1)			Polyvalue Belov	v Surface	(S8) (I RE	R R.	2 cm Muck (A10) (I RR K. I., MI RA 149B)	
Histic Fr	oipedon (A2)		MLRA 149B		(00) (111	,	Coast Prairie Redox (A16) (LRR K. L. R)	
Black Hi	stic (A3)	/		Thin Dark Surfa	ice (S9) (I	LRR R. MI	LRA 149B)) 5 cm Mucky Peat or Peat (S3) (LRR K. L. R)	
Hydroge	en Sulfide (A	4)		Loamy Mucky N	/lineral (F	1) (LRR K	, L)	Dark Surface (S7) (LRR K, L)	
Stratified	d Lavers (A5	5)		Loamy Gleved	Matrix (F2	2)	, ,	Polyvalue Below Surface (S8) (LRR K, L)	
Depleted	d Below Dar	, k Surface	e (A11)	Depleted Matrix	(F3)	,		Thin Dark Surface (S9) (LRR K, L)	
Thick Da	ark Surface	(A12)	. ,	Redox Dark Su	rface (F6)	1		Iron-Manganese Masses (F12) (LRR K, L, R	.)
Sandy M	lucky Miner	al (S1)		Depleted Dark	Surface (F	-7)		Piedmont Floodplain Soils (F19) (MLRA 149	B)
Sandy G	Bleyed Matri	x (S4)		Redox Depress	ions (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149E	3)
Sandy R	Redox (S5)							Red Parent Material (F21)	
Stripped	Matrix (S6))						Very Shallow Dark Surface (TF12)	
Dark Su	rface (S7) (I	LRR R, N	ILRA 149B	5)				 Other (Explain in Remarks) 	
³ Indicators of	f hydrophyti	c vegetat	ion and we	tland hydrology mus	t be pres	ent, unles	s disturbed	l or problematic.	
Restrictive I	Layer (if ob	served):							
Type: Ro	ock								
Depth (ind	ches): 3.0							Hydric Soil Present? Yes <u>v</u> No	
Pemarke:	<u></u>								

Many unsuccessful attempts were made to sample the soils. We hit a shallow, restrictive rock layer with every attempt. The soils are disturbed but remain saturated and support hydrophytic vegetation for much of the growing season.



wirb051e_xw_N



wirb051e_xw_W

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	ARK/DMP		
File #:	Date of visit(s):		
wirb051_x	2020-06-08		
Location:	Ecological Landsca	ape:	
PLSS: sec 05 T045N R001W	North Central Forest		
	North Ochtar Forest		
Lat: <u>46.403023</u> Long: <u>-90.526797</u>	Watershed:		
	LS13, Tyler Forks		
County: <u>Iron</u> Town/City/Village: <u>Anderson town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Gogebic silt loam, 2 to 6 percent slopes, very stony, rocky	Wetland Type(s):		
	PEM - fresh wet meadow		
Field Verified:			
Soil series not verified. Soils were a silty clay	Wetland Size:	Wetland Area Impacted	
loam over a cobble restrictive layer hit at 3	0.0095	0.0095	
inches.	Vegetation:	·	
	Plant Community D	Description(s):	
Hydrology:	The wetland is dominated by reed canary		
Seasonally saturated borrow pit.	arass and fringed sedge		
	grade and mige	a ooayo.	

SITE MAP

SECTION 1: Functional Value Assessment

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

WH-10: Standing water present at time of survey. FA-2: Frog observed. ST-1: The feature is a small borrow pit.

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Phalaris arundinacea*			PEM	Rare
Carex crinita*			PEM	Rare
Caltha palustris			PEM	Barren
Onoclea sensibilis			PEM	Barren
scirpus cyperinus			PEM	Barren
Acer rubrum			PEM	Barren
Lycopus americanus			PEM	Barren
Salix sp.			PEM	Barren

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

Vegetation is somewhat sparse and reed canary grass is abundant.

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
Χ	Х		H	C	Soil subsidence, loss of soil structure
					Sediment input
x	х		н	С	Removal of herbaceous stratum – mowing,
					grading, earthworms, etc.
Х	Х	Х	н	С	Removal of tree or shrub strata – logging,
	V		NA	0	Unprescribed life
	Χ		IVI	U U	Human trails – unpaved
					Romoval of large weedy debris
					Cover of non-native and/or invasive species
					Pesidential land use
					Parking lot
<u> </u>					Golf course
X	X		н	С	Gravel pit
	~			Ŭ	Recreational use (boating ATVs etc.)
					Excavation or soil grading
					Other (list below):
	ĺ				

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The feature is artificial and exists due to being a borrow pit. Woody plants are absent, although the site was forested before excavation, and is surrounded by forest.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Vegetation is somewhat sparse and reed canary grass is the most prevalent species.
Human Use Values	Located on public land, but remote.
Wildlife Habitat	Frogs and birds observed, standing water is likely present for long durations.
Fish and Aquatic Life Habitat	The feature has standing water for much of the year.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature has very low holding capacity and vegetation is sparse.
Water Quality Protection	See above.
Groundwater Processes	Limited groundwater recharge.
Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

Project/Site: Line 5 Relocation Pr	roject	City/County: Iron	San	npling Date: <u>2020-06-08</u>
Applicant/Owner: Enbridge			State: Wisconsin S	ampling Point: <u>wirb051e_xu</u>
Investigator(s): DMP/ARK		Section, Township, Range	≕ <u>sec 05 T045N R(</u>	001W
Landform (hillslope, terrace, etc.): <u>Rise</u>	Lo	ocal relief (concave, convex	, none): <u>None</u>	Slope (%): 0-2%
Subregion (LRR or MLRA):	Forests Lat: <u>46.40301</u>	2 Long:	-90.526732	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic silt loa	am, 2 to 6 percent	<u>slopes, very stony,</u>	rocky NWI classification	::
Are climatic / hydrologic conditions on the	site typical for this time of y	ear? Yes 🖌 No	(If no, explain in Remai	rks.)
Are Vegetation, Soil, or Hyd	drology significantly	v disturbed? Are "No	ormal Circumstances" prese	nt? Yes 🖌 No
Are Vegetation, Soil, or Hyd	drology naturally pr	oblematic? (If need	ed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS - Atta	ich site map showing	g sampling point loc	ations, transects, im	portant features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No 🖌	Is the Sampled Ar within a Wetland?	rea ? Yes ?	No
Remarks: (Explain alternative procedure: The upland sample plot was observed.	s here or in a separate repo taken on a rise w	ort.) ithin the landscape	e. No wetland indic	cators were
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two required)
Primary Indicators (minimum of one is rec	quired; check all that apply)		Surface Soil Crac	ks (B6)
Surface Water (A1)	Water-Stained	Leaves (B9)	Drainage Patterns	s (B10)
High Water Table (A2)	Aquatic Fauna	i (B13)	Moss Trim Lines ((B16)
Saturation (A3)	Marl Deposits (B15)		Dry-Season Water Table (C2)	

Marl Deposits (B15)

Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)		
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)		
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)		
Field Observations:				
Surface Water Present? Yes No	✓ Depth (inches):			
Water Table Present? Yes <u>No</u>	✓ 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 indicators of wetland hydrology were observed.

No

~

Wetland Hydrology Present? Yes _____

VEGETATION – Use scientific names of plants.

Sampling Point: wirb051e_xu

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u>)	<u>% Cover</u>	Species?		Number of Dominant Species
1. <u>Acer saccharum</u>	25	<u> </u>	FACU	That Are OBL, FACW, or FAC: (A)
2. <u>Ulmus americana</u>	<u>10</u>	<u>Y</u>	FACW	Total Number of Dominant
			<u>FACU</u>	Species Across Air Strata. \Box (B)
4			·	Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)
6				
7				Prevalence Index worksheet:
/	27	- Total Ca		Iotal % Cover of:Multiply by:
Sopling/Shrub Stratum (Diataiza: 15)	_3/		vei	EACW species $10 \times 2 = 20$
<u>Saping/Sinub Stratum</u> (Flot size. 15)	10	V	EACU	FAC species 9 $x^2 = 27$
	<u></u>	 		FACU species <u>56</u> x 4 = <u>224</u>
	<u> </u>	<u> </u>		UPL species x 5 =
3. <u>Tilla americana</u>	5	<u> </u>	FACU	Column Totals: <u>75</u> (A) <u>271</u> (B)
4		·	·	Prevalence Index = B/A = 3.6133333333333333333333333333333333333
5			·	
6			·	1 Papid Test for Hydrophytic Vegetation
7			·	2 - Dominance Test is >50%
	20	= Total Co	ver	$3 - Prevalence Index is \leq 3.0^{1}$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Carex pedunculata</u>	5	<u> </u>	FAC	data in Remarks or on a separate sheet)
2. <u>Poa pratensis</u>	5	<u> </u>	<u>FACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Prunus virginiana</u>	2	N	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Dirca palustris</u>	2	N	FAC	be present, unless disturbed or problematic.
5. <u>Triosteum aurantiacum</u>	2	Y		Definitions of Vegetation Strata:
6. <u>Ranunculus acris</u>	2	N	FAC	Trop Weady plants 3 in (7.6 cm) or more in diameter
7. <u>Solidago altissima</u>	2	N	FACU	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			·	
12				woody vines – All woody vines greater than 3.28 ft in height.
	20	= Total Co	ver	
Woody Vine Stratum (Plot size: <u>30</u>)				
1			·	
2			·	
3			·	Hydrophytic
4			·	Present? Yes No v
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)	The ca	nonv ie	dominated by sugar maple while the
herbaceous laver is sparse with a mix of	opianu. of sedae	and f	orhs	aominated by sugar maple while the
	Ji Jouye		0103.	

SOIL

Profile Desc	ription: (Describe 1	o the dep	th needed to docum	nent the	indicator	or confirm	the absence of indic	ators.)
Depth		Matrix		Redo	x Feature	<u>s</u> 1	. 2		
(inches)	Color	(moist)	%	Color (moist)	%	Type'	Loc	Texture	Remarks
0-6	5YR	3/3	100		0	. <u> </u>		SIL	
						·			
					·	·			
					·	·			
					·				
			·						
			. <u> </u>						
						·			
					·	·		·	
¹ Type: C=Co	oncentratio	n, D=Depl	etion, RM	Reduced Matrix, MS	S=Masked	d Sand Gra	ains.	² Location: PL=Po	re Lining, M=Matrix.
Hydric Soil I	ndicators	:						Indicators for Prob	plematic Hydric Soils ³ :
Histosol	(A1)			Polyvalue Below	v Surface	(S8) (LRF	RR,	2 cm Muck (A1	0) (LRR K, L, MLRA 149B)
Histic Ep	pipedon (A	2)		MLRA 149B)	1			Coast Prairie R	edox (A16) (LRR K, L, R)
Black His	stic (A3)			Thin Dark Surfa	ce (S9) (I	LRR R, MI	LRA 149B)	5 cm Mucky Pe	at or Peat (S3) (LRR K, L, R)
Hydroge	n Sulfide (A4)		Loamy Mucky N	Aineral (F	1) (LRR K	, L)	Dark Surface (S	67) (LRR K, L)
Stratified	Layers (A	15) ark Surface	(11)	Loamy Gleyed I		<u>(</u>)		Polyvalue Belo	
Depleted	rk Surface		(ATT)	Depieted Matrix	(FS) face (F6)				$\mathbf{P} = \mathbf{P} = \mathbf{P} \mathbf{P} \mathbf{P} \mathbf{P} \mathbf{P} \mathbf{P} \mathbf{P} \mathbf{P}$
Sandy M	lucky Mine	(A12)		Depleted Dark S	Surface (F	-7)		Piedmont Floor	aplain Soils (F19) (MLRA 149B)
Sandy G	leved Mat	rix (S4)		Redox Depress	ions (F8)	.,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy R	edox (S5)	、			. ,			Red Parent Ma	terial (F21)
Stripped	Matrix (Se	6)						Very Shallow D	ark Surface (TF12)
Dark Sur	face (S7)	(LRR R, N	ILRA 1498	3)				Other (Explain	in Remarks)
3									
³ Indicators of	hydrophy	tic vegetat	ion and we	etland hydrology mus	t be pres	ent, unless	s disturbed	or problematic.	
Restrictive L	ayer (it ol	oserved):							
Type: <u>Ro</u>	ock								
Depth (inc	hes): <u>6</u>							Hydric Soil Present	? Yes <u>No </u>
Remarks:									
A restrict	ive rocl	k layer	prever	ited a full asse	essme	nt of th	e soil p	rofile. No hydric	soil indicators were
observed	l in the	upper	6 inche	es.					



wirb051e_xu_E



wirb051e_xu_N

Project/Site: Line 5 Relocation Project	_ City/County: Iron Sampling Date: 2020-06-08						
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wire1007f_w</u>						
Investigator(s): DMP/ARK	_ Section, Township, Range: <u>sec 05 T045N R001W</u>						
Landform (hillslope, terrace, etc.): <u>Depression</u>	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>						
Soil Map Unit Name: <u>Gogebic silt loam, 2 to 6 percen</u>	t slopes, very stony, rocky NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🖌 No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrology significan	tly disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No						
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes V Hydric Soil Present? Yes V Wetland Hydrology Present? Yes V	Is the Sampled Area within a Wetland? Yes <u>✓</u> No						
Remarks: (Explain alternative procedures here or in a separate report.) The hardwood swamp is a mosaic of microdepressions and small upland hummocks. Most of the							
depressions are saturated to the surface.							
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)						
Primary Indicators (minimum of one is required; check all that appl	y) Surface Soil Cracks (B6)						
Surface Water (A1) Vater-Staine	ed Leaves (B9) Drainage Patterns (B10)						

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	oils (C6) _ Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No _	✓ Depth (inches):	
Water Table Dresent? Ves / No	Depth (inches): 0	
water rable Present? res <u>v</u> No	Depth (inches). <u>U</u>	
Saturation Present? Yes <u>v</u> No (includes capillary fringe)	Depth (inches): 0	Wetland Hydrology Present? Yes <u>v</u> No
Saturation Present? Yes <u>v</u> No <u>(includes capillary fringe)</u> Describe Recorded Data (stream gauge, monito	ring well, aerial photos, previous inspec	Wetland Hydrology Present? Yes <u>~</u> No ctions), if available:
Saturation Present? Yes V Saturation Present? Yes V (includes capillary fringe) V V Describe Recorded Data (stream gauge, monito Remarks:	Depth (inches): <u>0</u> Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <u>~</u> No tions), if available:
Saturation Present? Yes _ v _ No _ Saturation Present? Yes _ v _ No _ (includes capillary fringe) Describe Recorded Data (stream gauge, monito Remarks: The hydrologic regime is season	ring well, aerial photos, previous inspectively saturated. Some of th	Wetland Hydrology Present? Yes No ctions), if available:
Saturation Present? Yes _ v _ No _ Saturation Present? Yes _ v _ No _ (includes capillary fringe) Describe Recorded Data (stream gauge, monito Remarks: The hydrologic regime is season inundated while most of the othe	Depth (inches): 0 Tring well, aerial photos, previous inspection pally saturated. Some of the sur-	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> ctions), if available: e microdepressions within the wetland are face.
Remarks: Remarks: The hydrologic regime is season inundated while most of the othe	Depth (inches): 0 pring well, aerial photos, previous inspect pally saturated. Some of the pers are saturated to the sur	Wetland Hydrology Present? Yes No ctions), if available:
Saturation Present? Yes _ v _ No _ Saturation Present? Yes _ v _ No _ (includes capillary fringe) Describe Recorded Data (stream gauge, monito Remarks: The hydrologic regime is season inundated while most of the othe	Depth (inches): 0 pring well, aerial photos, previous inspection nally saturated. Some of the sur	Wetland Hydrology Present? Yes No ctions), if available: e microdepressions within the wetland are face.
Saturation Present? Yes No Saturation Present? Yes No (includes capillary fringe) Describe Recorded Data (stream gauge, monito Remarks: The hydrologic regime is season inundated while most of the othe	Depth (inches): 0 pring well, aerial photos, previous inspect pally saturated. Some of the pars are saturated to the sur	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> .
Saturation Present? Yes _ v _ No _ Saturation Present? Yes _ v _ No _ (includes capillary fringe) Describe Recorded Data (stream gauge, monito Remarks: The hydrologic regime is season inundated while most of the othe	Depth (inches): 0 Pepth (inches): 0 ring well, aerial photos, previous inspect pally saturated. Some of the ers are saturated to the sur	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> .

VEGETATION – Use scientific names of plants.

Sampling Point: wire1007f_w

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	<u>Species?</u>	Status	Number of Dominant Species
1. <u>Populus tremuloides</u>	50	<u> Y </u>	FAC	That Are OBL, FACW, or FAC: (A)
2. <u>Acer saccharum</u>	5	N	FACU	Total Number of Dominant
3. <u>Betula alleghaniensis</u>	2	N	FAC	Species Across All Strata:6(B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:6/ (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	57	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>10</u> x 2 = <u>20</u>
1. Corvlus cornuta	5	Y	FACU	FAC species <u>64</u> x 3 = <u>192</u>
2. Lonicera canadensis	2	Y	FACU	FACU species <u>14</u> x 4 = <u>56</u>
3			17100	UPL species x 5 =
0				Column Totals: <u>88</u> (A) <u>268</u> (B)
5.				Prevalence Index = B/A = <u>3.045454545454545454545454545454545454545</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	7	- Total Ca		∠ 2 - Dominance Test is >50%
			vei	3 - Prevalence Index is ≤3.0 ¹
1 Rubus nubescens	10	V	FACW	4 - Morphological Adaptations ¹ (Provide supporting
2 Ariszoma triphyllum	<u></u>	 		Problematic Hydrophytic Vegetation ¹ (Explain)
	 	<u> </u>		
3. <u>Aurynum angustum</u>	<u> </u>	<u>ĭ</u>		¹ Indicators of hydric soil and wetland hydrology must
		<u> </u>	FACU	be present, unless disturbed or problematic.
5. <u>I rillium cernuum</u>	2	<u> N</u>	FAC	Definitions of Vegetation Strata:
6			. <u> </u>	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7			. <u> </u>	at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				
12				Woody vines – All woody vines greater than 3.28 ft in height.
	24	= Total Co	ver	
Woody Vine Stratum (Plot size: 30)				
1			. <u> </u>	
2				
3				Hydrophytic
4				Vegetation Present? Yes ✔ No
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)		na	n dominatos the senery while ledy
fern dominates the horbaccous lower	weilano bere er	n. Quaki A aroac	whore	en dominates the canopy, while iddy
dominant	nere al	e areas	where	eastern rough seuge becomes

Profile Des	cription: (D	escribe t	to the dep	oth needed to docur	nent the	indicator	or confirm	the absence	of indicators.)		
Depth		Matrix		Redo	x Feature	S1		_	_		
(inches)		moist)	<u>%</u>	Color (moist)		Type'	Loc ²	<u>Texture</u>	Remarks		
0-6	<u>10YR</u>	2/1	100		0						
<u> 6-20 </u>	<u>5YR</u>	4/2	98	<u>7.5YR 4/4</u>	2	<u> </u>	<u>M</u>	COSL			
	_										
¹ Type: C=C	oncentration	n, D=Depl	etion, RM	=Reduced Matrix, M	S=Maske	d Sand Gra	ains.	² Location	: PL=Pore Lining, M=Matrix.		
Hydric Soil	Indicators:							Indicators	for Problematic Hydric Soils ³ :		
Histoso	l (A1) ninadan (A2	N .		Polyvalue Belov	w Surface	e (S8) (LRF	RR,	2 cm N	Auck (A10) (LRR K, L, MLRA 149B)		
Black H	istic (A3)	.)		Thin Dark Surfa) ace (S9) (l	LRR R. MI	RA 149B)	Coasi	Coast Prairie Redox (A16) (LRR K, L, R)		
Hydroge	en Sulfide (A	4)		∠ Loamy Mucky M	Aineral (F	1) (LRR K	, L)	Dark S	Dark Surface (S7) (LRR K, L)		
Stratifie	d Layers (A	5)		Loamy Gleyed	Matrix (F2	2)		Polyva	lue Below Surface (S8) (LRR K, L)		
Deplete	d Below Da	rk Surface	e (A11)	Depleted Matrix	(F3)			Thin D	ark Surface (S9) (LRR K, L)		
Thick D	ark Surface	(A12)		Redox Dark Su	rface (F6) Surface (F) =7)		Iron-Mi	anganese Masses (F12) (LRR K, L, R)		
Sandy f	Gleved Matri	ar (S1) ix (S4)		Redox Depress	ions (F8)	")		Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy F	Redox (S5)	()						Red Pa	arent Material (F21)		
Stripped	d Matrix (S6)						Very S	hallow Dark Surface (TF12)		
Dark Su	ırface (S7) (LRR R, M	ILRA 149	B)				Other ((Explain in Remarks)		
³ Indicators o	of hvdrophvti	c vegetat	ion and w	etland hydrology mus	st be pres	ent. unless	disturbed	or problematic			
Restrictive	Layer (if ob	served):		, ,,		,					
Туре:											
Depth (in	iches):							Hydric Soil	Present? Yes <u><</u> No		
Remarks:											
The soil	profile c	onsist	s of a c	lark mucky mi	neral I	ayer ov	/er a de	epleted co	arse sandy loam. Redox		
concentr	ations w	vere ob	oserve	d throughout t	he low	er laye	r and th	nree hydri	c indicators were met.		



wire1007f_w_NE



wire1007f_w_SW

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

WETLAND IDENTIFICATION					
Project name:	Evaluator(s):				
Line 5 Relocation Project	ARK/DMP				
File #:	Date of visit(s):				
wire1007	2020-06-08				
Location:	Ecological Landsca	ape:			
PLSS: sec 05 T045N R001W	North Central Forest				
Lat: <u>46.403280</u> Long: <u>-90.525153</u>	Watershed:				
	LS13, Tyler Forks				
County: <u>Iron</u> Town/City/Village: <u>Anderson town</u>					
SITE DESCRIPTION					
Soils:	WWI Class:				
Mapped Type(s):	N/A				
Gogebic silt loam, 2 to 6 percent slopes, very stony, rocky. Gogebic silt loam, 6 to 18 percent slopes, very stony, rocky. Chaheneau-Annalake complex, 0 to 6 percent slopes	Wetland Type(s):				
	PFO - Hardwood swamp				
Field Verified:		·			
Soil series not verified. Soils were a dark mucky	Wetland Size:	Wetland Area Impacted			
mineral over a reduced coarse sandy loam.	0.7635	0.7635			
	Vegetation:	·			
	Plant Community E	Description(s):			
Hydrology:	The canopy is domin	nated by quaking aspen, black ash,			
Seasonally saturated. The wetland consists of	basswood, and sugar maple. The shrub layer is				
many small depressions across a gentle slope	dominated by sugar maple, beaked hazel, and black ash.				
nossibly fed by groundwater seenage	The herb layer is dominated by eastern rough sedge,				
possibly led by groundwater seepage.	dwarf raspberry, and	d lady fern.			

SITE MAP

SECTION 1: Functional Value Assessment

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

WQ-8, GW-1, -3: Scattered pockets appear to be areas where the groundwater intersects the soil surface. FA-2: Standing water in microdepressions may provide sufficient habitat for some amphibians.

> 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	Birds calling
	Y	Avian, herpetofauna, 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

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,
			550	Abundance)
Populus tremuloides*			PFO	Interrupted
Fraxinus nigra*			PFO	Patchy
Acer saccharum			PFO	Rare
Athyrium filix-femina			PFO	Rare
Carex scabrata			PFO	Rare
Tilia americana			PFO	Rare
Equisetum arvense			PFO	Rare
Phegopteris connectilis			PFO	Rare
Rubus pubescens			PFO	Rare
Lonicera canadensis			PFO	Barren
Equisetum sylvaticum			PFO	Barren

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

The wetland is moderately diverse and lacking non-native species.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

No impacts observed.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Moderately diverse and lacking non-native species.
Human Use Values	The wetland is remote but located on public land.
Wildlife Habitat	The feature has multiple strata and provides potential for diverse wildlife species.
Fish and Aquatic Life Habitat	Standing water pockets may provide some habitat for amphibians.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature has low storage capacity, as it has groundwater seepage and discharge.
Water Quality Protection	See above.
Groundwater Processes	Groundwater seepage present.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

Project/Site: Line 5 Relocation Project	_ City/County: Sampling Date: 2020-06-08
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wire1007_u</u>
Investigator(s): DMP/ARK	_ Section, Township, Range: <u>sec 05 T045N R001W</u>
Landform (hillslope, terrace, etc.): Rise	.ocal relief (concave, convex, none): <u>None</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: _46.40324	41 Long: <u>-90.525276</u> Datum: WGS84
Soil Map Unit Name: Gogebic silt loam, 2 to 6 percent	slopes, very stony, rocky NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🗹 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	ly disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate rep The upland sample plot was taken on a rise in however no other wetland indicators were me species.	n the landscape. Hydrophytic vegetation was observed, et. The vegetation is mostly made up of FACU and FAC

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: wire1007_u

	Absolute	Dominan	Indicator	Dominance Test worksheet:		
<u>Tree Stratum</u> (Plot size: <u>30</u>)	<u>% Cover</u>	<u>Species</u> ?		Number of Dominant Species		
1. <u>Acer saccharum</u>		<u> </u>	FACU	That Are OBL, FACW, or FAC: 3 (A)		
2. <u>Populus tremuloides</u>	25	<u> </u>	FAC	Total Number of Dominant		
3. <u>Tilia americana</u>	2	<u> N </u>	<u>FACU</u>	Species Across All Strata: (B)		
4				Percent of Dominant Species		
5			·	That Are OBL, FACW, or FAC: <u>60</u> (A/B)		
6			·	Prevalence Index worksheet:		
7			·	Total % Cover of:Multiply by:		
		= Total Co	ver	OBL species x 1 =		
Sapling/Shrub Stratum (Plot size: 15)				FACW species7 x 2 =14		
1. Fraxinus pennsylvanica	5	Y	FACW	FAC species <u>54</u> x 3 = <u>162</u>		
2. Acer saccharum	5	Y	FACU	FACU species <u>72</u> x 4 = <u>288</u>		
3			1/100	UPL species x 5 =		
			·	Column Totals: <u>133</u> (A) <u>464</u> (B)		
4			·	Prevalence Index = $B/A = 3.488721804511278$		
5		. <u> </u>	·	Hudronbutio Vogetetion Indicatore:		
6				An Antice the Hydrophytic Vegetation		
7			·	1 - Rapid Test for Hydrophytic Vegetation		
	10	= Total Co	ver	$\frac{1}{2}$ 2 - Dominance results > 30%		
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting		
1. <u>Athyrium angustum</u>	25	Y	FAC	data in Remarks or on a separate sheet)		
2. <u>Mitchella repens</u>	5	Ν	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)		
3. <u>Acer saccharum</u>	5	N	FACU	1		
4. Pyrola elliptica	5	N	FACU	Indicators of hydric soil and wetland hydrology must		
5 Arisaema triphyllum	2	N	FAC			
6 Trillium cernuum	<u> </u>	 		Definitions of Vegetation Strata:		
				Tree – Woody plants 3 in. (7.6 cm) or more in diameter		
7. <u>Rubus pubescens</u>		IN	<u>FACW</u>	at breast height (DBH), regardless of height.		
8			·	Sapling/shrub – Woody plants less than 3 in. DBH		
9			·	and greater than of equal to 5.26 it (1 m) tail.		
10			·	Herb – All herbaceous (non-woody) plants, regardless		
11			·	of size, and woody plants less than 5.26 it tall.		
12			·	Woody vines – All woody vines greater than 3.28 ft in bound		
	46	= Total Co	ver	neight.		
Woody Vine Stratum (Plot size: 30)						
1						
2.						
3.				Hydrophytic		
4			·	Vegetation		
- T		- Total Ca		Present? Yes <u>~</u> No		
U = 1 otal Cover						
The vegetation is representative of the	upland.	Quakir	ng asper	n dominates the canopy, while sugar		
maple dominates the sub-canopy. Lady fern dominates the herbaceous layer.						
	-			-		

Profile Desc	cription: (Describe	to the dep	oth needed to	o docum	ent the i	ndicator	or confirm	the absence	of indicators.)	
Depth	Matrix			Redox	Feature	<u>s</u> 1	. 2			
(inches)	Color (moist)	%	Color (mo	oist)		Type'	Loc ²	Texture	Remarks	
0-12	<u>10YR 3/1</u>	100			0					
12-20	10YR 3/2	98	7.5YR	4/4	2	С	М	SCL		
	<u></u>		<u></u>	<u> </u>						
	. <u></u>									
¹ Type: C=C	oncentration. D=Dec	letion. RM	=Reduced Ma	atrix. MS	=Masked	Sand Gr	ains.	² Location	: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:			,,				Indicators	for Problematic Hydric Soils ³ :	
Histosol	(A1)		Polyvalu	ue Below	Surface	(S8) (LRI	RR,	2 cm M	Muck (A10) (LRR K, L, MLRA 149B)	
Histic E	pipedon (A2)		MLR	A 149B)				Coast Prairie Redox (A16) (LRR K, L, R)		
Black Hi	stic (A3)		Thin Da	rk Surfac	ce (S9) (L	RR R, M	LRA 149B)) 5 cm M	Mucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge Stratifio	en Sulfide (A4)		Loamy (Mucky M Glovod M	ineral (F ⁷ Astrix (F2	1) (LRR K)	., L)	Dark S	Surface (S7) (LRR K, L)	
Oraline	d Below Dark Surfac	e (A11)	Loanry C	d Matrix	(F3))		Thin D	Dark Surface (S9) ($I RR K I$)	
Thick Da	ark Surface (A12)		Redox E	Dark Surf	face (F6)			Iron-Manganese Masses (F12) (LRR K. L. R)		
Sandy N	/ucky Mineral (S1)		Deplete	d Dark S	urface (F	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
Sandy G	Gleyed Matrix (S4)		Redox [Depressio	ons (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy F	Redox (S5)							Red P	arent Material (F21)	
Stripped	Matrix (S6)		D \					Very S	Shallow Dark Surface (TF12)	
	nace (57) (LRR R, 1	VILKA 149	D)						(Explain in Remarks)	
³ Indicators o	f hydrophytic vegeta	tion and w	etland hydrolo	ogy must	be prese	ent, unles	s disturbed	or problemation	с.	
Restrictive	Layer (if observed)									
Туре:										
Depth (in	ches):							Hydric Soil	Present? Yes No	
Remarks:	,									
The soil	profile consist	tsof a d	ark loam	overa	a dark	sandy	clay Ic	am. Redo	ox was observed throughout	
the lowe	r laver. howev	ver no h	vdric soil	l indic	ators	vere o	bserve	d.	C	
	- j - ,		,					-		



wire1007_u_E



wire1007_u_W

Project/Site: Line 5 Relocation Project	_ City/County: <u>Iron</u> Sampling Date: <u>2020-06-08</u>
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wire1008f_w</u>
Investigator(s): DMP/ARK	Section, Township, Range: <u>sec 05 T045N R001W</u>
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.4043</u>	90 Long: <u>-90.523888</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Chabeneau-Annalake complex,	0 to 6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🔽 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes _ ✓ No Hydric Soil Present? Yes ✓ No	_ Is the Sampled Area within a Wetland? Yes <u>✓</u> No
Wetland Hydrology Present? Yes <u>v</u> No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate rep The hardwood swamp is a mosaic of small w	etland depressions and small upland hummocks.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)

Wettand Hydrology Indicators.	Secondary indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	Moss Trim Lines (B16)
✓ Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	pils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes _ No Depth (inches):	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): 1 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) No Depth (inches): 0	Wetland Hydrology Present? Yes <u></u>
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Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): 1 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) Depth (inches): 0 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: The hydrologic regime is seasonally saturated. The water to and the microdepressions are saturated to the surface.	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> tions), if available: able was observed just below the surface

VEGETATION – Use scientific names of plants.

Sampling Point: wire1008f_w

	Absolute	Dominant	Indicator	Dominance Test worksheet
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1. <u>Populus tremuloides</u>	50	Y	FAC	That Are OBL, FACW, or FAC: 4 (A)
2. <u>Fraxinus pennsylvanica</u>	10	N	<u>FACW</u>	Total Number of Dominant
3. <u>Fraxinus nigra</u>	5	N	FACW	Species Across All Strata: (B)
4. <u>Acer rubrum</u>	2	N	FAC	Percent of Dominant Species
5. <u>Acer saccharum</u>	2	N	<u>FACU</u>	That Are OBL, FACW, or FAC: <u>80</u> (A/B)
6				Prevalence Index worksheet
7	<u>.</u>			Total % Cover of: Multiply by:
	69	= Total Co	ver	OBL species 2 x 1 = 2
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>22</u> x 2 = <u>44</u>
1. Fraxinus nigra	5	Y	FACW	FAC species <u>84</u> x 3 = <u>252</u>
2 Fraxinus pennsylvanica	2	Y	FACW	FACU species <u>12</u> x 4 = <u>48</u>
3		.	<u></u>	UPL species x 5 =
۰				Column Totals: <u>120</u> (A) <u>346</u> (B)
5				Prevalence Index = B/A = <u>2.8833333333333333333</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
7	7	- Total Ca		2 - Dominance Test is >50%
			ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:)		V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Athyrium angustum</u>		<u> </u>	FAC	data in Remarks or on a separate sheet)
2. <u>Pyrola elliptica</u>	5	<u>N</u>	FACU	Problematic Hydrophytic Vegetation (Explain)
3. <u>Cornus canadensis</u>	5	<u> N </u>	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Carex gracillima</u>	5	<u> </u>	<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Carex pedunculata</u>	5	<u>N</u>	FAC	Definitions of Vegetation Strata:
6. <u>Linnaea borealis</u>	2	N	FAC	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Calamagrostis canadensis</u>	2	N	OBL	at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
· E	44	= Total Co		height.
Woody Vine Stratum (Plot size: 30)	<u> </u>	- 10(a) 00	vei	
1				
2				
3				Undraghatia
۰				Vegetation
· 4				Present? Yes <u>v</u> No
Pemarks: (Include photo numbers here or on a constate	U	= I otal Co	ver	
The vegetation is representative of the	hardwo	od swai	mn Que	aking aspen dominates the canopy

The vegetation is representative of the hardwood swamp. Quaking aspen dominates the canopy, while green and black ash dominate the sub-canopy. Lady fern and long-stalked sedge dominate the sparse herbaceous layer.

SOIL

Profile Desc	cription: (Desc	ribe to the dep	th needed	to docun	nent the i	indicator	or confirm	the absence	of indicators.)	
Depth	Mat	rix		Redo	x Feature	S1	. 2			
(inches)	Color (mois	<u>st) %</u>	Color (n	<u>noist)</u>	%	Type'	Loc ²	Texture	Remarks	
0-4	<u>10YR 2</u>	/1 100			0	·		MMI		
4-8	<u>10YR 2</u>	/1 98	<u>7.5YR</u>	4/4	2	C	M	SICL		
8-20	5YR 4/	/2 98	7.5YR	4/6	2	C	M	SCL		
						- <u> </u>				
					·	<u> </u>				
					·	<u> </u>				
						<u> </u>				
·					· · ·	·				
					- <u></u>	<u> </u>				
1						·				
Type: C=C	oncentration, D:	Depletion, RM	=Reduced N	Aatrix, MS	S=Masked	d Sand Gra	ains.	² Location:	PL=Pore Lining, M=Matrix.	
Histosol	(A1)		Polyva	lue Belov	w Surface	(S8) (I RE	R	2 cm M	luck (A10) (I RR K. I. MI RA 149B)	
Histic E	oipedon (A2)		NLF	RA 149B))	(00) (ER	,	Coast Prairie Redox (A16) (LRR K. L. R)		
Black Hi	stic (A3)		Thin D	ark Surfa	ice (S9) (I	LRR R, MI	LRA 149B)	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
Hydroge	en Sulfide (A4)		_∠ Loamy	Mucky N	/lineral (F	1) (LRR K	, L)	Dark S	urface (S7) (LRR K, L)	
	d Layers (A5) d Below Dark Si	urface (A11)	Loamy	Gleyed I od Matriv	Matrix (F2	2)		Polyval Thin Dr	ue Below Sufface (S8) (LRR K, L)	
Thick Da	ark Surface (A1)	2)	✓ Redox	Dark Su	rface (F6)			Iron-Ma	anganese Masses (F12) (LRR K. L. R)	
Sandy N	lucky Mineral (S	ý S1)	Deplet	ed Dark S	Surface (F	=7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)	
Sandy G	Bleyed Matrix (S	4)	Redox	Depress	ions (F8)			Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)	
Sandy F	Redox (S5)							Red Pa	arent Material (F21)	
Stripped Dark Su	rface (S7) (I RR	R. MI RA 149	3)					Very Si Other (hallow Dark Surface (TF12) Explain in Remarks)	
			-)							
³ Indicators o	f hydrophytic ve	getation and w	etland hydro	logy mus	t be prese	ent, unless	s disturbed	or problematic		
Restrictive	Layer (if observ	ved):								
Type.	- h).							Hydric Soil	Present? Yes 🗸 No	
Depth (In	cnes):									
The soil	profile con	sists of a d	ark mu	ckv mi	neral la	aver ov	/er a da	ark silty cla	av loam and a depleted	
sandy cla	av Ioam, F	our hydric	soil indi	cators	were	met.		and only one		
		o ar riyario		outoro						



wire1008f_w_E



wire1008f_w_S

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	ARK/DMP		
File #:	Date of visit(s):		
wire1008	2020-06-08		
Location:	Ecological Landscape:		
PLSS: sec 05 T045N R001W	North Central Forest		
Lat: <u>46.404379</u> Long: <u>-90.523893</u>	Watershed:		
	LS13, Tyler Forks		
County: Iron I own/City/Village: Anderson town			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Chabeneau-Annalake complex, 0 to 6 percent slopes	Wetland Type(s):		
	PFO - hardwood swamp		
Field Verified:		•	
Soil series not verified. Soils were a mucky	Wetland Size:	Wetland Area Impacted	
mineral over silty clay loam over sandy clay loam.	0.0232	0.0232	
	Vegetation:		
	Plant Community Description(s):		
Hydrology:	The canopy is dominated by quaking aspen, red maple, and sugar maple, with a typical		
Seasonally saturated depression with a high			
water table			
	hardwood swam	ip herbaceous layer	
	composition.		

SITE MAP

SECTION 1: Functional Value Assessment

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

ST-2, WQ-2, -3: Wetland is a set of closely aligned small depressions. GW-4: The top four inches of the soil profile were a mucky mineral.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Red-eyed video, ovenbird
	Y	Other avian species, 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

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata	All strata present 🖌	All strata present,
	or bare due to	present but	and good	conservative species
	invasive species	reduced native	assemblage of	represented
		species	native species	
NHI plant community	S4	S3 🖌	S2	S1-S2 (S2 high quality)
ranking	_			
Relative frequency of	Abundant	Common	Uncommon	Rare
plant community in				
watershed				
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)
Populus tremuloides*			PFO	Patchy
Athyrium filix-femina*			PFO	Patchy
Fraxinus pennsylvanica			PFO	Rare
Acer rubrum			PFO	Rare
Rubus pubescens			PFO	Rare
Acer saccharum			PFO	Rare
Carex gracillima			PFO	Rare
Carex pedunculata			PFO	Rare
Equisetum arvense			PFO	Barren
Betula papyrifera			PFO	Barren
Calamagrostis canadensis			PFO	Barren
Cornus canadensis			PFO	Barren
Fraxinus nigra			PFO	Barren
Linnaea borealis			PFO	Barren
Pyrola elliptica			PFO	Barren

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

Moderate diversity and a lack of non-native species.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

No impacts observed.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Moderate diversity and a lack of non-native species.
Human Use Values	Located on public land but remote.
Wildlife Habitat	Birds observed. Potential for diverse wildlife.
Fish and Aquatic Life Habitat	
Shoreline Protection	N/A
Flood and Stormwater Storage	Small wetland with low storage capacity.
Water Quality Protection	See above.
Groundwater Processes	The water table is close to the surface in places, but the feature likely does not have prominent discharge or groundwater processes associated.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

Project/Site: Line 5 Relocation Project	City/County: Iron Sampling Date: 2020-06-08
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wire1008_u
Investigator(s): DMP/ARK	Section, Township, Range: Sec 05 T045N R001W
Landform (hillslope, terrace, etc.); Rise	ocal relief (concave, convex, none): None Slope (%): 0-2%
Subregion (LRP or MLRA). Northcentral Forests Lat: 16 101/16	58 Long: -90 523915 Datum: WGS84
Soil Map Unit Name: Chabeneau-Annalake complex	0 to 6 percent slopes NWL classification:
An elimetic (hedge and the set the site to be a first the set of t	
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes <u>v</u> No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantl	y disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>v</u> No	Is the Sampled Area
Hydric Soil Present? Yes No 🗸	within a Wetland? Yes <u>No </u>
Wetland Hydrology Present? Yes No	If yes, optional Wetland 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)
Surface Water (A1) Water-Stained	Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna	a (B13) Moss Trim Lines (B16)
Saturation (A3) Marl Deposits	(B15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sul	fide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhiz	ospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of F	Leduced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat of Crust (B4) Recent Iron R	eduction in Tilled Solis (C6) Geomorphic Position (D2)
International Linear (BZ) International Linear (BZ) International Linear (BZ)	nace (C7) Shallow Aquitato (D3)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🗸 Depth (inche	s):
Water Table Present? Yes No 🗸 Depth (inche	s):
Saturation Present? Yes No 🖌 Depth (inche (includes capillary fringe)	s): Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial pho	tos, previous inspections), if available:
Remarks:	
No primary indicators of wetland hydrology we	ere observed.

VEGETATION – Use scientific names of plants.

Sampling Point: wire1008_u

The Other (Distring 20	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u>)	<u>% Cover</u>	Species?		Number of Dominant Species
1. <u>Populus tremuloides</u>		<u> </u>		That Are OBL, FACW, or FAC: 5 (A)
2. <u>Fraxinus nigra</u> 3. Fraxinus pennsylvanica	_ <u>10</u> 5	<u> </u>	FACW	Total Number of Dominant Species Across All Strata: 5 (B)
			<u>1 AOW</u>	
4			·	Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
5			·	
o			·	Prevalence Index worksheet:
/			·	Total % Cover of: Multiply by:
	65	= Total Co	ver	OBL species 0 x1 = 0
Sapling/Shrub Stratum (Plot size: 15)				FACW species 26 $x^2 = 52$
1. <u>Fraxinus nigra</u>	5	<u> </u>	<u>FACW</u>	FAC species $0 \times 4 = 0$
2. <u>Fraxinus pennsylvanica</u>	2	Y	FACW	$\frac{112}{112} = 0$
3				Column Totals: 113 (A) 313 (B)
4				
5				Prevalence Index = B/A = <u>2.77</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	7	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				\sim 3 - Prevalence Index is $\leq 3.0^{\circ}$
1. <u>Athyrium angustum</u>	25	Y	FAC	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2. <u>Carex pedunculata</u>	10	Y	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Orvzopsis asperifolia</u>	2	N		1
4. <u>Rubus pubescens</u>	2	N	FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Onoclea sensibilis	2	N	FACW	Definitions of Versitation Strata
6. Arisaema triphyllum	2	N	FAC	Demicions of Vegetation Strata.
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sanling/shrub - Woody plants less than 3 in DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10		. <u> </u>		Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12		·		Woody vines – All woody vines greater than 3.28 ft in
	43	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4.				Vegetation
	0	= Total Co	ver	Present? Yes <u>✓</u> No
Remarks: (Include photo numbers here or on a separate	sheet.)			I
The vegetation is representative of the	upland.	The ca	nopy is	dominated by quaking aspen, while
the herbaceous layer is dominated by l	ady fern	1.		

SOIL

Profile Desc	ription: (Describe t	o the dept	n needed to docun	nent the	indicator or confirm	the absence o	f indicators.)	
Depth (inches)	Matrix	0/	Redox	x Feature	$\frac{1}{1}$	Touturo	Domoriza	
		100					Remarks	
0-10	<u>7.51R 2.5/5</u>							
<u> 16-20 </u>	<u>7.5YR 4/4</u>	100		0		SCL		
		<u> </u>			· · ·			
					- <u> </u>			
¹ Type: C=Ce	oncentration. D=Depl	etion. RM=	Reduced Matrix. MS	S=Masked	d Sand Grains.	² Location:	PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:					Indicators for	or Problematic Hydric Soils ³ :	
Histosol	(A1)	_	Polyvalue Belov	v Surface	e (S8) (LRR R,	2 cm Mu	ick (A10) (LRR K, L, MLRA 149B)	
Histic Ep	oipedon (A2)		MLRA 149B)			Coast Pi	rairie Redox (A16) (LRR K, L, R)	
Black Hi	stic (A3)	-	Thin Dark Surfa	ce (S9) (I liporal (E		5 cm Mu	ICKY Peat or Peat (S3) (LRR K, L, R)	
Stratified	1 avers (A5)	-	Loamy Gleved I	Matrix (F2	(LKK K, L)	Polyvalu	ie Below Surface (S8) (LRR K. L)	
Depleted	d Below Dark Surface	e (A11)	Depleted Matrix	(F3)	-,	Thin Dar	rk Surface (S9) (LRR K, L)	
Thick Da	ark Surface (A12)	-	Redox Dark Sur	face (F6))	Iron-Mar	nganese Masses (F12) (LRR K, L, R)	
Sandy M	lucky Mineral (S1)	-	Depleted Dark S	Surface (F	=7)	Piedmont Floodplain Soils (F19) (MLRA 149B)		
Sandy G	Bleyed Matrix (S4)	-	Redox Depress	ions (F8)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21)		
Sandy R	Matrix (S6)					Very Sh	allow Dark Surface (TE12)	
Dark Su	rface (S7) (LRR R, M	ILRA 149B)				Other (E	Explain in Remarks)	
³ Indicators of	f hydrophytic vegetati	ion and wet	and hydrology mus	t be pres	ent, unless disturbed of	or problematic.		
Restrictive I	Layer (if observed):							
Type:								
Depth (inc	ches):					Hydric Soil P	resent? Yes No	
Remarks:								
The soll	profile consists	s of a br	own sandy id	bam ov	/er a sandy cla	y loam. No	o nyaric soil indicators	
were obs	servea.							



wire1008_u_NW



wire1008_u_SW

Project/Site: Line 5 Relocation F	Project	City/County: Iron	Samp	ling Date: <u>2020-06-08</u>
Applicant/Owner: Enbridge			State: Wisconsin Sar	mpling Point: <u>wire1006f_w</u>
Investigator(s): DMP/ARK		_ Section, Township, Range: S	ec 05 T045N R00	D1W
Landform (hillslope, terrace, etc.): Depl	ression L	ocal relief (concave, convex, no	ne): <u>None</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral	Forests Lat: 46.4056	39Long: <u>-9(</u>	0.526018	Datum: <u>WGS84</u>
Soil Map Unit Name: Chabeneau-A	Annalake complex.	0 to 6 percent slopes	NWI classification:	PFO1C
Are climatic / hydrologic conditions on the	site typical for this time of y	vear? Yes <u>✓</u> No	(If no, explain in Remarks	s.)
Are Vegetation, Soil, or H	ydrology significantl	y disturbed? Are "Norma	Il Circumstances" present	? Yes 🖌 No
Are Vegetation, Soil, or H	ydrology naturally p	roblematic? (If needed,	explain any answers in Re	emarks.)
SUMMARY OF FINDINGS - Att	ach site map showin	g sampling point location	ons, transects, imp	ortant features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative procedur The feature is a hardwood microtopography throughou vegetated, whereas the up observed along the southea	Yes <u>v</u> No Yes <u>v</u> No Yes <u>v</u> No es here or in a separate rep swamp that occurs ut the wetland. The land hummocks are astern end of the w	Is the Sampled Area within a Wetland? If yes, optional Wetland ort.) within a depression microdepressions ar e usually dominated by yetland.	Yes <u>v</u> No d Site ID: in the landscape. re typically satura by graceful sedge	• There is a lot of ited and sparsely e. Seepage was
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators (m	hinimum of two required)
Primary Indicators (minimum of one is re	equired; check all that apply)	Surface Soil Cracks	s (B6)
Surface Water (A1)	Water-Stained	d Leaves (B9)	Drainage Patterns (B10)
right water Table (A2)	Aquatic Fauna	(D15)		
Vater Marks (B1)		(DI) fide Odor (C1)		
Sediment Deposite (B2)	Ovidized Phiz	rospheres on Living Roots (C2)	Saturation Visible o	n Aerial Imageny (CO)
Drift Deposits (B3)	Presence of F	Reduced Iron (C4)	Stunted or Stressec	Plants (D1)

_ Recent Iron Reduction in Tilled Soils (C6)

____ Thin Muck Surface (C7)

 Yes _ ✓
 No _ _ _ Depth (inches): 1

 Yes _ ✓
 No _ _ _ Depth (inches): 0

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

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

____ Other (Explain in Remarks)

Remarks:

Algal Mat or Crust (B4)

____ Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

Iron Deposits (B5)

Field Observations: Surface Water Present?

Water Table Present?

(includes capillary fringe)

Saturation Present?

The hydrologic regime is seasonally saturated. There is standing water within some of the microdepressions throughout the wetland. The water table was observed at the surface.

___ Geomorphic Position (D2)

_ Microtopographic Relief (D4)

____ Shallow Aquitard (D3)

___ FAC-Neutral Test (D5)

Wetland Hydrology Present? Yes _
VEGETATION – Use scientific names of plants.

Sampling Point: wire1006f_w

Trop Stratum (Platiciza: 30)	Absolute	Dominan	t Indicator	Dominance Test worksheet:
1 Fravinus nigra	<u>60</u>	<u>Species:</u> V		Number of Dominant Species
1. <u>Traxinus nigra</u>	<u>00</u>	 		That Are OBL, FACW, or FAC: 5 (A)
		IN		Total Number of Dominant
3			<u> </u>	Species Across All Strata. D (B)
4				Percent of Dominant Species
5				
6			·	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	70	= Total Co	ver	OBL species <u>17</u> x 1 = <u>17</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>86</u> $x^2 = 1/2$
1. <u>Fraxinus nigra</u>	10	<u> </u>	FACW	FAC species 15 $x_3 = 45$
2. <u>Corylus cornuta</u>	2	N	FACU	$\frac{1100 \text{ species}}{1100 \text{ species}} = 0 \qquad x = 0$
3			<u> </u>	Column Totals: 125 (A) 262 (B)
4				
5				Prevalence Index = $B/A = 2.096$
6			<u> </u>	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	12	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				<u> </u>
1. Caltha palustris	10	Y	OBL	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2. Carex scabrata	5	Ň	OBI	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Equisetum arvense	_ <u></u> _	N	FAC	
Dryonteris carthusiana	_ <u> </u>	<u>N</u>	FACW	¹ Indicators of hydric soil and wetland hydrology must
5. Carex gracillima	 5	 	FACU	
6 Rubus pubescens	_ <u></u> 5	 		Definitions of Vegetation Strata:
7. Impations capanais	<u> </u>	 		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Impauens capensis</u>	_ <u>_</u>			at breast height (DBH), regardless of height.
8. <u>Poa paiusiris</u>				Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Giyceria striata</u>		<u> </u>		
10. <u>Mitelia nuda</u>	1	<u> N </u>	FACW	Herb – All herbaceous (non-woody) plants, regardless
11				
12				Woody vines – All woody vines greater than 3.28 ft in height.
	43	= Total Co	over	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2			<u> </u>	
3				Hydrophytic
4				Vegetation Present? Yes v No
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate The vegetation is representative of the	^{sheet.)} wetland	l, howe	ver east	ern rough sedge becomes dominant in

Profile Desc	cription: (D	Describe	to the dep	oth needed	to docum	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth		Matrix			Redox	Feature	s			
(inches)	Color (I	moist)	%	<u>Color (n</u>	noist)	%	Type'	Loc ²	Texture	Remarks
0-6	<u>10YR</u>	2/1	100			0			MMI	
6-10	<u>10YR</u>	2/1	100			0			C	
10-15	5YR	4/2	98	<u>7.5YR</u>	4/6	2	С	M	CL	
15-18	5YR	4/2	95	<u>7.5YR</u>	4/6	5	С	M	С	
18-20	5YR	4/4	100			0			SCL	
			·	-						
			·							
			·							
			·							
			lation DM	Deduced	Actrix MC	Maakaa			² l contion	DI Doro Lining M Motrix
¹ Type: C=C Hydric Soil	oncentratior	n, D=Dep	letion, RM	Reduced N	Aatrix, MS	=Masked	Sand Gr	ains.	² Location	PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
¹ Type: C=C Hydric Soil Histosol	oncentration Indicators: (A1)	n, D=Dep	letion, RM	=Reduced M	Matrix, MS	=Masked	I Sand Gra	ains. R R,	² Location Indicators 2 cm M	<u>PL=Pore Lining, M=Matrix.</u> for Problematic Hydric Soils ³ : Muck (A10) (LRR K, L, MLRA 149B)
¹ Type: C=C Hydric Soil Histosol Histic E	oncentration Indicators: (A1) pipedon (A2	n, D=Dep 2)	letion, RM	=Reduced M Polyva MLF	Matrix, MS Ilue Below RA 149B)	=Maskec	<u>I Sand Gr</u> (S8) (LRI	ains. R R,	² Location Indicators 2 cm N Coast	EXAMPLE TO A CONTRACT OF THE TOTAL OF TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF TOTAL OF THE TOTAL OF
¹ Type: C=C Hydric Soil Histosol Histic E _I Black Hi	oncentratior Indicators: (A1) pipedon (A2 istic (A3)	n, D=Dep 2)	letion, RM	Polyva Polyva Thin D	Matrix, MS Ilue Below RA 149B) Park Surfa	S=Masked Surface Ce (S9) (I	<u>Sand Gra</u> (S8) (LRF	ains. R R, LRA 149B)	² Location Indicators 2 cm M Coast 5 cm M	 PL=Pore Lining, M=Matrix. for Problematic Hydric Soils³: Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R)
¹ Type: C=C Hydric Soil Histosol Histic Ej Black Hi Hydroge	oncentration Indicators: (A1) pipedon (A2 istic (A3) en Sulfide (A	n, D=Dep 2) \\\	letion, RM	EReduced M Polyva MLF Thin D Loamy	Matrix, MS Ilue Below RA 149B) Park Surfa Mucky M	S=Masked V Surface ce (S9) (L lineral (F	<u>I Sand Gr</u> (S8) (LRI LRR R, MI 1) (LRR K	 ains. R R, LRA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S	 PL=Pore Lining, M=Matrix. for Problematic Hydric Soils³: Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L)
¹ Type: C=C Hydric Soil Histosol Histic E _I Black Hi Hydroge Stratified	oncentration Indicators: (A1) pipedon (A2 istic (A3) en Sulfide (A d Layers (A3)	n, D=Dep 2) 44) 5)	letion, RM	EReduced M Polyva MLF Loamy Loamy Doplot	Matrix, MS Ilue Below RA 149B) Park Surfa Mucky M Gleyed N od Matrix	=Masked V Surface ce (S9) (I lineral (F ² Matrix (F2	(S8) (LRF (S8) (LRF LRR R, Mi 1) (LRR K	 ains. R R, LRA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S Polyva Thin D	<u> FL=Pore Lining, M=Matrix.</u> for Problematic Hydric Soils ³ : Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L) brok Surface (S8) (LRR K, L)
¹ Type: C=C Hydric Soil Histosol Histic El Black Hi Hydroge Stratified Depleted Thick D	oncentration Indicators: (A1) pipedon (A2 istic (A3) en Sulfide (A d Layers (A4 d Below Dat d Below Dat	n, D=Dep 2) 44) 5) rk Surface (A12)	letion, RM	Polyva Polyva Thin D Loamy Loamy Deplet Redox	Matrix, MS Ilue Below RA 149B) Iark Surfa Mucky M Gleyed N ed Matrix Dark Sur	S=Masked V Surface ce (S9) (I lineral (F ⁻ Matrix (F2 (F3) face (F6)	 (S8) (LRF _RR R, MI 1) (LRR K	 R R, LRA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S Polyva Thin D	a: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L) Park Surface (S9) (LR
¹ Type: C=C Hydric Soil Histosol Histoc El Black Hi Hydroge Stratifier Depleter Thick Da Sandy M	oncentration Indicators: (A1) pipedon (A2 istic (A3) en Sulfide (A d Layers (A8) d Below Dal ark Surface	n, D=Dep 2) 44) 5) rk Surface (A12) ral (S1)	e (A11)	I=Reduced M Polyva MLf Thin D Loamy Loamy Deplet Redox Deplet	Matrix, MS Alue Below (A 149B) (ark Surfa) (Mucky M (Gleyed N (Gleyed N (Cleyed N (Cle	S=Maskec v Surface ce (S9) (I lineral (F ⁻ Matrix (F2 (F3) face (F6)	 (S8) (LRF _RR R, Mi 1) (LRR K .) 77)	 ains. R R, LRA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S Polyva Thin D Iron-M Piedm	EXAMPLE 12 Content of the second
¹ Type: C=C Hydric Soil Histosol Histic E _I Black Hi Hydroge Stratifier ∠ Depleter Thick Da Sandy M Sandy O	oncentratior Indicators: (A1) pipedon (A2 istic (A3) en Sulfide (A d Layers (A3 d Below Data ark Surface Aucky Miner Gleved Matri	n, D=Dep 2) A4) 5) rk Surfaco (A12) ral (S1) ix (S4)	e (A11)	EReduced M Polyva MLf Thin D Loamy Deplet Redox Deplet Redox	Matrix, MS Alue Below (A 149B) (ark Surfa) (Mucky M (Gleyed N (Gleyed N (d Matrix) (Dark Sur (Dark Sur (d Dark S (Depressi)	S=Maskec v Surface ce (S9) (I lineral (F ⁻ Matrix (F2 (F3) face (F6) Surface (F8) ons (F8)	<u>I Sand Gr</u> (S8) (LRI .RR R, Mi 1) (LRR K)	 ains. R R, LRA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S Polyva Thin D Iron-M Piedm Nesic	PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L) vark Surface (S9) (LRR K, L) langanese Masses (F12) (LRR K, L, R) ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B)
¹ Type: C=C Hydric Soil Histosol Histic Ej Black Hi Hydroge Stratified Depletee Thick Da Sandy M Sandy F	oncentration Indicators: (A1) pipedon (A2 istic (A3) en Sulfide (A d Layers (A3 d Below Data ark Surface Mucky Miner Gleyed Matri Redox (S5)	n, D=Dep 2) A4) 5) rk Surface (A12) ral (S1) ix (S4)	letion, RM	EReduced M Polyva MLF — Thin D → Loamy — Loamy — Deplet — Redox — Deplet — Redox	Matrix, MS Alue Below RA 149B) Park Surfa Mucky M Gleyed N ed Matrix Dark Sur ed Dark Sur Depressi	S=Maskec v Surface ce (S9) (I lineral (F ⁻ Matrix (F2 (F3) face (F6) Surface (F8) ons (F8)	<u>I Sand Gr</u> (S8) (LRI - RR R, M 1) (LRR K) 77)	 R R, LRA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S Dark S Polyva Thin D Iron-M Piedm Nesic Red P	PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L) vark Surface (S9) (LRR K, L) langanese Masses (F12) (LRR K, L, R) ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21)
¹ Type: C=C Hydric Soil Histosol Histic E Black Hi Hydroge Stratified ✓ Depletee Thick Da Sandy M Sandy R Sandy F Stripped	oncentration Indicators: (A1) pipedon (A2 istic (A3) en Sulfide (A d Layers (A3 d Below Dar ark Surface Mucky Miner Gleyed Matri Redox (S5) d Matrix (S6	n, D=Dep 2) 5) rk Surface (A12) ral (S1) ix (S4)	letion, RM	EReduced M Polyva MLF Thin D Loamy Deplet Redox Redox	Matrix, MS Alue Below (A 149B) (ark Surfact (Mucky M (Gleyed N (Gleyed N (Gleyed N (Colored Surfact) (Colored Surfact) (S=Maskec V Surface ce (S9) (L lineral (F ⁻ Matrix (F2 (F3) face (F6) Surface (F6) Surface (F8)	<u> Sand Gr</u> (S8) (LRI LRR R, Mi 1) (LRR K))	 R R, LRA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S Polyva Thin D Iron-M Piedm Mesic Red P Very S	i: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L) anganese Masses (F12) (LRR K, L, R) ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21) Shallow Dark Surface (TF12)
¹ Type: C=C Hydric Soil Histosol Histic Eµ Black Hi Hydroge Stratified Depletee Thick Da Sandy M Sandy G Sandy F Stripped Dark Su	oncentration Indicators: (A1) pipedon (A2 istic (A3) en Sulfide (A d Layers (A3) d Below Data ark Surface Aucky Miner Gleyed Matri Redox (S5) d Matrix (S6) rface (S7) (n, D=Dep 2) A4) 5) rk Surface (A12) ral (S1) ix (S4)) LRR R, M	letion, RM e (A11) fLRA 149	I=Reduced M Polyva MLf Thin D Loamy Deplet Redox Redox B)	Matrix, MS Alue Below RA 149B) Park Surfar Mucky M Gleyed N ed Matrix Dark Sur ed Dark S Depressi	S=Maskec V Surface ce (S9) (I lineral (F ⁻ Matrix (F2 (F3) face (F6) Surface (F6) Surface (F8)	<u>I Sand Gr</u> (S8) (LRI .RR R, M 1) (LRR K) 77)	 R R, LRA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S Polyva Thin D Iron-M Piedm Mesic Red P Very S Other	PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L) vark Surface (S9) (LRR K, L) langanese Masses (F12) (LRR K, L, R) ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21) Shallow Dark Surface (TF12) (Explain in Remarks)
¹ Type: C=C Hydric Soil Histosol Histic El Black Hi Hydroge Stratified ✓ Depleted Thick Da Sandy M Sandy R Sandy F Stripped Dark Su	oncentration Indicators: (A1) pipedon (A2 istic (A3) en Sulfide (A d Layers (A4 d Layers (A4 d Below Data ark Surface Aucky Miner Bleyed Matri Redox (S5) d Matrix (S6) rface (S7) (n, D=Dep 2) (A4) 5) rk Surface (A12) ral (S1) ix (S4)) LRR R, M ic vegetat	letion, RM e (A11) fILRA 149	I=Reduced M Polyva MLF Thin D Loamy Loamy Deplet Redox Deplet Redox	Matrix, MS Alue Below (A 149B) (ark Surfa- (Mucky M (Gleyed M (Gleyed M (Gleyed M (Charles) (Dark Sur (Dark Sur (Dark Sur (Depressi (Depressi	S=Maskec v Surface ce (S9) (I lineral (F ⁻ Matrix (F2 (F3) face (F6) Surface (F ons (F8)	(S8) (LRF (S8) (LRF LRR R, Mi 1) (LRR K 2) 77)	ains. R R, LRA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S Polyva Thin D Thin D Iron-M Nesic Red P Very S Other or problematic	<u>i: PL=Pore Lining, M=Matrix.</u> for Problematic Hydric Soils ³ : Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L) bark Surface (S9) (LRR K, L) langanese Masses (F12) (LRR K, L, R) ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21) Shallow Dark Surface (TF12) (Explain in Remarks) C.
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The soil profile consists of a dark mucky mineral layer over dark clay and a depleted clay loam and clay. There is a thin layer of red sandy clay loam at the bottom of the profile. Two hydric soil indicators were observed.



wire1006f_w_E



wire1006f_w_W

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	ARK/DMP		
File #:	Date of visit(s):		
wire1006	2020-06-08		
Location:	Ecological Landsca	ape:	
PLSS: sec 05 T045N R001W	North Control Forget		
	North Central Porest		
Lat: <u>46.405702</u> Long: <u>-90.526031</u>	Watershed:		
	LS13, Tyler Forks		
County: <u>Iron</u> Town/City/Village: <u>Anderson town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	тзк		
Wormet sandy loam, 0 to 3 percent slopes. Chabeneau-Annalake	Wetland Type(s):		
complex, 0 to 6 percent slopes.	PFO - hardwood swamp		
Field Verified:		P	
Soil series not verified. Soils were a mucky	Wetland Size:	Wetland Area Impacted	
mineral over clay over clay loam over clay over	0.5768	0.5768	
sandy clay loam	Vegetation:		
Sandy day loan.	Plant Community	Description(s):	
Hydrology:	Black ash and qua	king aspen are dominant in the	
The feature is a seasonally saturated depression. There	canopy, beaked hazel and black ash are dominant in the shrub layer, and eastern rough sedge and field		
is standing water within some of the microdepressions			
throughout the wetland. The water table was observed at			
the surface.		nant in the ground layer.	
	1		

SITE MAP

SECTION 1: Functional Value Assessment

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

WH-7: two bird species observed. GW-4: The top layer of the soil profile was a mucky mineral, which has formed above a layer of clay.

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	Other avian species, herpetofauna, mammals
Y	Y	Nuthatch, red-eyed video
Y	Y	Wood frog

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	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata	All strata present 🖌	All strata present,
	or bare due to	present but	and good	conservative species
	invasive species	reduced native	assemblage of	represented
		species	native species	
NHI plant community	S4	S3 🖌	S2	S1-S2 (S2 high quality)
ranking				
Relative frequency of	Abundant	Common	Uncommon	Rare
plant community in				—
watershed				
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

Fraxinus nigra*PFOInterrupPopulus tremuloides*PFOPatchCarex scabrata*PFOPatchRubus pubescensPFORareCaltha palustrisPFORarecorylus cornutaPFORareDrvopteris carthusianaPFORare	stimate
Provinus nigra PFO Interrup Populus tremuloides* PFO Patch Carex scabrata* PFO Patch Rubus pubescens PFO Rare Caltha palustris PFO Rare corylus cornuta PFO Rare Dryopteris carthusiana PFO Rare	tod
Populas tremuloides PFO Patch Carex scabrata* PFO Patch Rubus pubescens PFO Rare Caltha palustris PFO Rare corylus cornuta PFO Rare Dryopteris carthusiana PFO Rare	
Carex scabrataPFOPatchRubus pubescensPFORareCaltha palustrisPFORarecorylus cornutaPFORareDryopteris carthusianaPFORare	ly
Rubus publescens PFO Rate Caltha palustris PFO Rate corylus cornuta PFO Rate Dryopteris carthusiana PFO Rate	y
Caltha palustris PFO Rare corylus cornuta PFO Rare Dryopteris carthusiana PFO Rare)
corylus cornuta PFO Rare Dryopteris carthusiana PFO Rare	;
Dryopteris carthusiana	9
Equisetum arvense PFO Rare	•
Betula alleghaniensis PFO Barre	n
Abies balsamea PFO Barre	n
Athyrium filix-femina PFO Barre	n
Carex leptalea PFO Barre	n
Carex leptonervia PFO Barre	n
Ilex verticillata PFO Barre	n
Onoclea sensibilis PFO Barre	n
Osmunda cinnamomea PFO Barre	n
Packera aurea PFO Barre	n
Poa alsodes PFO Barre	n

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

High-quality native plant community.

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

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

No impacts were observed in or around the feature.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The feature has a high-quality native plant community.
Human Use Values	Located on public land, but remote.
Wildlife Habitat	Birds and frogs observed, potential for many others.
Fish and Aquatic Life Habitat	Small pools of standing water are present in microdepressions.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is somewhat small, but a depressional basin that holds some water.
Water Quality Protection	See above.
Groundwater Processes	The feature has organic soils and a high water table, but it is likely that water resides above the clay soil in microdepressions.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling Date: 2020-06-08
Applicant/Owner: Enbridge		State: Wisconsin Sampling Point: wire1006_u
Investigator(s): DMP/ARK	Section, Township, Range	sec 05 T045N R001W
Landform (hillslope, terrace, etc.): <u>Backslope</u> Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.405</u> Soil Man Unit Name: Chabeneau-Appalake complete	Local relief (concave, convex, 475 Long: -	none): <u>None</u> Slope (%): <u>3-7%</u> 90.526018 Datum: <u>WGS84</u>
Are climatic / hydrologic conditions on the site typical for this time /	$\frac{1}{2} \frac{1}{2} \frac{1}$	(If no, ovnloin in Romarks.)
Are climatic / hydrologic conditions on the site typical for this time of	oryear? Yes <u>v</u> No <u></u>	_ (II no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signification	antly disturbed? Are "Nor	mal Circumstances" present? Yes <u>V</u> No
Are Vegetation, Soil, or Hydrology natural	y problematic? (If neede	d, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ving sampling point loca	tions, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: (Explain alternative procedures here or in a separate of The upland sample plot was taken in a mes indicators were observed.	Is the Sampled Are within a Wetland? If yes, optional Wetl report.) ic hardwood forest or	a Yes No and Site ID: N a slight backslope. No wetland
HYDROLOGY Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that ap	ply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stai	ned Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fa	una (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Depos	sits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen S	Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized R	Inizospheres on Living Roots (C	3) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	n Reduced Iron (C4)	Geomorphic Position (D2)
Iron Denosits (B5)	Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Exp	lain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	,	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No Depth (inc	ches):	
Water Table Present? Yes No Depth (inc	ches):	
Saturation Present? Yes No 🖌 Depth (inc	ches): Wetlar	d Hydrology Present? Yes No
(Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial r	photos previous inspections) if	available
	, , , , , , , , , , , , , , , , , , ,	
Domorko		
No indicators of wetland hydrology were ob	served.	

VEGETATION – Use scientific names of plants.

Sampling Point: wire1006_u

Tree Stratum (Plot cize: 30)	Absolute % Cover	Dominant	Indicator	Dominance Test worksheet:
1 Acer saccharum	<u>50</u>	V		Number of Dominant Species
2 Tilia americana	<u> </u>	 N	FACU	
			LACO	Total Number of Dominant
3				$\frac{-4}{(0)}$
4				Percent of Dominant Species That Are OBL_EACW_or_EAC: 25 (A/B)
5				
6			·	Prevalence Index worksheet:
7			·	Total % Cover of:Multiply by:
	60	= Total Cov	/er	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: <u>15</u>)				FACW species <u>7</u> x 2 = <u>14</u>
1. <u>Ostrya virginiana</u>	10	Y	<u>FACU</u>	FAC species $2 \times 3 = 6$
2. <u>Fraxinus pennsylvanica</u>	5	Y	FACW	FACU species $95 \times 4 = 380$
3				$\begin{array}{c} \text{OPL species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Column Totals} 104 (A) 400 (B) \end{array}$
4				$\begin{array}{c} \text{Column rotars.} \\ \underline{104} \\ (\text{A}) \\ \underline{400} \\ (\text{B}) \end{array}$
5.				Prevalence Index = B/A = <u>3.8461538461538463</u>
6.				Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
··	15	- Total Ca		2 - Dominance Test is >50%
Hark Stratum (Plat size) 5		- 10(a) CO		3 - Prevalence Index is ≤3.0 ¹
<u>Herb Stratum</u> (Plot size: <u>5</u>)	20	V	FACU	4 - Morphological Adaptations ¹ (Provide supporting
2 Lonicora canadonsis	_ <u></u> 5	 N		Problematic Hydrophytic Vegetation ¹ (Explain)
	<u> </u>			
3. <u>Apres paisantea</u>				¹ Indicators of hydric soil and wetland hydrology must
4. <u>Dryopteris cartrusiana</u>			FACW	be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
<i>I</i>				at breast height (DBH), regardless of height.
0				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10.				Herb – All berbaceous (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
	29	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: 30)				
1				
2.				
3				Hydrophytic
4.				Vegetation
	0	= Total Cov	/er	Present? Yes <u>No /</u>
Remarks: (Include photo numbers here or on a separate	sheet.)			1
The vegetation is representative of the	upland.	The ca	nopy is	dominated by sugar maple, while the
herbaceous layer is sparse and domina	ated by p	partridge	eberry.	

SOIL

Profile Desc	cription: (Describe t	o the dept	th needed to docum	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redox	K Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	<u>7.5YR 2.5/2</u>	100		0			SIL	
12-20	7.5YR 4/6	100		0			SII	
		100						
					·			
·								
					·			
	·				<u> </u>			
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators	for Problematic Hydric Soils':
Histosol	(A1)		Polyvalue Below	v Surface	(S8) (LRF	RR,	2 cm M	Auck (A10) (LRR K, L, MLRA 149B)
Histic El	pipedon (A2)		MLRA 149B)	aa (SO) /I			Coast	Prairie Redox (A16) (LRR K, L, R)
Hydrode	en Sulfide (A4)		I nin Dark Suna Loamy Mucky M	lineral (F	1) (I RR K	LKA 149D)	Dark S	Surface (S7) ($\mathbf{IRR} \times \mathbf{I}$)
Stratified	d Lavers (A5)		Loamy Gleved N	Matrix (F2	:) (_	, _,	Polyva	lue Below Surface (S8) (LRR K, L)
Deplete	d Below Dark Surface	(A11)	Depleted Matrix	(F3)	,		Thin D	ark Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)		Redox Dark Sur	face (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Sandy N	/lucky Mineral (S1)		Depleted Dark S	Surface (F	7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy G	Gleyed Matrix (S4)		Redox Depressi	ons (F8)			Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)						Red Pa	arent Material (F21)
Stripped	Matrix (S6)						Very S	hallow Dark Surface (TF12)
Dark Su	mace (57) (LRR R, M	LRA 1498)				Other ((Explain in Remarks)
³ Indicators o	f hvdrophytic vegetati	on and we	tland hvdrology mus	t be prese	ent. unless	s disturbed	or problematic	
Restrictive	Layer (if observed):				,		1	
Type:	,							
Denth (in	ches):						Hvdric Soil	Present? Yes No ✔
Deptil (III	cnes).						,	
The soil	nrofila consista	e to be	dry and dark	silty lo	am ove	ar a rod	dish brow	n silty loam. No bydric soil
indicator	o woro obcorv		ary and dark s	Sinty 10				In Sinty Iodini. No mydrie Soli
inucator		eu.						



wire1006_u_NW



wire1006_u_SW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/Count	y: <u>Iron</u>	Sampling Date: <u>2020-05-25</u>	
Applicant/Owner: Enbridge			_ State: <u>Wisconsin</u> Sampling Point: <u>wira1002f_w</u>	
Investigator(s): <u>SBR/DGL</u>	Section, T	ownship, Range: <u>S</u>	ec 06 T045N R001W	
Landform (hillslope, terrace, etc.): Depressio	<u>N</u> Local relief (c	oncave, convex, no	ne): <u>Concave</u> Slope (%): <u>0-2%</u>	
Subregion (LRR or MLRA): Northcentral Forests	³ Lat: 46.405477	Long: -9(D.534194 Datum: WGS84	
Soil Map Unit Name: Gogebic silt loam, 6	to 18 percent slopes.	very stony, ro	Cky NWI classification:	
Are climatic / hydrologic conditions on the site typi	cal for this time of year? Yes	✓ No	(If no. explain in Remarks.)	
Are Vegetation Soil or Hydrology	significantly disturbed?	Are "Norma	l Circumstances" present? Yes ✔ No	
Are Vegetation Soil or Hydrology	organised in a construction of the cons	(If needed	explain any answers in Remarks)	
SUMMARY OF FINDINGS – Attach sit	te map showing sampli	ng point locatio	ons. transects. important features. etc.	
Hydrophytic Vegetation Present? Yes	<u>✓</u> Nowit	he Sampled Area	Yes 🖌 No	
Hydric Soil Present? Yes	<u> No</u> No			
Vetland Hydrology Present? Yes	v NO If y	es, optional Wetland	d Site ID:	
The wetland is a hardwood swan area and thus there is more stan	np where evapótrans ding water than would	piration has c d normally be	lecreased due to logging in the present.	
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 (BS)	9)	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 (C	1)	Crayfish Burrows (C8)	
Drift Deposits (B3)	Oxidized Rhizospheres of Presence of Reduced Iror	(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)	(C7) Shallow Aquitard (D2)		
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks	3)	Microtopographic Relief (D4)	
Sparsely Vegetated Concave Surface (B8)		,	FAC-Neutral Test (D5)	
Field Observations:				
Surface Water Present? Yes No _	✓ Depth (inches):			
Water Table Present? Yes <u> v</u> No	Depth (inches): 0			
Saturation Present? Yes <u>v</u> No _	Depth (inches): 0	Wetland H	Hydrology Present? Yes _	
Describe Recorded Data (stream gauge, monitor	ring well, aerial photos, previous	s inspections), if ava	illable:	
Remarks:				
The hydrology regime is saturate	ed and is likely affecte	d by logging	and decreased	
evapotranspiration rates which a	llows for more water	to present that	an normal.	

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wira1002f_w</u>

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1 Fraxinus nigra	30	V	FACW	Number of Dominant Species
	10	 		That Are OBL, FACW, or FAC: $\underline{2}$ (A)
2. <u>Acer saccharum</u>	_ <u></u>			Total Number of Dominant
3. <u>Populus tremuloides</u>	5	IN	FAC	Species Across All Strata: <u>3</u> (B)
4			·	Percent of Dominant Species
5			·	$\begin{array}{c} \text{That Are OBL, FACW, of FAC.} \\ \underline{OT} \\ (A'B) \end{array}$
6				Prevalence Index worksheet:
7			·	Total % Cover of: Multiply by:
	45	= Total Co	ver	OBL species x 1 =0
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>30</u> x 2 = <u>60</u>
1				FAC species x 3 =75
2.				FACU species <u>12</u> x 4 = <u>48</u>
3				UPL species x 5 =
4			·	Column Totals: <u>67</u> (A) <u>183</u> (B)
T				Prevalence Index = B/A = 2.7313432835820897
5			·	Hudronhutia Variation Indiantara
6			·	A Denid Test for Lludrenbutic Vegetation
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co	ver	\sim 3 - Prevalence Index is $\leq 30^{1}$
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. Osmunda claytoniana	20	Y	FAC	data in Remarks or on a separate sheet)
2. Erythronium americanum	4	N	·	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Claytonia caroliniana	2	Ν	FACU	
4.				Indicators of hydric soil and wetland hydrology must
5			·	
6			·	Definitions of Vegetation Strata:
7				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			·	
10				Herb – All herbaceous (non-woody) plants, regardless
11			·	of size, and woody plants less than 5.26 it tail.
12				Woody vines – All woody vines greater than 3.28 ft in
	26	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2.				
3				Hydrophytic
4				Vegetation
T		- Total Ca		Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate		- 10(a) C0	vei	
The sample point is on the edge of the	wetland	l and or	nly some	what represents the feature. The
wetland feature mostly consists of stan	ding wa	ter with	out herb	baceous vegetation.
	-			-

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth Matrix Redox Features								
(inches) Color (moist) % Color (moist) % Type ¹ Loc ² Texture Rem	narks							
<u>0-5 7.5YR 2.5/1 95 7.5YR 3/4 5 C M SIL</u>								
<u>5-10</u> 7.5YR 3/2 90 7.5YR 4/6 10 C M SIL								
<u>10-20</u> 7.5YR 3/4 90 7.5YR 4/6 10 C M LVFS								
· ·								
·								
· · · · · · · ·_								
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, J	M=Matrix.							
Histosol (A1) Polyvalue Below Surface (S8) (I RR R 2 cm Muck (A10) (I RR K	I MI RA 149R)							
) (LRR K, L, R)							
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat	(S3) (LRR K, L, R)							
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K Stratified Lavers (A5)	(, L) (S8) (IRR K I)							
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (L	RR K, L)							
Thick Dark Surface (A12)	(F12) (LRR K, L, R)							
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils	s (F19) (MLRA 149B)							
Sandy Gleyed Matrix (S4) Redox Depressions (F6) Mesic Spotic (TA6) (MLR	(A 144A, 145, 149D)							
Stripped Matrix (S6)	Very Shallow Dark Surface (TF12)							
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks	s)							
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
Restrictive Layer (if observed):								
Туре:								
Depth (inches): Hydric Soil Present? Yes _	<u> Ио</u>							
Remarks:	Remarks:							
Silty soils with redox present throughout the profile.								
Siny sons with redox present infoughout the profile.								
Sity sons with redox present throughout the profile.								
Sity sons with redox present throughout the profile.								
Sity sons with redox present throughout the profile.								
Sity sons with redox present throughout the profile.								
Siny sons with redox present throughout the profile.								
Siny sons with redox present throughout the profile.								
Sity sons with redox present throughout the profile.								
Sity sons with redox present throughout the profile.								
Sity soils with redox present throughout the profile.								
Sity soils with redox present throughout the profile.								
Sity soils with redox present throughout the profile.								



wira1002f_w_N



wira1002f_w_W

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	SBR/DGL Ó		
File #:	Date of visit(s):		
wira1002	2020-05-29		
Location:	Ecological Landsca	ape:	
PLSS: sec 06 T045N R001W	Superior Mineral Ranges		
Lat: <u>46.405508</u> Long: <u>-90.534298</u>	Watershed:		
	LS13, Tyler Forks		
County: Iron Town/City/Village: Anderson town			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Gogebic silt loam, 6 to 18 percent slopes, very stony, rocky	Wetland Type(s):		
	PFO - hardwood swamp		
Field Verified:			
The soils were not field verified. Soils were a silty	Wetland Size:	Wetland Area Impacted	
loam over loamy very fine sand, and were	0.1899	0.1899	
reduced throughout the profile.	Vegetation:		
	Plant Community Description(s):		
Hydrology:	The wetland is a hardwood swamp that is a sparsely		
The hydrologic regime is saturated with standing water present at	vegetated concave surface filled with surface water at the		
the time of the survey. Surface water is a main source of hydrology.	time of survey. There is very little herbaceous vegetation		
saturation at 0 inches are main indicators of hydrology.	except on the peripheries of the wetland where there is		
	less/no standing wat	ter present.	

SITE MAP

SECTION 1: Functional Value Assessment

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

WH-6: There is an upland island in the wetland feature but it is relatively small. WH-10/FA-2/4: There is standing water present at the time of survey and the feature is likely able to support aquatic invertebrates and amphibians. ST2/WQ-3: The wetland is a small, shallow depression without channels. ST-5 surface water is likely the main source of hydrology.

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

Observed	Potential	Species/Habitat/Comments
	Y	Amphibians
Y	Y	Avian

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

Observed	Potential	Species/Habitat
	Y	Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Fraxinus nigra*			PFO	Patchy
Osmunda claytoniana*			PFO	Rare
Acer saccharinum			PFO	Rare
Erythronium americanum			PFO	Rare
Acer saccharum			PFO	Rare
Claytonia caroliniana			PFO	Rare

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

Overall low floristic integrity due to missing strata and abundance of the plant community.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
,					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
					Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
					Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
					Removal of herbaceous stratum – mowing,
					grading, earthworms, etc.
х	Х		н	С	Removal of tree or shrub strata – logging,
				-	unprescribed fire
					Human trails – unpaved
X	V			0	Human trails – paved
X	X		н	C	Removal of large woody debris
	X		L	C	Cover of non-native and/or invasive species
					Residential land use
					Orban, commercial or industrial use
					Becreational use (besting AT)(a sta)
					Execution of a cill grading
					Other (list below):
	+				
				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 within an area with clear evidence of logging, which has resulted in the wetland's current condition.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Low floristic integrity due to missing strata and common plant community.
Human Use Values	The area is used for logging.
Wildlife Habitat	The wetland is small with mostly tree cover, though it can provide some habitat.
Fish and Aquatic Life Habitat	The wetland has standing water but is small in size.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is small and can only hold a small amount of water, and does not receive increase stormwater inputs.
Water Quality Protection	The wetland is small and without dense vegetation, thus limiting its filtering capacity.
Groundwater Processes	The wetland does not seem to influence groundwater processes.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/Co	ounty: <u>Iron</u>	Sampling Date: 2020-05-29
Applicant/Owner: Enbridge			State: Wisconsin Sampling Point: wira1002_u
Investigator(s): SBR/DGI	Sectio	n, Township, Range: S	ec 06 T045N R001W
Landform (hillslope terrace etc.): Side Slope	Local relie	ef (concave, convex, nor	ne): None Slope (%): 8-15%
Subrasian (I BB as MI BA). Northcentral Forests			534260
Subregion (LRR of MLRA): Lat	<u>40.403343</u>		Datum: <u>VVG504</u>
Soil Map Unit Name: GOGEDIC SIII IOAIII, 6 10	re percent slope	<u>es, very stony, roc</u>	
Are climatic / hydrologic conditions on the site typical for	or this time of year? Ye	es 🔽 No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturb	bed? Are "Normal	Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology	naturally problema	tic? (If needed, e	explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site m	ap showing sam	pling point locatio	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No K	Is the Sampled Area	
Hydrophytic Vegetation reserver reserver Yes		within a Wetland?	Yes No
Wetland Hydrology Present? Yes	No 🖌	If yes, optional Wetland	l Site ID:
Remarks: (Explain alternative procedures here or in	a separate report.)		
The upland is located upslope from	the wetland and	d is dominated b	by a sugar maple in the overstory
and shade-tolerant forbs in the unde	erstory. Very fev	w shrubs are pre	esent.
HYDROLOGY			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; chec	k all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)	Water-Stained Leaves	s (B9)	Drainage Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lines (B16)
Saturation (A3)	Marl Deposits (B15)		Dry-Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odd	or (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizosphere	es on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced	Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction	n in Tilled Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C	7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Rem	arks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present? Yes No _	Depth (inches):		
Water Table Present? Yes No _	Depth (inches):		
Saturation Present? Yes No _	Depth (inches):	Wetland H	lydrology Present? Yes No
(includes capillary fringe)		· · · · · · · · · · · · · · · · · · ·	
Describe Recorded Data (stream gauge, monitoring v	vell, aerial photos, prev	lious inspections), if ava	liable:
Remarks:			
No indicators of wetland hydrology v	vere observed.		
, , ,			

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wira1002_u1</u>

Trop Stratum (Plot size: 30)	Absolute	Dominar	nt Indicator	Dominance Test worksheet:
1 Acor cocobarum	<u> </u>	<u>Species</u>		Number of Dominant Species
	 			That Are OBL, FACW, or FAC: (A)
	10	N	FACU	Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	95	= Total Co	over	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =0
1				FAC species <u>30</u> x 3 = <u>90</u>
2				FACU species <u>105</u> x 4 = <u>420</u>
2.				UPL species x 5 =
3				Column Totals: <u>135</u> (A) <u>510</u> (B)
4				Provelopce Index = P/A = -2.78
5				
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co	over	2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)				3 - Prevalence Index is ≤3.0"
1. Athvrium angustum	20	Y	FAC	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2 Caulophyllum thalictroides	10	Y		Problematic Hydrophytic Vegetation ¹ (Explain)
3 Acer saccharum	10	V	FACU	
A Clintonia borgalis	<u></u>	 		¹ Indicators of hydric soil and wetland hydrology must
	 	N		be present, unless disturbed or problematic.
				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
	50	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30)				
1				
2				
2				
S				Hydrophytic Vegetation
4				Present? Yes No 🗸
		= Total Co	over	
The sample point is representative of the	sheet.) he unlar	nd area		
			•	

SOIL

Profile Desc	ription: (Describe	to the dept	h needed to document the indicator or confirm	the absence of indicators.)
Depth (inches)	Matrix Color (moist)	0/2	Redox Features	Texture Remarks
<u>0-10</u>	10YR 2/1	100		SII
10_20	7.5YR 3/4	100		<u> </u>
10-20	<u>7.311 3/4</u>	100		
		·		
		·		
·				
¹ Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
Histosol	(A1)		Polyvalue Below Surface (S8) (I PP P	2 cm Muck (A10) (I PP K I MI PA 149B)
Histic Ep	pipedon (A2)	-	MLRA 149B)	Coast Prairie Redox (A16) (LRR K, L, R)
Black Hi	stic (A3)	-	Thin Dark Surface (S9) (LRR R, MLRA 149B)	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydroge Stratified	n Sulfide (A4)	-	Loamy Mucky Mineral (F1) (LRR K, L)	Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L)
Depleted	d Below Dark Surfac	e (A11)	Depleted Matrix (F3)	Thin Dark Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)	-	Redox Dark Surface (F6)	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy N	lucky Mineral (S1) Sleved Matrix (S4)	-	Depleted Dark Surface (F7) Redox Depressions (F8)	Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MI RA 144A 145 149B)
Sandy R	Redox (S5)	-		Red Parent Material (F21)
Stripped	Matrix (S6)			Very Shallow Dark Surface (TF12)
Dark Su	rface (S7) (LRR R, N	ILRA 149B)	Other (Explain in Remarks)
³ Indicators of	f hydrophytic vegetat	tion and wet	land hydrology must be present, unless disturbed o	or problematic.
Restrictive I	Layer (if observed):			
Туре:				
Depth (ind	ches):			Hydric Soll Present? Yes No V
Remarks:	il with no obs	orvod in	dicators of bydric soils	
A Sinty 30				





wira1002_u1_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	_ City/County: <u>Iron</u> Sampling Date: <u>2020-05-29</u>
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wira1002_u2</u>
Investigator(s): <u>SBR/DGL</u>	Section, Township, Range: <u>Sec 06 T045N R001W</u>
Landform (hillslope, terrace, etc.): <u>Rise</u> L	.ocal relief (concave, convex, none): <u>None</u> Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.4054</u>	<u>59</u> Long: <u>-90.534459</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic silt loam, 6 to 18 percent	t slopes, very stony, rocky NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	year? Yes 🔽 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	ly disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate rep The upland is a small island on a rise, potenti near the edge of the wetland feature.	ort.) ally a berm created by logging activity, and located
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)

Primary Indicators (minimum of	of one is required;	Surface Soil Cracks (B6)	
Surface Water (A1)		Drainage Patterns (B10)	
High Water Table (A2)		Moss Trim Lines (B16)	
Saturation (A3)		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 Aeri	ial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Conc	ave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present?	Yes No _	✓ Depth (inches):	
Water Table Present?	Yes No _	✓ Depth (inches):	
Saturation Present?	Yes <u>No</u>	✓ Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? (includes capillary fringe)	Yes No _	Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No am gauge, monito	Depth (inches): ing well, aerial photos, previous inspe	Wetland Hydrology Present? Yes No ✓ ctions), if available:
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No _ am gauge, monito	Depth (inches): ing well, aerial photos, previous inspe	Wetland Hydrology Present? Yes No ctions), if available:
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes No _ am gauge, monito	Depth (inches): ing well, aerial photos, previous inspe	Wetland Hydrology Present? Yes No
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks: No indicators of wetl	Yes No _ am gauge, monito	Depth (inches): ing well, aerial photos, previous inspe	Wetland Hydrology Present? Yes No ctions), if available:
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks: No indicators of wetl	Yes No _ am gauge, monito and hydrolog	Depth (inches): ing well, aerial photos, previous inspe gy were observed.	Wetland Hydrology Present? Yes No ctions), if available:
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks: No indicators of wetl	Yes No _ am gauge, monito and hydrolog	Depth (inches): ring well, aerial photos, previous inspe	Wetland Hydrology Present? Yes No
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks: No indicators of wetl	Yes No _ am gauge, monito and hydrolog	Depth (inches): ing well, aerial photos, previous inspe gy were observed.	Wetland Hydrology Present? Yes No
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks: No indicators of wetl	Yes No _ am gauge, monito and hydrolog	Depth (inches): ing well, aerial photos, previous inspe gy were observed.	Wetland Hydrology Present? Yes No
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks: No indicators of wetl	Yes No _ am gauge, monito and hydrolog	Depth (inches): ing well, aerial photos, previous inspe gy were observed.	Wetland Hydrology Present? Yes No
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks: No indicators of wetl	Yes No _ am gauge, monito and hydrolog	Depth (inches): ing well, aerial photos, previous inspe gy were observed.	Wetland Hydrology Present? Yes No
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks: No indicators of wetl	Yes No _ am gauge, monito and hydrolog	Depth (inches): ing well, aerial photos, previous inspe gy were observed.	Wetland Hydrology Present? Yes No
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks: No indicators of wetl	Yes No _ am gauge, monito and hydrolog	Depth (inches): ing well, aerial photos, previous inspe gy were observed.	Wetland Hydrology Present? Yes No
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks: No indicators of wetl	Yes No am gauge, monito and hydrolog	Depth (inches): ing well, aerial photos, previous inspe gy were observed.	Wetland Hydrology Present? Yes No

VEGETATION – Use scientific names of plants.

Sampling Point: wira1002_u2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 Acer saccharum	80	Y	FACU	Number of Dominant Species
2			17.00	
2				Total Number of Dominant
3			<u> </u>	Species Across All Strata. $\underline{4}$ (B)
4			. <u></u>	Percent of Dominant Species
5				$\frac{1}{23}$
6			. <u> </u>	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	80	= Total Cov	/er	OBL species x 1 =0
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =
1. <u>Corylus cornuta</u>	15	Y	FACU	FAC species x 3 =45
2.				FACU species <u>110</u> x 4 = <u>440</u>
3				UPL species x 5 =
0				Column Totals: <u>125</u> (A) <u>485</u> (B)
5.				Prevalence Index = B/A = <u>3.88</u>
6				Hydrophytic Vegetation Indicators:
7			······	1 - Rapid Test for Hydrophytic Vegetation
/	15			2 - Dominance Test is >50%
		= Total Cov	/er	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Athyrium angustum</u>	10	<u> </u>	FAC	data in Remarks or on a separate sheet)
2. Lonicera canadensis	10	<u> </u>	<u>FACU</u>	Problematic Hydrophytic Vegetation' (Explain)
3. <u>Clintonia borealis</u>	5	N	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Maianthemum canadense</u>	5	N	FACU	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
	30	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: 30)				
1				
1				
2				
3			. <u></u>	Hydrophytic Vegetation
4				Present? Yes No 🗸
	0	= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate	sheet.)	w tho c	omolo n	voint
	Senteu i		ampie p	onn.

SOIL

Profile Desc	cription: (Describe	to the dept	h needed to docun	nent the	indicator	or confirm	n the absence of indica	tors.)	
Depth	Matrix		Redo	x Feature	s				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-10	<u>10YR 2/1</u>	100		0			SIL		
10-20	7.5YR 3/4	100		0			SI		
				·					
				·					
					·		·		
				·					
		<u> </u>							
				·			. <u> </u>		
				·					<u> </u>
							·		
¹ Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	S=Maske	d Sand Gr	ains.	² Location: PL=Por	e Lining, M=M	atrix.
Hydric Soil	Indicators:						Indicators for Probl	ematic Hydrid	Solls":
Histosol	(A1)	-	Polyvalue Belov	v Surface	e (S8) (LR	RR,	2 cm Muck (A10) (LRR K, L, N dax (A16) (L B	
FISUC E	pipedon (AZ)		Thin Dark Surfa	(SQ) (DA 1498	Coast Prairie Re	t or Peat (S3)	(IDDKID)
Hvdroge	en Sulfide (A4)	-	Loamy Mucky M	/lineral (F	1) (LRR K	L L)	Dark Surface (S	7) (LRR K. L)	
<u>Stratifie</u>	d Lavers (A5)	-	Loamy Gleved I	Matrix (F2	2)	, _/	Polvvalue Below	Surface (S8)	(LRR K. L)
Deplete	d Below Dark Surfac	e (A11)	Depleted Matrix	(F3)	-,		Thin Dark Surfac	ce (S9) (LRR #	(,,,, K , L)
Thick Da	ark Surface (A12)		 Redox Dark Su	face (F6))		Iron-Manganese	Masses (F12)	(LRR K, L, R)
Sandy M	/lucky Mineral (S1)	_	Depleted Dark S	Surface (I	F7)		Piedmont Flood	plain Soils (F1	9) (MLRA 149B)
Sandy C	Gleyed Matrix (S4)	-	Redox Depress	ions (F8)			Mesic Spodic (T	A6) (MLRA 14	4A, 145, 149B)
Sandy F	Redox (S5)						Red Parent Mate	erial (F21)	
Stripped	l Matrix (S6)						Very Shallow Da	ark Surface (TF	-12)
Dark Su	rface (S7) (LRR R, N	ILRA 149B)				Other (Explain ir	n Remarks)	
³ Indicators o	f hydrophytic yogoto	tion and wat	land hydrology mus	t ha proc	ont unlos	e dicturbod	or problematic		
Restrictive	Laver (if observed):		and hydrology mus	t be ples	ent, unies	Sustaibed			
Type:	_ujoi (ii obooi tou).								
Depth (in	ches):						Hydric Soil Present?	Yes	No 🖌
Remarks:									
A silty so	oil with no redo	ox featui	es present.						



wira1002_u2_N



wira1002_u2_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: <u>Iron</u> Sampling Date: <u>2020-05-2</u>
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wira1004f_</u>
Investigator(s): <u>SBR/DGL</u>	Section, Township, Range: <u>sec 06 T045N R001W</u>
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.40	5911 Long: <u>-90.537652</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic silt loam, 6 to 18 perc	cent slopes, very stony, rocky NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	e of year? Yes 🗹 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signifi	icantly disturbed? Are "Normal Circumstances" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology natura	ally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sho	wing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🖌 No	Is the Sampled Area
Hydric Soil Present? Yes _ ✔ No	within a Wetland? Yes <u>v</u> No
Wetland Hydrology Present? Yes <u>v</u> No	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.) The wetland is relatively large in size and located next to a two-track trail. The wetland is sparsely vegetated with standing water present at the time of the survey. The tree canopy is dominated by quaking aspen and black ash. The edges of the wetland are dominated by sedges and common lady fern.

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)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living I	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	ils (C6) 🔄 🖉 Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>v</u> No Depth (inches): <u>1</u>	
Water Table Present? Yes <u>v</u> No Depth (inches): <u>0</u>	
Saturation Present? Yes <u>v</u> No <u>Depth</u> (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> V</u> No
Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes _ No Depth (inches): 0 (includes capillary fringe)	Wetland Hydrology Present? Yes V No ions), if available:
Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe)	Wetland Hydrology Present? Yes <u>v</u> No <u></u>
Saturation Present? Yes _ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The bydrologic regime is seturated with standing water prov	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u>
Saturation Present? Yes _ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is saturated with standing water press	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes _ No Depth (inches): 0 Depth (inches)	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes _ No Depth (inches): 0 Depth (inches): 0 Depth (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is saturated with standing water preside	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> ions), if available:
Saturation Present? Yes _ ✓ No Depth (inches): 0	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> ions), if available:
Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is saturated with standing water pres	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> ions), if available: sent at the time of the survey.
Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is saturated with standing water pres	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> ions), if available:
Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is saturated with standing water pres	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> ions), if available:
Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is saturated with standing water pres	Wetland Hydrology Present? Yes <u>v</u> No <u>sions</u>), if available:
Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is saturated with standing water preside	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> ions), if available: Sent at the time of the survey.
Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is saturated with standing water pres	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> ions), if available: sent at the time of the survey.

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wira1004f_w</u>

	Absolute	Dominan	t Indicator	Dominance Test worksheet
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	Species?	<u>Status</u>	Number of Dominant Species
1. <u>Populus tremuloides</u>	70	<u> </u>	FAC	That Are OBL, FACW, or FAC: (A)
2. <u>Fraxinus nigra</u>	15	N	FACW	Total Number of Dominant
3. <u>Ulmus americana</u>	10	N	<u>FACW</u>	Species Across All Strata:7(B)
4				Percent of Dominant Species
5			<u> </u>	That Are OBL, FACW, or FAC: (A/B)
6		_		Provalence Index worksheet:
7.				Total % Cover of: Multiply by:
	95	= Total Co	over	$\frac{1}{\text{OBL species}} = 15 \qquad \text{manpy by}$
Sapling/Shrub Stratum (Plot size: 15)				FACW species $45 \times 2 = 90$
1 Tilia americana	5	V	EACU	FAC species 105 x 3 = 315
1. <u>Thia americana</u>	 	 		FACU species <u>25</u> x 4 = <u>100</u>
				UPL species x 5 =
3. <u>Uimus americana</u>	5	Y	FACW	Column Totals: <u>190</u> (A) <u>520</u> (B)
4				Provolonco Indox - R/A - 2.736842105263158
5				$\frac{1}{2.730642105203136}$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	15	= Total Co	over	\sim 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				\sim 3 - Prevalence index is ≤ 3.0
1. <u>Athyrium angustum</u>	20	Y	FAC	data in Remarks or on a separate sheet)
2. <u>Carex crinita</u>	15	Y	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Carex gracillima	10	N	FACU	
4. Carex cf blanda	10	N	FAC	Indicators of hydric soil and wetland hydrology must
5 Rubus nubescens	10	<u> </u>	FACW	
6 Arissema triphyllum	5	 		Definitions of Vegetation Strata:
 Ansacina inprintina Solidogo gigoptop 	<u>_</u>	N		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
1: <u>Solidago gigantea</u>	 			at breast height (DBH), regardless of height.
		IN	TACO	Sapling/shrub – Woody plants less than 3 in. DBH
9				
10				Herb – All herbaceous (non-woody) plants, regardless
11				
12				Woody vines – All woody vines greater than 3.28 ft in height
	80	= Total Co	over	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2			<u> </u>	
3				Hydrophytic
4.				Vegetation
	0	= Total Co	over	Present? Tes v No
Remarks: (Include photo numbers here or on a separate	sheet.)			
The sample point represents the edges	s of the v	wetland	l as the r	majority of the wetland is a sparsely
vegetated with standing water present	at the tir	me of th	ne surve	у.

SOIL

Profile Des	cription: (Describe	to the de	pun needed	to docum	inenit the i	nuicator		the absence	or indicators.)	
Depth	Matrix			Redo	x Feature	s				
(inches)		%		noist)	<u>%</u>			Texture	Remarks	
0-14	<u>7.5YR 3/1</u>	98	<u>7.51R</u>	3/4	<u> </u>					
14-20	<u>7.5YR 4/2</u>	90	<u>7.5YR</u>	3/4	10	<u> </u>	M	SIL		
			·		·					
			·							
			·		·					
¹ Type: C=C	oncentration D=De	oletion RM		Aatrix MS	S=Masker	Sand Gra	ains	² Location	PI =Pore Lining M=Matrix	
Hydric Soil	Indicators:							Indicators	for Problematic Hydric Soils ³ :	
Histosol (A1) Polyvalue Below Surface (S8) (LRR R,						R,	2 cm N	luck (A10) (LRR K, L, MLRA 149B)		
Histic E	pipedon (A2)			RA 149B)				Coast I	Prairie Redox (A16) (LRR K, L, R)	
Hydrog	en Sulfide (A4)		Loamy	/ Mucky N	/lineral (F	1) (LRR K, WIL	L)	Dark S	urface (S7) (LRR K, L)	
Stratifie	d Layers (A5)		Loamy	Gleyed I	Matrix (F2	2)	,	Polyvalue Below Surface (S8) (LRR K, L)		
Deplete	d Below Dark Surfac	ce (A11)	Deplet	ed Matrix	(F3) face (F6)			Thin Da	ark Surface (S9) (LRR K, L)	
Sandy I	Mucky Mineral (S1)		Deplet	ed Dark Su	Surface (F0)	7)		Piedmo	ont Floodplain Soils (F12) (MLRA 149B)	
Sandy (Gleyed Matrix (S4)		Redox	Depress	ions (F8)	,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy I	Sandy Redox (S5)					Red Parent Material (F21)				
Stripped	d Matrix (S6)	MI PA 149	B)					Very Shallow Dark Surface (TF12)		
			()							
³ Indicators of	of hydrophytic vegeta	ation and w	etland hydro	ology mus	t be prese	ent, unless	disturbed	or problematic		
Restrictive	Layer (if observed)	:								
Type:								Hudria Sail	Brocont? Yoo // No	
Depth (ir	iches):							Hydric Soli		
Remarks:										
A silty so	oil with redox	concen	trations	nreser	nt					
A silty so	oil with redox	concen	trations	preser	nt.					
A silty so	bil with redox	concen	trations	preser	nt.					
A silty so	bil with redox	concen	trations	preser	nt.					
A silty so	bil with redox	concen	trations	preser	nt.					
A silty so	bil with redox	concen	trations	preser	nt.					
A silty so	bil with redox	concen	trations	preser	nt.					
A silty so	bil with redox	concen	trations	preser	nt.					
A silty so	bil with redox	concen	trations	preser	nt.					
A silty so	bil with redox	concen	trations	preser	nt.					
A silty so	bil with redox	concen	trations	preser	nt.					
A silty so	bil with redox	concen	trations	preser	nt.					
A silty so	bil with redox	concen	trations	preser	nt.					


wira1004f_w_S



wira1004f_w_W

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	SBR/DGL			
File #:	Date of visit(s):			
wira1004	2020-05-29			
Location:	Ecological Landsca	ape:		
PLSS: sec 06 T045N R001W	Superior Mineral Range	S		
		5		
Lat: <u>46.405890</u> Long: <u>-90.537730</u>	Watershed:			
	LS13, Tyler Forks			
County: Iron Town/City/Village: Anderson town				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Gogebic silt loam, 6 to 18 percent slopes, very stony, rocky	Wetland Type(s):			
	PFO - hardwood swamp			
Field Verified:		·		
The soils were not field verified. Soils were a	Wetland Size:	Wetland Area Impacted		
reduced silty loam throughout the sampled	0.1377	0.1377		
profile	Vegetation:			
	Plant Community D	Description(s):		
Hydrology:	The wetland is a hardwood swamp dominated by quaking			
The hydraulic regime is saturated, with standing water present at	Aspen and black ash in the overstory. The wetland is			
the time of the survey. The major source of hydrology is likely from	mostly covered by standing water and very little vegetation grows in the herbaceous layer. The edges of			
surface water. Standing water is present, along with a shallow				
UDSERVED WATER TADIE AND SATURATION AT UTICHES.	the wetland are dom	the wetland are dominated by ferns and sedge species.		

SITE MAP

SECTION 1: Functional Value Assessment

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

WH-2: There are 3 strata present in the wetland feature at >10% cover each. WH-10/FA-2/4: There is standing water present at the time of survey and is likely present long enough and at a depth that is able to support aquatic invertebrates and amphibians. ST2/WQ-3: The wetland is a large, shallow depression without channels.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Avian
	Y	Amphibians

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

Observed	Potential	Species/Habitat
	Y	Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata 🖌	All strata present	All strata present,
	or bare due to	present but	and good	conservative species
	invasive species	reduced native	assemblage of	represented
		species	native species	
NHI plant community	S4	S3 🖌	S2	S1-S2 (S2 high quality)
ranking				
Relative frequency of	Abundant 🖌	Common	Uncommon	Rare
plant community in	_		_	
watershed				
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,
Populus tremulaides*			PEO	Continuous
Athyrium filix-femina*			PEO	Patchy
carex of blanda			PEO	Rare
			PFO	Rare
Fravious nigra			PFO	Rare
Rubus nubescens			PFO	Rare
			PFO	Rare
Acer saccharum			PFO	Rare
Carex gracillima			PFO	Rare
Impatiens capensis			PFO	Rare
Onoclea sensibilis			PFO	Rare
Parthenocissus inserta			PFO	Barren
Arisaema triphyllum			PFO	Barren
Erythronium americanum			PFO	Barren
Solidago gigantea			PFO	Barren
Trillium grandiflorum			PFO	Barren

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

Floristic integrity is average based on species assemblage and the frequency of the community.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is isolated within a hardwood forest and next to a two track trail.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Most of the wetland is underwater at the time of survey, with sparse herbaceous cover.
Human Use Values	The wetland is relatively isolated and hard to access.
Wildlife Habitat	Lots of tree cover for avian species and water that could be used by amphibians.
Fish and Aquatic Life Habitat	Potential for aquatic invertebrates based on water presence and depth.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is relatively large in size and can hold a decent amount of flood water.
Water Quality Protection	The wetland can likely filter an average amount of water, although it has sparse herbaceous/shrub vegetation.
Groundwater Processes	The wetland does not appear to influence groundwater processes.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling Date: <u>2020-05-29</u>
Applicant/Owner: Enbridge	Sta	ate: <u>Wisconsin</u> Sampling Point: <u>wira1004_u</u>
Investigator(s): <u>SBR/DGL</u>	Section, Township, Range: <u>SEC (</u>)6 T045N R001W
Landform (hillslope, terrace, etc.): Talf	Local relief (concave, convex, none):	None Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests	.at: <u>46.405946</u> Long: <u>-90.53</u>	7523 Datum: WGS84
Soil Map Unit Name: Gogebic silt loam, 6 to	o 18 percent slopes, very stony, rocky	NWI classification:
Are climatic / hydrologic conditions on the site typica	al for this time of year? Yes <u>v</u> No (If no	, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Normal Circu	umstances" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If needed, explai	n any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing sampling point locations,	transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No Is the Sampled Area	
Hydric Soil Present? Yes	No <u>v</u> within a Wetland?	Yes No <u>//</u>
Wetland Hydrology Present? Yes	No <u>v</u> If yes, optional Wetland Site	ID:

Remarks:	(Explain	alternative	procedures	here or in a	separate report.)	1
		-		-		-

The upland is located slightly upslope of the wetland alongside a two-track trail.

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: wira1004_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan Species?	t Indicator Status	Dominance Test worksheet:			
1. Populus tremuloides	<u>80</u>	Y	FAC	Number of Dominant Species That Are OBL EACW or EAC: 2 (A)			
 Perula papyrifera 	10	N	FACU				
				Total Number of Dominant			
5		·	<u> </u>				
4		·	<u> </u>	Percent of Dominant Species			
5		·	<u> </u>				
6		·	<u> </u>	Prevalence Index worksheet:			
7			.	Total % Cover of:Multiply by:			
	90	= Total Co	ver	OBL species x 1 =			
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =0			
1. <u>Acer rubrum</u>	10	Y	FAC	FAC species <u>100</u> x 3 = <u>300</u>			
2. <u>Acer saccharum</u>	10	Y	FACU	FACU species <u>85</u> x 4 = <u>340</u>			
3. Picea glauca	5	Y	FACU	UPL species $0 \times 5 = 0$			
4		.		Column Totals: <u>185</u> (A) <u>640</u> (B)			
5			<u> </u>	Prevalence Index = B/A = <u>3.4594594594594594</u>			
6			. <u> </u>	Hydrophytic Vegetation Indicators:			
0		·	<u> </u>	1 - Rapid Test for Hydrophytic Vegetation			
1				2 - Dominance Test is >50%			
_	25	= Total Co	ver	3 - Prevalence Index is ≤3.0 ¹			
Herb Stratum (Plot size:5)				4 - Morphological Adaptations ¹ (Provide supporting			
1. <u>Mitchella repens</u>	20	<u> Y </u>	<u>FACU</u>	data in Remarks or on a separate sheet)			
2. <u>Pteridium aquilinum</u>	20	Y	<u>FACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)			
3. <u>Acer rubrum</u>	10	Ν	FAC	¹ Indianteur of hudric coil and until and hudrals mumurt			
4. Maianthemum canadense	10	N	FACU	be present, unless disturbed or problematic.			
5. Lonicera canadensis	10	Ν	FACU	Definitions of Vegetation Strata			
6. Trillium grandiflorum	2	N		Demitions of Vegetation official.			
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter			
8			<u> </u>	at bleast height (bbh), regardless of height.			
0			. <u> </u>	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3 28 ft (1 m) tall			
9		·	<u> </u>				
10			·	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
11		·					
12			<u> </u>	height.			
	72	= Total Co	ver				
Woody Vine Stratum (Plot size: <u>30</u>)							
1							
2			<u> </u>				
3			<u> </u>	Hydrophytic			
4.				Vegetation			
	0	= Total Co	ver				
Remarks: (Include photo numbers here or on a separate	sheet.)	_					
The sample point of representative of t	he uplar	nd area					

SOIL

Profile Desc	ription: (Describe	to the depth	needed to docun	nent the i	indicator o	or confirm	the absence	of indicators.)	
Depth	Matrix		Redo	x Feature	S				
<u>(inches)</u>	Color (moist)	%	Color (moist)	%	Type'	Loc ²	Texture	Remarks	
0-20	7.5YR 3/3	100		0			SL	coarse gravel	
					· ·				
					· ·				
					· ·				
					· ·				
·		<u> </u>			· ·				
					· ·				
					· ·				
¹ Type: C=Co	oncentration, D=Dep	etion, RM=F	Reduced Matrix, MS	S=Masked	d Sand Gra	ins.	² Location	: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:						Indicators	for Problematic Hydric Soils':	
Histosol	(A1)	_	_ Polyvalue Below	v Surface	(S8) (LRR	R,	2 cm N	1uck (A10) (LRR K, L, MLRA 149B)	
Histic Ep	bipedon (A2)		MLRA 149B)	(00) (Coast	Prairie Redox (A16) (LRR K, L, R)	
Black Hi	Stic (A3)	_	_ Thin Dark Surfa	ce (S9) (I linoral (E		RA 149B)	5 cm N	lucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge Stratifier	1 Juliue (A4)		_ Loamy Gleved I	Matrix (E2	1) (LKK K, 2)	L)	Dark S	unace (S7) (LKK K, L) lue Below Surface (S8) (LPP K, L)	
Stratilied	1 Below Dark Surface		_ Loany Gleyeu I Depleted Matrix	(F3)	-)		Folyva Thin D	ark Surface (S9) (LRR K \mathbf{I})	
Thick Da	ark Surface (A12)		Redox Dark Su	face (F6)			Iron-M	anganese Masses (F12) (LRR K. L. R)	
Sandy M	luckv Mineral (S1)	—	Depleted Dark S	Surface (F	-7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)	
Sandy G	Bleved Matrix (S4)	_	Redox Depress	ions (F8)	.,		Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)	
Sandy R	Redox (S5)			()			Red Pa	arent Material (F21)	
Stripped	Matrix (S6)						Very Shallow Dark Surface (TF12)		
Dark Su	rface (S7) (LRR R, N	ILRA 149B)					Other (Explain in Remarks)		
³ Indicators of	f hydrophytic vegetat	ion and wetla	and hydrology mus	t be prese	ent, unless	disturbed	or problematic		
Restrictive I	Layer (if observed):								
Туре:									
Depth (ind	ches):						Hydric Soil	Present? Yes No	
Remarks [.]	/								
A sandy	loam soil with	coarse	aravel throug	ihout t	he profi	le			
/ Country			graver anoug	inour a		10.			



wira1004_u_S



wira1004_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City	//County: <u>Iron</u> Sampling Date: <u>2020-05-29</u>				
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wira1003f_w</u>				
Investigator(s): SBR/DGL Se	ction, Township, Range: <u>sec 06 T045N R001W</u>				
Landform (hillslope, terrace, etc.): Depression	relief (concave, convex, none): Concave Slope (%): 0-2%				
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.406269	Long: -90.538177 Datum: WGS84				
Soil Map Unit Name: Gogebic silt loam. 6 to 18 percent slc	Des. verv stony. rocky NWI classification:				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes 🖌 No (If no explain in Remarks)				
Are Vegetation Soil or Hydrology significantly dis	turbed? Are "Normal Circumstances" present? Ves 🖌 No				
Are Vegetation, or Hydrology significantly dis					
	mauc? (in needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sa	impling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes 🖌 No	Is the Sampled Area				
Hydric Soil Present? Yes <u>v</u> No	within a Wetland? Yes <u>v</u> No				
Wetland Hydrology Present? Yes <u> Ves No</u>	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)	ecetation in the herbaceous layer due to presence				
of water. The wetland feature is located alongsid	e a downhill access road. The wetland is potentially				
man made as a result of the road construction, a	s a berm is present on the downhill side of the				
wetland helping the area to retain more water that	in would naturally occur.				
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required: check all that apply)	Surface Soil Cracks (R6)				
Surface Water (A1)	ves (R9) Drainage Patterns (B10)				
High Water Table (A2) Aguatic Fauna (B1	3) Moss Trim Lines (B16)				
 Saturation (A3) Marl Deposits (B1) 	j) Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide (Ddor (C1) Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizosph	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3)	ced Iron (C4) Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Reduc	tion 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:					
Surface Water Present? Yes <u>v</u> No <u>Depth</u> (inches): 1					
Water Table Present? Yes <u>v</u> No Depth (inches): <u>C</u>					
Saturation Present? Yes <u>v</u> No Depth (inches): 0	Wetland Hydrology Present? Yes <u>✓</u> No				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:				
	, , , , , , , , , , , , , , , , , , ,				
Remarks:	ng water present at the time of the survey and				
throughout most of the wetland feature	ig water present at the time of the survey and				

VEGETATION – Use scientific names of plants.

Sampling Point: wira1003f_w

Trop Stratum (Plot size: 30)	Absolute	Dominan	t Indicator	Dominance Test worksheet:		
1 Bopuluo tromulaidas	<u>% Cover</u>	<u>Species</u>		Number of Dominant Species		
	0	<u> </u>		That Are OBL, FACW, or FAC:5(A)		
2				Total Number of Dominant		
3				Species Across All Strata. D (B)		
4				Percent of Dominant Species		
5						
6				Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
	80	= Total Co	over	OBL species x 1 =		
Sapling/Shrub Stratum (Plot size: 15)				FACW species45 x 2 =90		
1. <u>Fraxinus nigra</u>	15	Y	FACW	FAC species <u>100</u> x 3 = <u>300</u>		
2. <u>Ilex verticillata</u>	10	Y	FACW	FACU species <u>5</u> x 4 = <u>20</u>		
3.				UPL species <u>0</u> x 5 = <u>0</u>		
4				Column Totals: <u>150</u> (A) <u>410</u> (B)		
5				Prevalence Index = $B/A = 2.7333333333333333333333333333333333333$		
6.				Hydrophytic Vegetation Indicators:		
7				1 - Rapid Test for Hydrophytic Vegetation		
/·	25	- Tetal Ca		∠ 2 - Dominance Test is >50%		
	25		over	3 - Prevalence Index is ≤3.0 ¹		
Herb Stratum (Plot size:)	20	V		4 - Morphological Adaptations ¹ (Provide supporting		
1. <u>Athyrium angustum</u>		<u> </u>		data in Remarks or on a separate sheet)		
2. <u>Rubus pubescens</u>	15	<u> </u>	FACW			
3. <u>Caulophyllum thalictroides</u>	15	<u> </u>		¹ Indicators of hydric soil and wetland hydrology must		
4. Lonicera canadensis	5	N	FACU	be present, unless disturbed or problematic.		
5. <u>Onoclea sensibilis</u>	5	N	FACW	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		
	60	= Total Co	over	neight.		
Woody Vine Stratum (Plot size: <u>30</u>)						
1.						
2						
3				Hudronbutio		
0				Vegetation		
T		- Tetal Ca		Present? Yes <u>v</u> No		
Remarks: (Include photo numbers here or on a senarate	U		IVEI			
The sample point is somewhat representative of the wetland. A portion of the wetland is underwater						
at the time of survey and has little vegetation beyond the tree laver. The sample point is more						
representative of the edges of the wetla	and that	are not	t inunda [.]	ted with standing water.		

Profile Desc	ription: (Describe f	o the dep	th needed to	o docum	ent the i	ndicator	or confirm	the absence	of indicators.)	
Depth	Matrix			Redox	Features	8				
(inches)	Color (moist)	%	Color (mo	oist)	%	Type ¹	Loc ²	Texture	Remarks	
0-6	<u>7.5YR 2.5/1</u>	100			0			MMI	loamy	
6-14	7.5YR 2.5/1	100			0			L		
14-20	<u>5YR 4/2</u>	90	5YR	4/4	10	C	M	SIL		
		·								
		<u> </u>								
			-							
			_							
·		·								
·					·					
					<u> </u>					
			-							
¹ Type: C=C	oncentration, D=Depl	etion, RM	Reduced Ma	atrix, MS	=Masked	Sand Gra	ains.	² Locatior	: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:							Indicators	for Problematic Hydric Soils ³ :	
Histosol	(A1) Singdon (A2)		Polyvalu	Le Below	Surface	(S8) (LRF	RR,	2 cm M	Muck (A10) (LRR K, L, MLRA 149B)	
Black Hi	stic (A3)		Thin Da	rk Surfac	ce (S9) (L	.RR R. MI	LRA 149B)	Coast 5 cm M	Aucky Peat or Peat (S3) (LRR K. L. R)	
Hydroge	en Sulfide (A4)		🖌 Loamy I	Mucky M	ineral (F1) (LRR K	, L)	Dark S	Surface (S7) (LRR K, L)	
Stratified	d Layers (A5)		Loamy (Gleyed N	/atrix (F2)		Polyva	alue Below Surface (S8) (LRR K, L)	
Depleted	d Below Dark Surface	e (A11)	Deplete	d Matrix	(F3)			Thin D	park Surface (S9) (LRR K, L)	
Sandy M	Ark Surface (ATZ) Aucky Mineral (S1)		Redox L	Jark Sun d Dark S	iace (F6) Surface (F	7)		Piedmont Eloodplain Soils (F12) (LRR K, L, R)		
Sandy G	Bleyed Matrix (S4)		Redox [Depressio	ons (F8)	,,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy F	Redox (S5)			·	· · ·			Red P	arent Material (F21)	
Stripped	Matrix (S6)							Very S	Shallow Dark Surface (TF12)	
Dark Su	rface (S7) (LRR R, M	ILRA 1498	3)					Other	(Explain in Remarks)	
³ Indicators o	f hydrophytic vegetati	ion and we	etland hydrolo	ogy must	be prese	ent, unless	s disturbed (or problemati	C.	
Restrictive	Layer (if observed):		-							
Туре:										
Depth (in	ches):							Hydric Soil	Present? Yes <u>v</u> No	
Remarks:										
Profile contains a thick dark surface over a depleted silty loam.										
1										



wira1003f_w_NW



wira1003f_w_SW

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	SBR/DGL			
File #:	Date of visit(s):			
wira1003	2020-05-29			
Location:	Ecological Landsca	ape:		
PLSS: sec 06 T045N R001W	Superior Mineral Ranges			
		5		
Lat: <u>46.406236</u> Long: <u>-90.538197</u>	Watershed:			
	LS13, Tyler Forks			
County: <u>Iron</u> Town/City/Village: <u>Anderson town</u>				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Gogebic silt loam, 6 to 18 percent slopes, very stony, rocky	Wetland Type(s):			
	PFO - hardwood swamp			
Field Verified:		·		
The soils were not field verified. Soils were a	Wetland Size:	Wetland Area Impacted		
loamy mucky mineral over loam, which	0.0140	0.0140		
transitioned to reduced silty loam.	Vegetation:			
	Plant Community Description(s):			
Hydrology:	The wetland is a hardwood swamp dominated by quaking aspen in			
The hydrologic regime is saturated with standing water present at the time	the tree layer and with standing water present. The areas with			
of survey. The major hydrology source is from surface water. Main indicators of bydrology include surface water, shallow water table and	standing water mostly lack herbaceous vegetative cover. There is a			
saturation observed at 0 inches, and water stained leaves.	the access road construction but likely acts as a dam and increases			
	the amount of water the	feature can hold unnaturally.		

SITE MAP

SECTION 1: Functional Value Assessment

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

WH-2: There are 3 strata present in the wetland feature at >10% cover each. WH-10/FA-2/4: There is standing water present at the time of survey and is likely present long enough to support aquatic invertebrates and potentially amphibians. ST2/WQ-3: The wetland is a small depression without channels.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Avian
	Y	Amphibians

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

Observed	Potential	Species/Habitat
	Y	Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata	All strata present 🗸	All strata present,
	or bare due to	present but	and good	conservative species
	invasive species	reduced native	assemblage of	represented
		species	native species	
NHI plant community	S4	S3V	S2	S1-S2 (S2 high quality)
ranking	_	_	_	
Relative frequency of	Abundant	Common	Uncommon	Rare
plant community in	_		_	
watershed				
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)
Populus tremuloides*			PFO	Continuous
Fraxinus nigra			PFO	Patchy
Athyrium filix-femina			PFO	Rare
Caulophyllum thalictroides			PFO	Rare
Rubus pubescens			PFO	Rare
Acer saccharum			PFO	Rare
Onoclea sensibilis			PFO	Rare
Phegopteris connectilis			PFO	Rare
Trillium grandiflorum			PFO	Barren

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

Floristic integrity is medium based on lack of invasive species present, dominance of a single species in the overstory, multiple strata present, and relative abundance of the plant community.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
					Drainage – tiles, ditches
Х	х		М	С	Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
					Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
Х	Х		L	UC	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
					Removal of herbaceous stratum – mowing,
					grading, earthworms, etc.
	x		N/	C	Removal of tree or shrub strata – logging,
	~		101	0	unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
	Х		L	C	Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is a small depression along a road used to access logging sites. No invasive species were observed but it is likely that some are present within the buffer due to the disturbance by the road construction. Surface water is likely the main source of hydrology for this feature. A berm is present on the downhill side of the wetland, which impounds water in the feature.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The floristic integrity is average based on lack of invasive species and presence of multiple strata, but limited but the dominance of quaking aspen in the tree layer, and the overall abundance of this plant community.
Human Use Values	The wetland is relatively isolated.
Wildlife Habitat	The wetland is small, which limits its use.
Fish and Aquatic Life Habitat	There is standing water present and at a depth that could support both aquatic invertebrates and amphibians but not fish.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is small and not densely vegetated, which limits its holding capacity.
Water Quality Protection	The wetland does not have any dense vegetation and likely does little filtering.
Groundwater Processes	The wetland does not seem to influence groundwater processes.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation	Project	City/0	County: Iron	Sam	npling Date: <u>2020-05-29</u>
Applicant/Owner: Enbridge				State: Wisconsin S	ampling Point: <u>wira1003_</u> u
Investigator(s): <u>SBR/DGL</u>		Secti	on, Township, Range: <u>Se(</u>	<u>: 06 T045N R(</u>	001W
Landform (hillslope, terrace, etc.): Side	e Slope	Local re	ief (concave, convex, none)): <u>None</u>	Slope (%): <u>8-15%</u>
Subregion (LRR or MLRA): Northcentra	al Forests Lat: 46.4	06174	Long: <u>-90.</u>	538244	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic silt I	<u>oam, 6 to 18 pe</u>	ercent slop	<u>es, very stony, rock</u>	<u>y</u> NWI classification	:
Are climatic / hydrologic conditions on th	e site typical for this t	ime of year?	∕es _ ✔ No (If	no, explain in Remar	rks.)
Are Vegetation, Soil, or H	-lydrology sig	nificantly distu	rbed? Are "Normal C	ircumstances" prese	nt? Yes 🖌 No
Are Vegetation, Soil, or H	-lydrology nat	urally problem	atic? (If needed, exp	plain any answers in l	Remarks.)
SUMMARY OF FINDINGS - At	tach site map sh	nowing san	npling point location	s, transects, im	portant features, etc.
Hydrophytic Vegetation Present?	Yes <u>No</u>	V	Is the Sampled Area		
Hydric Soil Present?	Yes <u>No</u>	~	within a Wetland?	Yes	No <u> </u>
Wetland Hydrology Present?	Yes No	v	If yes, optional Wetland S	ite ID:	
Remarks: (Explain alternative procedu	res here or in a separ	ate report.)			

The upland located upslope from the wetland and next to a gravel access road for logging sites.

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 (C	C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes <u>No</u> Depth (inches):	
Saturation Present? Yes <u>No</u> Depth (inches): <u>Wetlan</u>	nd Hydrology Present? Yes No 🖌
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if	available:
Remarks: No indicators of wetland bydrology were observed	
The indicators of wetland hydrology were observed.	

VEGETATION – Use scientific names of plants.

Sampling Point: wira1003_u

Trop Stratum (Plot size: 30)	Absolute	Dominar	t Indicator	Dominance Test worksheet:
1 Populus tremuloides		V		Number of Dominant Species
2. Potulo popuriforo	<u></u> 5	 N		That Are OBL, FACW, or FAC: (A)
			<u>FACU</u>	Total Number of Dominant
S		·		$\frac{1}{2}$
4		·		Percent of Dominant Species That Are OBL_EACW_or_EAC: 17 (A/B)
5				
6		·		Prevalence Index worksheet:
/				Total % Cover of: Multiply by:
	95	= Total Co	over	OBL species x1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species $0 \times 2 = 0$
1. <u>Tilia americana</u>	10	<u> </u>	FACU	FACU species $50 \times 4 = 200$
2. <u>Picea glauca</u>	10	<u> </u>	<u>FACU</u>	UPL species $0 \times 5 = 0$
3. <u>Prunus serotina</u>	5	<u> </u>	<u>FACU</u>	Column Totals: <u>150</u> (A) <u>500</u> (B)
4		·		
5				Prevalence Index = B/A = <u>3.333333333333333333</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	25	= Total Co	over	2 - Dominance Test is >50%
Herb Stratum (Plot size:5)				3 - Prevalence Index is $\leq 3.0^{\circ}$
1. <u>Caulophyllum thalictroides</u>	20	Y		data in Remarks or on a separate sheet)
2. Solidago sp.	20	Y	_	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Athvrium angustum	10	N	FAC	
4. Aralia nudicaulis	5	N	FACU	¹ Indicators of hydric soil and wetland hydrology must
5 Taraxacum officinale	 5	N	FACU	
6 Pyrola of elliptica	<u> </u>	 N	FACU	Definitions of Vegetation Strata:
7. Pteridium aquilinum	 5	 N		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
	<u> </u>		1700	at breast height (DBH), regardless of height.
				Sapling/shrub – Woody plants less than 3 in. DBH
9		·		
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11		·		Weedwaines All weedwaines greater than 2.29 ft in
12		·		height.
	73	= Total Co	over	
Woody Vine Stratum (Plot size: <u>30</u>)				
1		·		
2				
3		·		Hydrophytic
4		·		Vegetation Present? Yes No v
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)	daraa		
	ie uplan	u alea.		

SOIL

Profile Desc	cription: (Describe t	o the dept	h needed to docun	nent the	indicator o	or confirm	the absence	of indicato	rs.)	
Depth	Matrix		Redo	x Feature	s					
(inches)	Color (moist)		Color (moist)	%	Type'	Loc ²	Texture		Remarks	
0-10	<u>7.5YR 2.5/3</u>	100		0			SIL			
10-20	5YR 3/3	100		0			SL	coarse	e aravel	
					·					
		<u> </u>		·	· ·					
										-
		·			· ·					
		·			· ·		·			<u>.</u>
		·		·	· ·					<u>.</u>
		<u> </u>		·	· ·					<u>.</u>
1 _{Tumor} 0-0							21		ining M-Mat	
Hydric Soil	Indicators:		Reduced Matrix, Ma	5-Masked	a Sand Gra	ins.	Indicators	for Problem	natic Hydric S	soils ³
Histosol	(A1)		Polyvalue Belov	v Surface	(S8) (I RR	R	2 cm 1	Muck (A10) (RA 149B)
Histosof (A1) Polyvalde Below Surface (So) (LKK K, Histic Epipedon (A2) MLRA 149B)						Coast	Prairie Redo	Dx (A16) (LRR	K, L, R)	
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B)					5 cm M	Mucky Peat o	or Peat (S3) (L	RR K, L, R)		
Hydroge	en Sulfide (A4)		Loamy Mucky M	/lineral (F	1) (LRR K,	L)	Dark S	Surface (S7)	(LRR K, L)	
Stratified	d Layers (A5)		Loamy Gleyed I	Matrix (F2	2)		Polyva	alue Below S	Surface (S8) (L	RR K, L)
Depleted	d Below Dark Surface	e (A11)	Depleted Matrix	: (F3) face (ГС)			Thin D	ark Surface	(S9) (LRR K ,	
Thick Da	ark Surface (ATZ) Aucky Mineral (S1)		Redox Dark Sui	nace (Fo) Surface (F) =7)		Iron-IV Piedm	anganese iv	iasses (F12) (I ain Soile (F10)	-RR R, L, R)
Sandy N	Gleved Matrix (S4)		Depleted Dark C	ions (F8)	7)		Fleam Mesic	Spodic (TA6	6) (MLRA 144/	(MEKA 149B)
Sandy R	Redox (S5)	•					Red Parent Material (F21)			
Stripped	I Matrix (S6)						Very S	Shallow Dark	Surface (TF1	2)
Dark Su	rface (S7) (LRR R, M	LRA 149B)				Other	(Explain in F	Remarks)	
2										
°Indicators of	f hydrophytic vegetati	on and we	land hydrology mus	t be pres	ent, unless	disturbed	or problemation	С.		
	Layer (If observed):									
Type:										
Depth (ind	ches):						Hydric Soil	Present?	Yes	No <u>~</u>
Remarks:										
No indica	ators of hydric	SOIIS W	ere observed.							



wira1003_u_NE



wira1003_u_SE

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iro	n Sa	ampling Date: <u>2020-07-02</u>
Applicant/Owner: Enbridge		State: Wisconsin	Sampling Point: wirc024f_xw
Investigator(s): DMP/AGG	Section, Townshi	o, Range: <u>sec 32 T046N F</u>	R001W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave	, convex, none): Concave	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat:	46.426519	Long: -90.515210	Datum: WGS84
Soil Map Unit Name: Lupton-Pleine-Cathro	complex. 0 to 1 percen	t slopes NWI classification	on: PFO1/4B
Are climatic / hydrologic conditions on the site typical for	or this time of year? Yes 🖌	No (If no explain in Rem	arks)
Are Vegetation Soil or Hydrology	significantly disturbed?	Are "Normal Circumstances" pres	sent? Yes 🖌 No
Are Vegetation Soil or Hydrology	olgriniounity distanced:	(If needed, explain any answers i	n Remarks)
SUMMARY OF FINDINGS – Attach site m	ap showing sampling po	int locations, transects, ir	nportant features, etc.
Hydrophytic Vegetation Present? Yes 🖌	No Is the San	npled Area	
Hydric Soil Present? Yes 🗸	No within a V	/etland? Yes <u>/</u>	No
Wetland Hydrology Present? Yes <u>v</u>	No If yes, opti	onal Wetland Site ID:	
Remarks: (Explain alternative procedures here or in a	a separate report.) Poression within the la	ndscape Parts of the v	vetland include a
mosaic of wetland and upland habita	at across hummocks a	nd hollows Other area	s of the wetland
have standing water and plants that	are more adapted to lo	na term inundation	
HIDROLOGI		Cacandar / Indicator	(minimum of two required)
Primary Indicators (minimum of one is required; cheel	(all that apply)	Secondary Indicator	s (minimum of two required)
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patter	ns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines	s (B16)
Saturation (A3)	Marl Deposits (B15)	Dry-Season Wa	ter Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrow	s (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living	Roots (C3) Saturation Visib	le on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stres	sed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled S	oils (C6) <u> </u>	sition (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitar	d (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	🔽 Microtopograph	ic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Te	st (D5)
Field Observations:			
Surface Water Present? Yes No	Depth (inches):		
Water Table Present? Yes <u>No </u>	Depth (inches):		
Saturation Present? Yes <u>No </u>	Depth (inches):	Wetland Hydrology Present?	Yes 🧹 No
Describe Recorded Data (stream gauge, monitoring w	vell, aerial photos, previous inspe	ctions), if available:	
Remarks:			
The hydrologic regime is seasonally	saturated. Standing w	ater was observed in c	other areas of the
feature.			

VEGETATION – Use scientific names of plants.

Sampling Point: wirc024f_xw

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator	Dominance Test worksheet:
1 Abies balsamea	<u>50</u>	V		Number of Dominant Species
2. Frovinuo nigro	<u> </u>			That Are OBL, FACW, or FAC: <u>4</u> (A)
	2	<u> </u>	FACW	Total Number of Dominant
3				Species Across All Strata. $\underline{4}$ (B)
4				Percent of Dominant Species
5				
6			<u> </u>	Prevalence Index worksheet:
7			·	Total % Cover of: Multiply by:
	75	= Total Cov	/er	OBL species <u>50</u> x 1 = <u>50</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>42</u> x 2 = <u>84</u>
1. <u>Fraxinus nigra</u>	10	Y	FACW	FAC species <u>56</u> x 3 = <u>168</u>
2. Abies balsamea	2	N	FAC	FACU species x 4 =0
3				UPL species x 5 =
0				Column Totals: <u>148</u> (A) <u>302</u> (B)
4		· <u> </u>		Prevalence Index = B/A = 2.0405405405405403
5			·	
6				A Denid Test for Lludrenbutic Vegetation
7		. <u></u>		1 - Rapid Test for Hydrophytic Vegetation
	12	= Total Cov	/er	2° 2 - Dominance Test is > 30%
Herb Stratum (Plot size: 5_)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Glyceria striata</u>	50	Y	OBL	data in Remarks or on a separate sheet)
2. <u>Rubus pubescens</u>	5	<u>N</u>	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Osmunda clavtoniana	2	Ν	FAC	
4. Equisetum sylvaticum	2	N	FACW	Indicators of hydric soil and wetland hydrology must
5. Cornus canadensis	2	N	FAC	Definitions of Vocatation Strata
6				Deminions of Vegetation Strata.
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless 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.
	01	= Total Cov	/er	
Woody Vine Stratum (Plot size: 30)				
1			. <u> </u>	
2			. <u> </u>	
3				Hydrophytic
4				Vegetation Present? Yes in No.
	0	= Total Co	/er	rresent: res_⊭_N0
Remarks: (Include photo numbers here or on a separate	sheet.)			
The vegetation at the sample point is re	epresen	tative of	[:] this are	ea of the wetland. Other areas of the

wetland have standing water within the hollows. Lake sedge, marsh marigold, and cattails can be found in the wetter areas.

SOIL	
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Profile Desc	cription: (Describe	to the dep	oth needed to docum	nent the	indicator	or confirn	n the absence	of indicators.)	
Depth	Matrix		Redo	k Feature	s				
<u>(inches)</u>	Color (moist)	%	Color (moist)	%	Type'	Loc ²	Texture	Remarks	
	<u>10YR 2/1</u>	100		0	·				
2-12	<u>7.5R 4/2</u>	95	<u>7.5YR 4/6</u>	5	C	M	<u> </u>		
12-20	<u>10YR 2/1</u>	100		0	<u></u>		CL		
					·				
					·				
					·				
							·		
					·		·		
					·				
¹ Type: C=C	oncentration, D=Depl	etion, RM	Reduced Matrix, MS	S=Masked	d Sand Gra	ains.	² Location	: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:						Indicators for Problematic Hydric Soils ³ :		
Histosol	(A1)		Polyvalue Below	Polyvalue Below Surface (S8) (LRR R,			2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)		
Histic Ep Black Hi	oipedon (A2)		MLRA 149B) Thin Dark Surfa	MLRA 149B) Thin Dark Surface (SQ) (I PP P MI PA 149B)					
Hydroge	en Sulfide (A4)	Loamy Mucky M	Loamy Mucky Mineral (F1) (LRR K, L)			Dark Surface (S7) (LRR K, L)			
Stratified Layers (A5)			Loamy Gleyed N	Matrix (F2	2)	, ,	Polyva	Polyvalue Below Surface (S8) (LRR K, L)	
Depleted Below Dark Surface (A11)			Depleted Matrix	(F3)			Thin D	ark Surface (S9) (LRR K, L)	
Thick Dark Surface (A12)			Redox Dark Sur	face (F6)			Iron-M	anganese Masses (F12) (LRR K, L, R)	
Sandy Mucky Mineral (S1)			Depleted Dark S	Surface (F	-7)		Piedm	ont Floodplain Soils (F19) (MLRA 149B)	
Sandy G	Bleyed Matrix (S4)		Redox Depressi	ions (F8)			Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)	
Sanuy P	I Matrix (S6)						Verv S	shallow Dark Surface (TE12)	
Dark Su	rface (S7) (LRR R, N	ILRA 149	B)				Other (Explain in Remarks)		
<u>,</u>								· ·	
°Indicators o	f hydrophytic vegetat	ion and w	etland hydrology mus	t be pres	ent, unless	s disturbed	or problematio	2.	
Type	Layer (il observed):								
Dopth (in							Hydric Soil	Present? Yes ✓ No	
Deptri (in	cnes).								
The soil	profile consist	sofad	dark loam over	a den	leted c	lav loa	m and a d	lark clav loam Redox	
concentrations were observed throughout the middle layer, and two hydric indicators were observed									
concentratione were observed integreat the middle layer, and two fryane indicators were observed.									



wirc024f_xw_N



wirc024f_xw_SW

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	DMP/AGG		
File #:	Date of visit(s):		
wirc024_x	2020-07-02		
Location:	Ecological Landscape:		
PLSS: sec 32 T046N R001W	North Central Forest		
Lat: <u>46.426517</u> Long: <u>-90.515209</u>	Watershed:		
	LS11, Potato River		
County: Iron I own/City/Village: Guilley lowin			
Soils:	WWI Class:		
Mapped Type(s):	T3/5K		
percent slopes, Chabeneau-Channing-Gogebic complex, 2 to 6	Wetland Type(s):		
	PFO - Hardwood swamp		
Field Verified:		-	
The soils were not verified.	Wetland Size:	Wetland Area Impacted	
	3.8413	3.8413	
	Vegetation:		
	Plant Community D	Description(s):	
Hydrology:	The wetland is a hardwood swamp with a canopy dominated		
The hydrologic regime is seasonally saturated.	by balsam fir and black ash with red maple common in some		
	areas. The shrub and ground layers were sparsely covered		
	nnoughout most of the wetland. Lady fern, starflower and fowl		
	manna grass were co	minor inoughout the leature.	

SITE MAP

SECTION 1: Functional Value Assessment

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

Section 1 Comments (Refer to Section 1 numbers)

HU-1/3: The feature is located within public land and may provide recreation opportunities.

HU-4: The feature has been relatively undisturbed. WH-2/6: Three strata are present and the surrounding area has an interspersion of upland and wetland habitats.

WH-1/7/8: The wetland is fairly large and surrounded by a large block of forest that likely provides habitat for sensitive species.

WH-10: Areas within the wetland had standing water during the field survey. It is likely that amphibians and aquatic insects utilize the feature.

ST-1: The feature is a basin wetland that occurs within a depression in the landscape.

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	Eastern wood peewee, wood thrush, white throated sparrow, black throated green warbler
	Y	Mammals, 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	Y	Toad
	Y	Amphibians and aquatic insects.

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Abies balsamea*			PFO	Interrupted
Alnus incana			PFO	Rare
Athyrium filix-femina			PFO	Rare
Brachyelytrum erectum			PFO	Barren
Calamagrostis canadensis			PFO	Barren
Caltha palustris			PFO	Barren
Carex bromoides			PFO	Barren
Carex cf radiata			PFO	Barren
Carex crinita			PFO	Barren
Carex intumescens			PFO	Barren
Carex scabrata			PFO	Barren
Cornus canadensis			PFO	Barren
Equisetum sylvaticum			PFO	Barren
Fraxinus nigra*			PFO	Patchy
Galium sp.			PFO	Barren
Glyceria striata			PFO	Barren
llex verticillata			PFO	Rare
Iris versicolor			PFO	Barren
Matteuccia struthiopteris			PFO	Barren
Onoclea sensibilis			PFO	Barren
Osmunda claytoniana			PFO	Barren
Rubus idaeus			PFO	Barren
Rubus pubescens			PFO	Barren
Trientalis borealis			PFO	Barren
Typha sp.			PFO	Barren
Carex lacustris			PFO	Rare

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

The floristic integrity is moderate to high due to diversity of native species and absence of non natives.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

There were no disturbances observed in the surrounding area.
SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The floristic integrity is moderate. There was a good diversity of native species and sparse cover of non natives.
Human Use Values	The feature is located within public land. There are no trails leading to the wetland and it is unlikely that people would venture to the feature.
Wildlife Habitat	The wetland has a variety of different habitat structures and areas of the wetland had standing water. Mammals, reptiles and other animals likely utilize the wetland.
Fish and Aquatic Life Habitat	Some areas of the wetland were inundated and it is likely that amphibians and aquatic insects utilize the feature.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is relatively large and it likely plays a significant role in water storage from adjacent uplands
Water Quality Protection	The feature is relatively large and likely plays a significant role in water quality protection.
Groundwater Processes	The wetland likely serves as groundwater recharge.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

Project/Site: Line 5 Relocation Project	City/County:	on	Sampling Date: <u>2020-07-02</u>
Applicant/Owner: Enbridge		State: Wisco	onsin_Sampling Point: <u>wirc024f_xu</u>
Investigator(s): DMP/AGG	Section, Towns	hip, Range: <u>sec 32 T046</u>	5N R001W
Landform (hillslope, terrace, etc.): Rise	Local relief (concav	ve, convex, none): None	Slope (%): 0-2%
Subregion (I RR or MI RA) Northcentral Forests	Lat: 46 426482	1 ong -90.515044	Datum WGS84
Soil Map Unit Name: Pence-Gogebic cor	nplex, 2 to 6 percent slor	Des. stony NWI class	ification: PFO1/4B
Are climatic / hydrologic conditions on the site typic	cal for this time of year? Yes \checkmark	No (If no explain ir	Remarks)
Are Vegetation Soil or Hydrology	significantly disturbed?	Are "Normal Circumstances	s" present? Ves 🖌 No
Are Vegetation, on Hydrology		(If pooded, explain any app	were in Remarke)
		(in needed, explain any ansi	
SUMMARY OF FINDINGS – Attach sit	e map showing sampling p	oint locations, transec	ts, important features, etc.
Hydrophytic Vegetation Present? Yes	✓ No Is the Sa	ampled Area	
Hydric Soil Present? Yes	No within a	wetland? Yes	No <u></u>
Wetland Hydrology Present? Yes	No <u>~</u> If yes, op	otional Wetland Site ID:	
typically found in uplands. No oth	er wetland parameters v	vere observed.	ed by species that are
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Ind	icators (minimum of two required)
Primary Indicators (minimum of one is required; of	heck all that apply)	Surface Se	oil Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage I	Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim	Lines (B16)
Saturation (A3)	Marl Deposits (B15)	Dry-Seaso	on Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish B	urrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Livin Presence of Reduced Iren (C1)	ig Roots (C3) Saturation	Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled	Soils (C6) Geomorph	bic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow A	quitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopo	graphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neut	ral Test (D5)
Field Observations:			
Surface Water Present? Yes No	✓ Depth (inches):	_	
Water Table Present? Yes No	✓ Depth (inches):	-	
Saturation Present? Yes <u>No</u>	✓ Depth (inches):	_ Wetland Hydrology Pres	sent? Yes No
Describe Recorded Data (stream gauge, monitor	ing well, aerial photos, previous insp	 vections), if available:	
2			
Remarks:	wwere observed		

Sampling Point: <u>wirc024f_xu</u>

Trop Stratum (Plat aiza: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1 Abios balcamos	<u>% Cover</u>	<u>Species</u> ?		Number of Dominant Species
	<u> </u>	<u>Y</u>		That Are OBL, FACW, or FAC: (A)
2. <u>Fraxinus nigra</u>	<u> 10 </u>	<u>IN</u>		Total Number of Dominant
3. <u>Acer rubrum</u>	10	N	_FAC_	Species Across All Strata: 4 (B)
4			·	Percent of Dominant Species
5			·	
6			·	Prevalence Index worksheet:
7			·	Total % Cover of:Multiply by:
	70	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>10</u> $x = 20$
1. <u>Abies balsamea</u>	2	<u> N</u>	FAC	FAC species $64 \times 3 = 192$
2			·	FACU species 8 $x 4 = 32$
3				Column Totals: 82 (A) 211 (B)
4			·	$\frac{1}{2} \frac{1}{2} \frac{1}$
5				Prevalence Index = B/A = <u>2.975609756097561</u>
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
	2	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				$_$ 3 - Prevalence Index is ≤3.0 ¹
1 Majanthomum canadonso	Б	V	EACU	4 - Morphological Adaptations ¹ (Provide supporting
Carey podupoulate	<u> </u>	 		Problematic Hydrophytic Vegetation ¹ (Explain)
		<u> </u>		
3. <u>Carex gracillima</u>		<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Pyrola elliptica</u>	1	N	FACU	be present, unless disturbed or problematic.
5			·	Definitions of Vegetation Strata:
6			·	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7			·	at breast height (DBH), regardless of height.
8			·	Sapling/shrub – Woody plants less than 3 in. DBH
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 beight
	10	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3.				Hydrophytic
4.				Vegetation
	0	= Total Co	ver	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	sheet.)	1010100		
The sample vegetation is representativ	e of the	upland	. The ca	nopy is dominated by balsam fir with
black ash and red maple scattered thro	ughout.			

Profile Description:	(Describe	to the dept	th needed to docur	ment the indi	icator or confiri	m the absence	of indicators.)
Depth	Matrix		Redo	x Features			
(inches) Col	or (moist)	%	Color (moist)	<u>%</u> 1	ype ¹ Loc ²	Texture	Remarks
<u> 0-6 5Y</u>	R 3/3	100		0		<u>L</u>	
6-20 5YE	2 4/4	100		0		SI	
0-20 011	<u> </u>	100					
·							
					·	·	
		- <u> </u>					
·					·	·	
		. <u> </u>					
¹ Type: C=Concentra	ition, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked Sa	and Grains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil Indicate	ors:					Indicators	for Problematic Hydric Soils":
Histosol (A1)	(40)		Polyvalue Belov	w Surface (S8	3) (LRR R,	2 cm M	luck (A10) (LRR K, L, MLRA 149B)
Black Histic (A3)	(AZ)		Thin Dark Surfa) 200 (SQ) (I P E		$\frac{1}{5}$ coast f	Prairie Redox (A 16) (LRR K, L, R)
Hvdrogen Sulfid	, e (A4)		Loamv Muckv N	Mineral (F1) (LRR K. L)	Dark Si	urface (S7) (LRR K. L)
Stratified Layers	(A5)		Loamy Gleyed	Matrix (F2)	,	Polyval	ue Below Surface (S8) (LRR K, L)
Depleted Below	Dark Surfac	e (A11)	Depleted Matrix	k (F3)		Thin Da	ark Surface (S9) (LRR K, L)
Thick Dark Surfa	ace (A12)		Redox Dark Su	rface (F6)		Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Sandy Mucky M	neral (S1)		Depleted Dark	Surface (F7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed N	latrix (S4)		Redox Depress	sions (F8)		Mesic S	Spodic (1A6) (MLRA 144A, 145, 149B)
Sandy Redox (S	5) (S6)					Keu Pa	hellow Dark Surface (TE12)
Dark Surface (S	(50) 7) (LRR R. I	ALRA 1498	;)			Other (Explain in Remarks)
	. , (, .						
³ Indicators of hydrop	hytic vegeta	tion and we	tland hydrology mus	st be present,	unless disturbe	d or problematic	
Restrictive Layer (in	observed)						
Туре:							
Depth (inches):						Hydric Soil	Present? Yes No
Remarks:							
The soil profile	e consist	s of a d	ark loam over	r a reddis	sh brown sa	andy loam.	No hydric soil indicators
were observed	J.					-	-



wirc024f_xu_N



wirc024f_xu_S

Project/Site: Line 5 Relocation Project	t City/County: Iron	Samplir	ng Date: <u>2020-05-25</u>
Applicant/Owner: Enbridge		State: Wisconsin Sam	oling Point: <u>wire1001f_w</u>
Investigator(s): <u>DMP/ARK</u>	Section, Township, Ra	nge: <u>sec 05 T045N R001</u>	IW
Landform (hillslope, terrace, etc.): Depressio	Dn Local relief (concave, conv	vex, none): <u>Concave</u>	Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forest	^S Lat: <u>46.412453</u> Lon	g: <u>-90.528201</u>	Datum: WGS84
Soil Map Unit Name: Cathro muck. drain	nageway. 0 to 1 percent slopes	NWI classification: P	'FO1C
Are climatic / hydrologic conditions on the site typ	ical for this time of year? Yes ✔ No	(If no, explain in Remarks.)	
Are Vegetation Soil or Hydrology	<pre>/ significantly disturbed? Are "</pre>	"Normal Circumstances" present?	Yes 🖌 No
Are Vegetation Soil or Hydrology	/ organised and a local solution of the	eded explain any answers in Ren	narks)
			iai (S.)
SUMMARY OF FINDINGS – Attach s	te map showing sampling point le	ocations, transects, impo	rtant features, etc.
Hydrophytic Vegetation Present?Yes _Hydric Soil Present?Yes _	v No Is the Sampled v No within a Wetlar	Area nd? Yes <u>√</u> No	
Wetland Hydrology Present? Yes _	✓ No If yes, optional \	Netland Site ID:	
		O a constant la disetana (asia	in the second
Wetland Hydrology Indicators:		Secondary Indicators (min	imum or two requirea)
Primary Indicators (minimum of one is required;	Water Stained Leaves (B0)		30) 10)
 High Water Table (A1) 	Aquatic Fauna (B13)	Moss Trim Lines (B16	3)
 Saturation (A3) 	Marl Deposits (B15)	Dry-Season Water Ta	able (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Root	s (C3) Saturation Visible on	Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed F	lants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (0	C6) <u>~</u> Geomorphic Position	(D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Rel	ief (D4)

- Microtopographic Relief (D4)
 FAC-Neutral Test (D5)
- _____ Wetland Hydrology Present? Yes ____ No _____

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

Yes <u>v</u> No Depth (inches): <u>3</u>

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

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

Remarks:

Field Observations:

Surface Water Present?

(includes capillary fringe)

Water Table Present?

Saturation Present?

Sparsely Vegetated Concave Surface (B8)

The hydrologic regime is seasonally saturated. It is assumed that the water table will lower with leaf-out of the trees later in the year.

Sampling Point: <u>wire1001f_w</u>

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u>)	<u>% Cover</u>	<u>Species</u> ?		Number of Dominant Species
1. <u>Fraxinus nigra</u>		<u> </u>		That Are OBL, FACW, or FAC:6(A)
2. <u>Populus tremuloides</u>	5	<u> </u>		Total Number of Dominant
3. <u>Ables balsamea</u>		<u> </u>		Species Across All Strata: (B)
4. <u>Acer rubrum</u>	5	<u> </u>	FAC	Percent of Dominant Species
5			. <u> </u>	That Ale OBL, FACW, OF FAC. <u>80</u> (A/B)
6				Prevalence Index worksheet:
7			. <u> </u>	Total % Cover of: Multiply by:
	50	= Total Co	ver	OBL species <u>14</u> x 1 = <u>14</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>50</u> x 2 = <u>100</u>
1. <u>Viburnum lentago</u>	5	Y	FAC	FAC species $30 \times 3 = 90$
2. <u>Betula papyrifera</u>	2	Y	FACU	FACU species <u>2</u> x 4 = <u>8</u>
3				UPL species $0 \times 5 = 0$
4.				Column Totals: <u>96</u> (A) <u>212</u> (B)
5.				Prevalence Index = B/A = 2.20833333333333333
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
··	7	- Total Co		_∠ 2 - Dominance Test is >50%
Horh Stratum (Plot size: 5		- 10(a) 00	vei	$_$ 3 - Prevalence Index is ≤3.0 ¹
1 Carey brunnescens	10	V	FACW	4 - Morphological Adaptations ¹ (Provide supporting
2 Carex crinita	<u> 10 </u> 10	 		Problematic Hydrophytic Vegetation ¹ (Explain)
3 Onoclea sensibilis	<u> 10 </u> 10	 		
A Pubus pubascons	<u></u>	 N		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Nubus pubescens</u>	<u> </u>	N		be present, unless disturbed or problematic.
5. <u>Calina palustris</u>	<u> </u>	 		Definitions of Vegetation Strata:
		IN		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
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.	30	- Total Co		height.
Weady Vina Stratum (Plat aiza: 30)		- 10lai C0	vei	
(Plot size:)				
1				
2				
3				Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate The vegetation is representative of the	sheet.) hardwo	od swa	mn Tha	tree laver is dominated by black ash
and guaking aspen. The shrub laver is	dominat	ted by n	annvhe	rry and the herbaceous laver is
dominated by sedges.				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			Redox	x Feature	<u>s</u> 1	. 2		
(inches)	Color (moist)	%	<u>Color (n</u>	noist)		lype		lexture	Remarks
	<u>10YR 2/1</u>	100	·		0			MMI	
7-17	<u>10YR 2/1</u>	98	<u>10YR</u>	3/4	2	C	Μ	SCL	
17-20	10YR 3/1	98	10YR	3/4	2	С	Μ	SC	
			· · · · · · · · · · · · · · · · · · ·			·			
·						·			
						·			
						·			
						·			
			· ·			·			
·						·			
1									
'Type: C=C	oncentration, D=Depl	etion, RM	1=Reduced N	/latrix, MS	S=Masked	d Sand Gra	ains.	² Location	n: PL=Pore Lining, M=Matrix.
Type: C=C Hydric Soil Histosol	oncentration, D=Depl Indicators: (A1)	etion, RM	<u>1=Reduced N</u>	Matrix, MS	S=Masked v Surface	d Sand Gra (S8) (LRF	ains. R R,	² Location Indicators 2 cm M	n: PL=Pore Lining, M=Matrix. 5 for Problematic Hydric Soils³: Muck (A10) (LRR K, L, MLRA 149B)
<u>'Type: C=C</u> Hydric Soil Histosol Histic E Black Hi	oncentration, D=Depl Indicators: (A1) pipedon (A2) istic (A3)	etion, RM	I=Reduced N Polyva MLF Thin D	<u>/latrix, MS</u> llue Belov RA 149B) ark Surfa	S=Masked v Surface ce (S9) (I	<u>d Sand Gra</u> (S8) (LRF	ains. R R, RA 149B)	² Location Indicators 2 cm M Coast 5 cm M	n: PL=Pore Lining, M=Matrix. f or Problematic Hydric Soils ³ : Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R)
<u>'Type: C=C</u> Hydric Soil Histosol Histic E _I Black Hi Hydroge	oncentration, D=Depl Indicators: (A1) pipedon (A2) istic (A3) en Sulfide (A4)	<u>etion, R</u> M	I=Reduced N Polyva MLF Thin D Loamy	<u>Matrix, MS</u> Ilue Belov RA 149B) ark Surfa Mucky M	<u>S=Maskeo</u> v Surface ce (S9) (I 1ineral (F	<u>d Sand Gra</u> (S8) (LRF LRR R, MI 1) (LRR K	ains. R R, -RA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S	n: PL=Pore Lining, M=Matrix. a for Problematic Hydric Soils³: Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L)
<u>'Type: C=C</u> Hydric Soil Histosol Histic E Black Hi Hydroge Stratified	oncentration, D=Depl Indicators: (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5)	<u>etion, RM</u>	I <u>=Reduced N</u> Polyva Thin D Loamy Loamy	Matrix, MS Ilue Below RA 149B) ark Surfa Mucky M Gleyed N	<u>S=Masked</u> v Surface ce (S9) (I ⁄lineral (F ⁄latrix (F2	<u>d Sand Gra</u> (S8) (LRF L RR R, MI 1) (LRR K	ains. R R, _RA 149B) , L)	² Location Indicators 2 cm M 5 cm M 5 cm M Dark S Polyva	n: PL=Pore Lining, M=Matrix. 5 for Problematic Hydric Soils³: Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L)
Type: C=C Hydric Soil Histosol Histic E Black Hi Hydroge Stratified Depleted	oncentration, D=Depl Indicators: (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) d Below Dark Surface	<u>etion, RM</u> ∋ (A11)	I=Reduced M Polyva MLF Thin D Loamy Deplet Dedata	Matrix, MS lue Belov RA 149B) ark Surfa Mucky M Gleyed M ed Matrix	S=Masked v Surface ce (S9) (I lineral (F Matrix (F2 (F3)	1 Sand Gra (S8) (LRF LRR R, MI 1) (LRR K	ains. R R, .RA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S Polyva Thin D	n: PL=Pore Lining, M=Matrix. a for Problematic Hydric Soils³: Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L) Dark Surface (S9) (LRR K, L)
Type: C=C Hydric Soil Histosol Histic E Black Hi Hydroge Stratified Depletee Thick Da Sandy M	oncentration, D=Depl Indicators: (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) d Below Dark Surface ark Surface (A12) Aucky Mineral (S1)	<u>etion, RM</u> ≥ (A11)	I=Reduced M Polyva MLF Thin D Loamy Loamy Deplet Redox Deplet	Matrix, MS lue Belov (RA 149B) ark Surfa Mucky M Gleyed M ed Matrix Dark Sur ed Dark S	S=Masked v Surface ce (S9) (I fineral (F Matrix (F2 (F3) face (F6)	<u>d Sand Gra</u> (S8) (LRF LRR R, MI 1) (LRR K 2)	ains. R R, .RA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S Polyva Thin D Iron-M Piedm	 h: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils³: Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L) Dark Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Janganese Masses (F12) (LRR K, L, R) Dont Eloodplain Soils (F19) (ML RA 149B)
Type: C=C Hydric Soil Histosol Histic E Black Hi Hydroge Stratified Depleted Thick Da Sandy M Sandy O	oncentration, D=Depl Indicators: (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) d Below Dark Surface ark Surface (A12) /lucky Mineral (S1) Sleved Matrix (S4)	<u>etion, RM</u> ≎ (A11)	I=Reduced M Polyva MLF Thin D Loamy Deplet Redox Deplet Redox	Matrix, MS lue Belov (A 149B) ark Surfa Mucky M Gleyed M ed Matrix Dark Sur ed Dark S Depressi	S=Masked v Surface ce (S9) (I lineral (F Matrix (F2 (F3) face (F6) Surface (F ions (F8)	d Sand Gra (S8) (LRF LRR R, MI 1) (LRR K 2) -7)	ains. R R, .RA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S Polyva Thin D Iron-M Piedm Mesic	n: PL=Pore Lining, M=Matrix. a for Problematic Hydric Soils ³ : Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L) Dark Surface (S9) (LRR K, L) langanese Masses (F12) (LRR K, L, R) nont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B)
Type: C=C Hydric Soil Histosol Histic Ej Black Hi Hydroge Stratified Depletee Thick Da Sandy M Sandy F Sandy F	oncentration, D=Depl Indicators: (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5)	<u>etion, RM</u> ≽ (A11)	I=Reduced M Polyva MLF Thin D Loamy Deplet Redox Deplet Redox	Matrix, MS Ilue Below (A 149B) ark Surfa Mucky M Gleyed N ed Matrix Dark Sur ed Dark S Depressi	S=Masked v Surface ce (S9) (I flineral (F Matrix (F2 (F3) face (F6) Surface (F ions (F8)	1 Sand Gra (S8) (LRF LRR R, MI 1) (LRR K 2) -7)	ains. R R, .RA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S Polyva Thin D Iron-M Piedm Mesic Red P	n: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils³: Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L) Dark Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Ianganese Masses (F12) (LRR K, L, R) nont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) Parent Material (F21)
Type: C=C Hydric Soil Histosol Histic E Black Hi Hydroge Stratified Depletee Thick Da Sandy M Sandy M Sandy F Stripped	oncentration, D=Depl Indicators: (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) d Matrix (S6)	<u>etion, RM</u> ≽ (A11)	I=Reduced M Polyva MLF Thin D ∠ Loamy Loamy Deplet ∠ Redox Redox	Matrix, MS Ilue Below RA 149B) ark Surfa Mucky M Gleyed N ed Matrix Dark Sur ed Dark S Depressi	S=Masked v Surface ce (S9) (I fineral (F Matrix (F2 (F3) face (F6) Surface (F ions (F8)	<u>d Sand Gra</u> (S8) (LRF L RR R, MI 1) (LRR K 2)	ains. R R, .RA 149B) , L)	² Location Indicators 2 cm M 5 cm M 5 cm M 5 cm M 0 ark S 0 ark S 	The second
Type: C=C Hydric Soil Histosol Histic E Black Hi Hydroge Stratifier Depleter Thick Da Sandy M Sandy O Sandy F Sandy F Depleter Sandy M	oncentration, D=Depl Indicators: (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Sleyed Matrix (S4) Redox (S5) d Matrix (S6) rface (S7) (LRR R, M	<u>etion, RM</u> ≥ (A11) I LRA 14 9	I=Reduced M Polyva MLF Thin D ✓ Loamy Deplet ✓ Redox Redox	Matrix, MS Ilue Belov (A 149B) ark Surfa Mucky M Gleyed M ed Matrix Dark Sur ed Dark S Depressi	S=Masked v Surface ce (S9) (I fineral (F Matrix (F2 (F3) face (F6) Surface (F ions (F8)	<u>d Sand Gra</u> (S8) (LRF LRR R, MI 1) (LRR K 2) -7)	ains. R R, .RA 149B) , L)	² Location Indicators 2 cm M 5 cm M 5 cm M Dark S Polyva Thin D Thin D Thin D Iron-M Nesic Nesic Very S Other	n: PL=Pore Lining, M=Matrix. a for Problematic Hydric Soils ³ : Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L) Dark Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) anganese Masses (F12) (LRR K, L, R) bont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) 'arent Material (F21) Shallow Dark Surface (TF12) (Explain in Remarks)
Type: C=C Hydric Soil Histosol Histic El Black Hi Hydroge Stratified Depleted Thick Da Sandy M Sandy G Sandy F Stripped Dark Su	oncentration, D=Depl Indicators: (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) d Below Dark Surface ark Surface (A12) Aucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) d Matrix (S6) rface (S7) (LRR R, M	etion, RM ≥ (A11) ILRA 149	I=Reduced M Polyva MLF Thin D ✓ Loamy Deplet ✓ Redox Deplet Redox	Matrix, MS Ilue Belov (A 149B) ark Surfa Mucky M Gleyed M ed Matrix Dark Sur ed Dark S Depressi	S=Masked v Surface ce (S9) (I fineral (F Matrix (F2 (F3) face (F6) Surface (F6) Surface (F8) t be prese	d Sand Gra (S8) (LRF LRR R, MI 1) (LRR K 2) 7)	ains. R R, .RA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S Polyva Thin D Thin D Iron-M Piedm Nesic Red P Very S Other	n: PL=Pore Lining, M=Matrix. a for Problematic Hydric Soils ³ : Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L) Dark Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) langanese Masses (F12) (LRR K, L, R) Noont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21) Shallow Dark Surface (TF12) (Explain in Remarks) c.
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Type: C=C Hydric Soil	oncentration, D=Depl Indicators: (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) d Matrix (S6) rface (S7) (LRR R, M f hydrophytic vegetati Layer (if observed):	etion, RM ≥ (A11) ILRA 149	I=Reduced M Polyva MLF Thin D Loamy Deplet Redox Redox	Matrix, MS Ilue Below (RA 149B) ark Surfa Mucky M Gleyed N ed Matrix Dark Sur ed Dark S Depressi	S=Masked v Surface ce (S9) (I fineral (F Matrix (F2 (F3) face (F6) Surface (F ions (F8) t be press	d Sand Gra (S8) (LRF LRR R, MI 1) (LRR K 2) 77)	ains. R R, .RA 149B) , L)	² Location Indicators 2 cm M Coast 5 cm M Dark S Dark S Polyva Thin D Iron-M Nesic Nesic Red P Very S Other or problematic	n: PL=Pore Lining, M=Matrix. a for Problematic Hydric Soils ³ : Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L) alue Below Surface (S8) (LRR K, L) Dark Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Ianganese Masses (F12) (LRR K, L, R) nont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21) Shallow Dark Surface (TF12) (Explain in Remarks) c.
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observed within the lower layers. Redox Dark Surface and Loamy Mucky Mineral were the hydric soil indicators met.



wire1001f_w_E



wire1001f_w_S

Project/Site: Line 5 Relocation Project	City/County: <u>Iron</u> Sampling Date: <u>2020-05-25</u>
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wire1001e_w
Investigator(s): DMP/ARK	Section, Township, Range: <u>Sec 05 T045N R001W</u>
Landform (hillslope, terrace, etc.); Depression	Local relief (concave, convex, none): Concave Slope (%): 0-2%
Subregion (I RR or MI RA). Northcentral Forests Lat: 46 412	496 Long: -90.528283 Datum: WGS84
Soil Man Unit Name: Cathro muck drainadeway 0	to 1 percent slopes NWL classification: PEO1C
Are dimetia / hydrologic conditions on the site typical for this time	
Are climatic / hydrologic conditions on the site typical for this time	i year? Yes <u>v</u> No (i no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signification	antiy disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology natural	y problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ring sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🖌 No	Is the Sampled Area
Hydric Soil Present? Yes ✓ No	within a Wetland? Yes <u> V</u> No
Wetland Hydrology Present? Yes <u>·</u> No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate	report.)
The wet meadow is part of a complex that is	s primarily hardwood swamp. The wet meadow occurs
within a opening in the canopy.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that ap	ply) Surface Soil Cracks (B6)
Surface Water (A1) Water-Stai	ned Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fa	una (B13) Moss Trim Lines (B16)
_ Saturation (A3) Marl Depo	sits (B15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen	Sulfide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized R	hizospheres 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 Iro	n 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 (Exp	lain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (ind	:hes):
Water Table Present? Yes <u>v</u> No Depth (inc	ches): <u>6</u>
Saturation Present? Yes <u>v</u> No Depth (ind	ches): <u>4</u> Wetland Hydrology Present? Yes <u>v</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial p	hotos, previous inspections), if available:
Remarks:	
I ne reature is assumed to be saturated dur	ing part of the growing season. Water table was
observed 6 inches below the surface.	

Sampling Point: wire1001e_w

Troo Stratum (Plot size: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1 Ulmus americana	<u>5 5</u>	<u>Species</u>		Number of Dominant Species
2 Acor rubrum	 			That Are OBL, FACW, or FAC: $\underline{4}$ (A)
3. Fraxinus nigra	<u> </u>	 N	FACW	Total Number of Dominant Species Across All Strata: 5 (B)
A			<u>17.011</u>	
5			·	That Are OBL, FACW, or FAC: 80 (A/B)
6			·	
7			·	Prevalence Index worksheet:
/	10	- Total Ca		Iotal % Cover of:Multiply by:
Conting (Chrish Stratum (Distaire) 15			ver	$\begin{array}{c c} \text{OBL species} & \underline{2} & x & \underline{1} & \underline{2} \\ \text{FACW species} & 53 & x & \underline{2} & \underline{106} \\ \end{array}$
<u>Saping/Shrub Stratum</u> (Plot size: 15)	F	V		FAC species $18 \times 3 = 54$
1. <u>Viburnum ientago</u>		<u> </u>	FAC	FACU species $0 \times 4 = 0$
2. <u>Rubus sp.</u>		<u> </u>		UPL species x 5 =
3. <u>Populus tremuloides</u>		<u> </u>		Column Totals: <u>73</u> (A) <u>162</u> (B)
4. <u>Cornus alba</u>	2	N	FACW	Provolance Index = P/A = -2.22
5			·	
6				Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
	11	= Total Co	ver	\sim 2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)				\sim 3 - Flevalence much is ≥ 3.0
1. <i>Phalaris arundinacea</i>	35	Y	FACW	data in Remarks or on a separate sheet)
2. <u>Onoclea sensibilis</u>	5	Ν	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Carex cf leptonervia</u>	5	N	FAC	
4. <u>Rubus pubescens</u>	2	N	FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Solidago gigantea	2	N	FACW	Definitions of Vagatation Strata:
6. Symphyotrichum puniceum	2	N	OBI	Deminions of Vegetation Strata.
7. Trillium cernuum	_ <u></u> 1	N	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast beight (DBH) regardless of beight
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 herbesseus (nen weedu) plante, regerdiese
11			·	of size, and woody plants less than 3.28 ft tall.
10				Woody vines – All woody vines greater than 3 28 ft in
12	52	- Total Ca	·	height.
Western (Distributed 20		= Total Co	ver	
<u>woody vine Stratum</u> (Plot size: <u>50</u>)				
1			·	
2			·	
3			·	Hydrophytic
4			·	Present? Yes <u>v</u> No
-		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.) Wet me	adow c	ommuni	ty. The trees are located on the margin
of the feature and include red maple, b	lack ash	and A	mericar	elm. The shrub cover is sparse and

of the feature and include red maple, black ash, and American elm. The shrub cover is sparse and made up of red-osier dogwood, American hazel, and nannyberry. The ground layer is dominated by reed canary grass.

SOIL

Profile Des	cription: (Describe t	o the de	pth needed	to docun	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth Matrix Redox Features										
(inches)	Color (moist)	%	<u>Color (n</u>	noist)	%	Type'	Loc ²	Texture	Remarks	
	<u>10YR 3/1</u>	95	<u>7.5YR</u>	4/4	5	_ <u>C</u> _	M	<u> SL </u>		
	<u>10YR 4/1</u>	90	<u>7.5YR</u>	4/4	10	_C	M	LS		
17-20	10YR 4/2	85	7.5YR	4/4	15	С	М	LS		
	<u> </u>		<u></u>	•, •	<u> </u>					
							·			
					·		<u> </u>			
			-							
							·			
					·		·			
					·		<u> </u>			
¹ Type: C=C	oncentration, D=Depl	etion, RM	I=Reduced N	/atrix, MS	S=Masked	Sand Gra	ains.	² Location:	PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:							Indicators	for Problematic Hydric Soils ³ :	
Histosol	l (A1)		Polyva	lue Belov	v Surface	(S8) (LRF	R,	2 cm N	luck (A10) (LRR K, L, MLRA 149B)	
HISTIC E Black H	pipedon (A2) istic (A3)		MLI Thin D	XA 149B) lark Surfa	ce (S9) (I	RRR MI	RA 149B)	Coast Prairie Redox (A16) (LRR K, L, R)		
Hydroge	en Sulfide (A4)		Loamy	Mucky M	/lineral (F1) (LRR K,	L)	Dark S	urface $(S7)$ (LRR K, L)	
Stratifie	d Layers (A5)		Loamy	Gleyed I	Matrix (F2)	,	Polyva	lue Below Surface (S8) (LRR K, L)	
Deplete	d Below Dark Surface	(A11)	Deplet	ed Matrix	: (F3)			Thin Da	ark Surface (S9) (LRR K, L)	
Thick D	ark Surface (A12)		Redox	Dark Su	face (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)	
Sandy N	Mucky Mineral (S1)		Deplet	ed Dark S	Surface (F	7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)	
Sandy C	Beyed Matrix (S4)		Redox	Depress	ions (F8)				Spodic (1A6) (MLRA 144A, 145, 149B)	
Stripper	Matrix (S6)							Red Pa	hallow Dark Surface (TE12)	
Dark Su	Irface (S7) (LRR R, M	LRA 149	B)					Other (Explain in Remarks)	
°Indicators o	of hydrophytic vegetati	on and w	etland hydro	ology mus	t be prese	ent, unless	disturbed	or problematic		
Tuno	Layer (if observed):									
Type:								Hydric Soil	Brosont? Vos 🗸 No	
Depth (in	ches):							Hyuric Soli		
Remarks:	profilo consiste	ofa	dark can	dy loo		donlo	tod loa	my cond	Podox was obsorved	
througho	profile consists	Throp	uain Saii budria a	uy iua cil indi	in over	uepie	not	illy Saliu.	Redux was observed	
linought	out the prome.	mee	inyunc s		Caluis	weiei	net.			
1										



wire1001e_w_E



wire1001e_w_W

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

Evaluator(s):		
ARK/DMP		
Date of visit(s):		
2020-05-25		
Ecological Landsca	ape:	
Superior Mineral Pange		
Superior Milleral Ranges	5	
Watershed:		
LS13, Tyler Forks		
WWI Class:		
ТЗК		
Wetland Type(s):		
PFO-PEM complex - hardwood swamp, wet meadow		
Wetland Size:	Wetland Area Impacted	
0.5613	0.5613	
Vegetation:		
Plant Community D	Description(s):	
The wetland is pr	edominantly black ash swamp	
with an herb layer of diverse sedges and forbs.		
is dominated by r	eeu canary grass.	
	Evaluator(s): ARK/DMP Date of visit(s): 2020-05-25 Ecological Landsca Superior Mineral Ranges Watershed: LS13, Tyler Forks Wetland Size: 0.5613 Vegetation: Plant Community E The wetland is pr with an herb laye An anthropogenic is dominated by r	

SITE MAP

SECTION 1: Functional Value Assessment

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

HU-3: A forest road to the north provides access to this site. HU-6: Potential habitat for diverse threatened or endangered animal and plant 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	Potential habitat for diverse wetland fauna

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	Potential for aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Rubus idaeus			PFO	
Fraxinus nigra*			PFO	Continuous
Carex brunnescens			PFO	Rare
Carex crinita			PFO	Rare
Phalaris arundinacea			PEM	Rare
Acer rubrum			PFO/PEM	Rare
Calamagrostis canadensis			PFO/PEM	Rare
Caltha palustris			PFO	Rare
Alnus incana			PFO/PEM	Barren
Onoclea sensibilis			PFO/PEM	Barren
Populus tremuloides			PFO/PEM	Barren
Abies balsamea			PFO	Barren
Betula papyrifera			PFO	Barren
Carex cf leptonervia			PEM	Barren
Chrysosplenium americanum			PFO/PEM	Barren
Cornus alba			PFO/PEM	Barren
Corylus americana			PFO/PEM	Barren
Cypripedium reginae			PFO	Barren
Impatiens capensis			PFO	Barren
Rubus pubescens			PFO/PEM	Barren
Rubus sp.			PEM	Barren
Solidago gigantea			PEM	Barren
Symphyotrichum puniceum			PFO/PEM	Barren
Trillium cernuum			PFO/PEM	Barren
Ulmus americana			PFO/PEM	Barren
Viburnum lentago			PFO/PEM	Barren

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

The floristic integrity ranges from moderate to high. Native plant species are dominant in the hardwood swamp, and invasive species are absent. Reed canary grass is dominant in the wet meadow, and native species are not diverse.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
, , , , , , , , , , , , , , , , , , ,					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells,
					impounded water, increased runoff
					Point source or stormwater discharge
					Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		L	UC	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
v			NA	C	Removal of herbaceous stratum – mowing,
~			IVI	U	grading, earthworms, etc.
x			м	C	Removal of tree or shrub strata – logging,
~			IVI	U	unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
Х			M	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)

A swath of approximately 15 percent of the wetland has been cleared of canopy species, and reed canary grass has replaced the native herb component.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Despite the disturbed portion, the majority of the wetland is a diverse native plant community.
Human Use Values	Not immediately accessible from public roads, but a forest road gives access for hunting or nature study.
Wildlife Habitat	Structurally complex with potential for diverse wildlife species.
Fish and Aquatic Life Habitat	Aquatic insects are presumed to be present.
Shoreline Protection	N/A
Flood and Stormwater Storage	Potential to store significant overland flow.
Water Quality Protection	Dense, intact vegetation provides water quality protection. Water is stagnant and potentially undergoes significant denitrification.
Groundwater Processes	

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling	Date: <u>2020-05-25</u>
Applicant/Owner: Enbridge		State: Wisconsin Samplin	ig Point: <u>wire1001_u</u>
Investigator(s): <u>ARK/DMP</u>	Section, Township, Range	e: <u>sec 05 T045N R001V</u>	V
Landform (hillslope, terrace, etc.): Backslope	_ Local relief (concave, convex	k, none): <u>None</u>	_ Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.412</u>	.594 Long:	-90.528193	Datum: WGS84
Soil Map Unit Name: Wormet sandy loam, 0 to 3 pe	rcent slopes	NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes 🖌 No	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrologysignification	antly disturbed? Are "No	ormal Circumstances" present? Y	es 🖌 No
Are Vegetation, Soil, or Hydrology natural	y problematic? (If need	led, explain any answers in Remar	·ks.)

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

Hydrophytic Vegetation Present?	Yes	No	Is the Sampled Area
Hydric Soil Present?	Yes	No	within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No <u>~</u>	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed	dures here or in	a separate report.)	
Mesic hardwood forest su	urrounds th	ne wetland.	

HYDROLOGY

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

Sampling Point: wire1001_u

	Absolute	Dominant	Indicator	Deminente Tratumiente de
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Dominance Test worksneet:
1. <u>Acer rubrum</u>	70	Y	FAC	That Are OBL, FACW, or FAC: (A)
2. <u>Abies balsamea</u>	5	N	FAC	Total Number of Dominant
3. <u>Populus tremuloides</u>	5	N	FAC	Species Across All Strata:6(B)
4. <u>Betula papyrifera</u>	2	N	<u>FACU</u>	Percent of Dominant Species
5	·			That Are OBL, FACW, or FAC:33 (A/B)
6				Provalance Index worksheet:
7.				Total % Cover of Multiply by
	82	= Total Co	ver	$\frac{1}{\text{OBL species}} \qquad 0 \qquad \text{x1} = 0$
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =4
1 Convlus cornuta	10	Y	FACU	FAC species <u>86</u> x 3 = <u>258</u>
2 Abies halsamea	<u> </u>	 	FAC	FACU species <u>27</u> x 4 = <u>108</u>
2. <u>Abics balsamed</u>	<u> </u>	 		UPL species <u>12</u> x 5 = <u>60</u>
3. <u>1 Taxinus nigra</u>	2	N		Column Totals: <u>127</u> (A) <u>430</u> (B)
4. <u>Fluitus seloutita</u>		N		Prevalence Index = B/A = 3.3858267716535435
5. <u>Lonicera canadensis</u>				Hudronhutia Varatatian Indiaatara
6. <u>Betula papyritera</u>		N	FACU	1 Papid Tast for Hydrophytic Vogetation
7			·	2 - Dominance Test is >50%
	22	= Total Co	ver	$3 - Prevalence Index is \leq 3.0^1$
Herb Stratum (Plot size: 5)				 4 - Morphological Adaptations¹ (Provide supporting
1. <u>Eurybia macrophylla</u>	10	<u> Y </u>	UPL	data in Remarks or on a separate sheet)
2. <u>Maianthemum canadense</u>	5	Y	<u>FACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Pteridium aquilinum</u>	5	Y	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Apocynum androsaemifolium</u>	2	N	UPL	be present, unless disturbed or problematic.
5. <u>Carex sp.</u>	2	N		Definitions of Vegetation Strata:
6. <u>Trientalis borealis</u>	1	N	FAC	
7. <u>Oryzopsis asperifolia</u>	1	N		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
	26	= Total Co	Ver	height.
Weady Vina Stratum (Plot ciza: 30)		- 10101 00	VCI	
(Flot size. <u>50</u>)				
l			·	
2	·		·	
3	·		·	Hydrophytic Vegetation
4			·	Present? Yes No <u>v</u>
Demotion (Include photo numbers have as an an anti-	<u> </u>	= Total Co	ver	
Sample plot is representative of the are	a surroi	undina	the hard	wood swamp. The upland directly to
the north of the wet meadow is more or	ben.			

SOIL

Profile Desc	ription: (Descr	ibe to the dep	th needed to document the indicator or confirm	the absence of in	ndicators.)
Depth (inches)	Matr Color (moist	<u>ix</u>)%	<u>Redox Features</u> Color (moist) % Type ¹ Loc ²	Texture	Remarks
0-14	7.5YR 3/	3 100	0		
14-20	5YR 4/	3 100			
<u> </u>		<u> </u>			
$\frac{1}{1}$ Type: C=C	oncentration D=	Depletion RM=	Beduced Matrix MS=Masked Sand Grains	² Location: PL	=Pore Lining M=Matrix
Hydric Soil	Indicators:		The action of the second of th	Indicators for	Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Below Surface (S8) (LRR R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
Histic Ep Black Hi	oipedon (A2) stic (A3)		MLRA 149B) Thin Dark Surface (S9) (I RR R MI RA 149B)	Coast Prair	ie Redox (A16) (LRR K, L, R) v Peat or Peat (S3) (LRR K L R)
Hydroge	n Sulfide (A4)		Loamy Mucky Mineral (F1) (LRR K, L)	Dark Surfa	ce (S7) (LRR K , L)
Stratified	Layers (A5)	.	Loamy Gleyed Matrix (F2)	Polyvalue I	Below Surface (S8) (LRR K, L)
Depleted	d Below Dark Su ark Surface (A12	rface (A11)	Depleted Matrix (F3) Redox Dark Surface (F6)	Thin Dark S	Surface (S9) (LRR K, L)
Sandy M	lucky Mineral (S	1)	Depleted Dark Surface (F7)	Piedmont F	-loodplain Soils (F19) (MLRA 149B)
Sandy G	Bleyed Matrix (S4	4)	Redox Depressions (F8)	Mesic Spo	dic (TA6) (MLRA 144A, 145, 149B)
Sandy R	edox (S5)			Red Paren	t Material (F21)
Stripped	Matrix (S6) rface (S7) (I RR	R MIRA 149F	3)	Very Shallo Other (Exp	ow Dark Surface (TF12) Jain in Remarks)
			·)		
³ Indicators of	f hydrophytic veg	getation and we	tland hydrology must be present, unless disturbed	or problematic.	
Type:	Layer (If observ	ea):			
Depth (in	ches).			Hydric Soil Pre	sent? Yes No ✔
Remarks:				.,	
No hydrid	c soil indica	ators were	observed.		



wire1001_u_E



wire1001_u_W

Project/Site: Line 5 Relo	cation Proiect	City/C	County: Iron	Sampling Date: <u>2020-06-06</u>	
Applicant/Owner: Enbridg	e ,		, <u> </u>	State: <u></u>	
Investigator(s): DMP/AR	<	Section	on, Township, Range: S	ec 05 T045N R001W	
Landform (hillslope, terrace, e	tc.): Depressior	Local rel	ief (concave, convex, no	ne): Concave Slope (%): 0-2%	
Subregion (LRR or MLRA). N	orthcentral Forests	Lat: 46 407497	Long9() 522850 Datum: WGS84	
Soil Man Unit Name: Minor	caua muck 0 f	o 2 percent slope	<u> </u>	NWI classification:	
Are elimetia / hydrologia condi	<u>itiana an tha aita tuniu</u>	$\frac{102}{2}$ percent slope			
Are Vegetation, Soil	, or Hydrology	significantly distur	bed? Are "Norma	I Circumstances" present? Yes <u>v</u> No	
Are Vegetation, Soil	, or Hydrology	naturally problem	atic? (If needed, e	explain any answers in Remarks.)	
SUMMARY OF FINDIN	GS – Attach sit	e map showing san	pling point location	ons, transects, important features, etc.	
Hydrophytic Vegetation Pres	sent? Yes	✓ No	Is the Sampled Area		
Hydric Soil Present?	Yes	✓ No	within a Wetland?	Yes 🖌 No	
Wetland Hydrology Present?	Yes	✓ No	If yes, optional Wetland	Site ID:	
Remarks: (Explain alternativ	ve procedures here o	r in a separate report.)			
The hardwood swa	mp is a mosai	c of microdepress	sions and small u	ipland hummocks. Standing water	
occurs within some	of the depres	sions. Exposed ro	ocks were observ	ved in areas of the feature. There	
is a restrictive rock	layer below th	e surface.			
HYDROLOGY					
Wetland Hydrology Indicat	tors:			Secondary Indicators (minimum of two required)	
Primary Indicators (minimum	n of one is required; o	heck all that apply)		Surface Soil Cracks (B6)	
Surface Water (A1)		✓ Water-Stained Leave	es (B9)	Drainage Patterns (B10)	
High Water Table (A2)		Aquatic Fauna (B13)	. ,	Moss Trim Lines (B16)	
Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)	
Water Marks (B1)		Hydrogen Sulfide Od	or (C1) Crayfish Burrows (C8)		
Sediment Deposits (B2)		Oxidized Rhizospher	es on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)	
Drift Deposits (B3)		Presence of Reduced	d Iron (C4)	Stunted or Stressed Plants (D1)	
Algal Mat or Crust (B4)		Recent Iron Reductio	on in Tilled Soils (C6)	<u>c</u> Geomorphic Position (D2)	
Iron Deposits (B5)	nial Imagan (DZ)	Thin Muck Surface (C	i) marka)	Shallow Aquitard (D3)	
Inundation Visible on Ae			naiks)	EAC-Neutral Test (D5)	
Field Observations:					
Surface Water Present?	Yes No	 Depth (inches): 			
Water Table Present?	Yes 🖌 No	Depth (inches): 6			
Saturation Present?	Yes 🖌 No	Depth (inches): 4	Wetland H	lydrology Present? Yes ✔ No	
(includes capillary fringe)		· 、 ,			
Describe Recorded Data (sti	ream gauge, monitor	ing well, aerial photos, pre	evious inspections), if ava	Nlable:	
Remarks:					
The hydrologic regi	me is seasona	ally saturated. The	e water table was	s observed 6 inches below the	
soil surface. Some	of the microde	epressions throug	hout the feature	are inundated.	
i i i i i i i i i i i i i i i i i i i					

Sampling Point: wire1005f_w1

· · ·	Absolute	Dominant	t Indicator	
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	Species?	Status	Dominance Test worksheet:
1. <u>Populus tremuloides</u>	25	Y	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
2. <u>Fraxinus nigra</u>	10	Y	FACW	Total Number of Dominant
3. <u>Betula papyrifera</u>	2	N	FACU	Species Across All Strata:5_ (B)
4			<u> </u>	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6				Provalance Index worksheet:
7		_		Total % Cover of Multiply by
	37	= Total Co	ver	$\begin{array}{c} \hline \hline$
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>60</u> x 2 = <u>120</u>
1. Fraxinus nigra	20	Y	FACW	FAC species <u>34</u> x 3 = <u>102</u>
2. Alnus incana	5	N	FACW	FACU species <u>15</u> x 4 = <u>60</u>
3 Prunus virginiana	5	N	FACU	UPL species <u>0</u> x 5 = <u>0</u>
4 llex verticillata	5	N	FACW	Column Totals: <u>111</u> (A) <u>284</u> (B)
5. Ribes triste	2	N	OBI	Prevalence Index = B/A = 2.5585585585585585585
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
··	37	= Total Co	ver	∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5		Total 00		$_$ 3 - Prevalence Index is ≤3.0 ¹
1 Carey intumescens	10	Y	FACW	4 - Morphological Adaptations ¹ (Provide supporting
2 Rubus pubescens	10	 		Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Nubus pubescens</u>	_ <u></u> 5	 N	FAC	
A Athurium angustum	<u> </u>			¹ Indicators of hydric soil and wetland hydrology must
4. <u>Atriyildin angustum</u>	<u> </u>	N		be present, unless disturbed or problematic.
	<u> </u>			Definitions of Vegetation Strata:
6. <u>Equiselum alvense</u>				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
				at breast height (DBH), regardless of height.
8. <u>Fragaria virginiana</u>		<u>IN</u>		Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Agrimonia ci striata</u>		IN	FACU	
10			<u> </u>	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3 28 ft tall
11				
12			·	height.
	37	= Total Co	ver	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2			. <u> </u>	
3			. <u> </u>	Hydrophytic
4				Present? Yes <u>v</u> No
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate The tree and shrub lavers are represen	sheet.) Ntative o	f the we	etland. T	he ground layer in some areas of the
wetland is dominated by fringed sedge	and are	ater bla	adder se	idge.
, , , , , , , , , , , , , , , , , , , ,	5.5			

SOIL

Profile Desc	ription: (Describe te	o the dep	oth needed to docum	nent the i	indicator	or confirm	the absence of	indicators.)
Depth	Matrix		Redox	Feature	s			
<u>(inches)</u>	Color (moist)	%	Color (moist)	%	Type'	Loc ²	Texture	Remarks
0-8	<u>5YR 2.5/1</u>	100		0			CL	
8-15	5YR 4/2	95	7.5YR 4/6	5	С	М	SCL	
			<u></u>					
					·			
					·		<u> </u>	
					·			
					·			
				. <u> </u>	·		·	
							<u> </u>	
¹ Type: C=Co	oncentration, D=Deple	etion, RM	=Reduced Matrix, MS	=Masked	d Sand Gra	ains.	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:			o ((00) (1 0		Indicators for	Problematic Hydric Soils":
HISTOSOI Histic Fr	(A1) Dipedon (A2)		Polyvalue Below MI RA 149B)	/ Surface	(58) (LR F	κκ,	2 cm Muc	K (A10) (LRR K, L, MLRA 149B) Sirie Redox (A16) (LRR K, L, R)
Black Hi	stic (A3)		Thin Dark Surfa	ce (S9) (I	LRR R, MI	_RA 149B)	5 cm Muc	ky Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)		Loamy Mucky N	lineral (F	1) (LRR K	, L)	Dark Surf	ace (S7) (LRR K, L)
Stratified	d Layers (A5)		Loamy Gleyed N	/atrix (F2	2)		Polyvalue	Below Surface (S8) (LRR K, L)
Depleted	d Below Dark Surface	(A11)	Depleted Matrix	(F3) faco (E6)			Thin Dark	Surface (S9) (LRR K, L)
Sandy M	Ark Surface (ATZ) Aucky Mineral (S1)		Redux Dark Sur Depleted Dark S	Surface (FO)	-7)		Piedmont	Floodplain Soils (F12) (MLRA 149B)
Sandy G	Gleyed Matrix (S4)		Redox Depressi	ons (F8)	.,		Mesic Spo	odic (TA6) (MLRA 144A, 145, 149B)
Sandy R	Redox (S5)			. ,			Red Pare	nt Material (F21)
Stripped	Matrix (S6)						Very Shal	low Dark Surface (TF12)
Dark Su	rface (S7) (LRR R, M	LRA 149	B)				Other (Ex	plain in Remarks)
³ Indicators of	f hydrophytic vegetati	on and w	etland hydrology mus	t be prese	ent. unless	s disturbed	or problematic	
Restrictive I	Layer (if observed):							
Type: <u>R</u>	ocks							
Depth (ind	ches): <u>15.0</u>						Hydric Soil Pre	esent? Yes <u><</u> No
Remarks:								
The soil	profile consists	s of a d	dark clay loam	over a	a deple	ted san	idy clay loar	n. Redox was observed
througho	ut the lower la	yer. A	restrictive rock	k layer	was e	ncounte	ered at 15 ir	nches.





wire1005f_w1_SE

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling Date: <u>2020</u>	<u>)-06-08</u>
Applicant/Owner: Enbridge		_ State: Wisconsin Sampling Point: wire	e1005f_w2
Investigator(s): <u>DMP/ARK</u>	Section, Township, Range: <u>S</u>	ec 05 T045N R001W	
Landform (hillslope, terrace, etc.): Depression	ocal relief (concave, convex, no	ne): <u>Concave</u> Slope (%)	0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.40627	25 Long: <u>-9</u>).525899 Datum: <u>W</u>	<u>GS84</u>
Soil Map Unit Name: Wormet sandy loam, 0 to 3 perce	ent slopes	NWI classification: PFO1C	
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes 🖌 No	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Norma	l Circumstances" present? Yes N	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 location	ons, transects, important feature	es, etc.
Hydrophytic Vegetation Present? Yes _ No Hydric Soil Present? Yes _ No Wetland Hydrology Present? Yes _ No	Is the Sampled Area within a Wetland? If yes, optional Wetland	Yes ∕ No	
Remarks: (Explain alternative procedures here or in a separate report The hardwood swamp is a mosaic of wetland depressions were inundated at the time of sur	ort.) depressions and sma vey.	all upland hummocks. Most o	of the
HYDROLOGY			

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
✓ Surface Water (A1)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>v</u> No Depth (inches): <u>1</u>	
Water Table Present? Yes <u>v</u> No Depth (inches): <u>0</u>	
Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) Yes No Depth (inches): 0	Wetland Hydrology Present? Yes <u></u>
Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) Ves No Depth (inches): 0 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective) No No No No	Wetland Hydrology Present? Yes <u>~</u> No ctions), if available:
Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes V No Depth (inches): 0 (includes capillary fringe) Ves V No Depth (inches): 0 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective No No No No	Wetland Hydrology Present? Yes ✓ No .tions), if available:
Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) No Depth (inches): 0 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	Wetland Hydrology Present? Yes <u>v</u> No ctions), if available:
Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: The hydrologic regime is seasonally saturated. The microd	Wetland Hydrology Present? Yes _ No ctions), if available:
Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes V No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: The hydrologic regime is seasonally saturated. The microd table is at the surface	Wetland Hydrology Present? Yes No ctions), if available: epressions are inundated and the water
Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) No Depth (inches): 0 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: The hydrologic regime is seasonally saturated. The microd table is at the surface.	Wetland Hydrology Present? Yes No stions), if available: epressions are inundated and the water
Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) No Depth (inches): 0 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: The hydrologic regime is seasonally saturated. The microd table is at the surface.	Wetland Hydrology Present? Yes <u>v</u> No <u>No</u> ctions), if available:
Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is seasonally saturated. The microd table is at the surface.	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> etions), if available: epressions are inundated and the water
Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is seasonally saturated. The microd table is at the surface.	Wetland Hydrology Present? Yes <u>~</u> No ctions), if available: epressions are inundated and the water
Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is seasonally saturated. The microd table is at the surface.	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> tions), if available:
Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is seasonally saturated. The microd table is at the surface.	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> etions), if available:
Water Table Present? Yes _ ✓ No Depth (inches): 0 Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: Remarks: The hydrologic regime is seasonally saturated. The microd table is at the surface.	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> tions), if available:
Water Table Present? Yes _ ✓ No Depth (inches): 0 Saturation Present? Yes _ ✓ No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is seasonally saturated. The microd table is at the surface.	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> ettons), if available:

Sampling Point: <u>wire1005f_w2</u>

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator	Dominance Test worksheet:
1. Populus tremuloides	<u>50</u>	V	FAC	Number of Dominant Species That Are OBL FACIAL on FAC: 7 (A)
2. Fravinus nigra	<u></u>			That are OBL, FACW, or FAC: \underline{I} (A)
2. <u>Traxinus nigra</u> 3. Acer rubrum	<u> </u>	 N	FAC	Total Number of Dominant Species Across All Strata: 7 (B)
4			·	Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
0				
0			·	Prevalence Index worksheet:
/			·	Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species 12 $x_1 = 12$
Sapling/Shrub Stratum (Plot size: 15)	4.0	V		FACW species $\underline{40}$ x 2 - $\underline{92}$
1. <u>Fraxinus nigra</u>	10	<u> Y </u>	FACW	FACU species $2 \times 4 = 8$
2. <u>Acer rubrum</u>	5	<u> Y </u>	FAC	UPL species $0 \times 5 = 0$
3			·	Column Totals: <u>131</u> (A) <u>325</u> (B)
4			·	Prevalence index $= B/A = -2.48$
5				Hudrophytic Vegetation Indicatory
6			·	1 - Rapid Test for Hydrophytic Vegetation
7			·	 2 - Dominance Test is >50%
_		= Total Co	ver	\sim 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Carex scabrata</u>	10	<u> </u>	OBL	data in Remarks or on a separate sheet)
2. <u>Osmunda claytoniana</u>	5	<u> </u>	FAC	Problematic Hydrophytic Vegetation' (Explain)
3. <u>Osmundastrum cinnamomeum</u>	5	<u> </u>	<u>FACW</u>	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Athyrium angustum</u>	2	N	FAC	be present, unless disturbed or problematic.
5. Impatiens capensis	2	N	FACW	Definitions of Vegetation Strata:
6. <u>Glyceria cf striata</u>	2	N	OBL	Tree Weady plants 2 in (7.6 cm) or more in diameter
7. <u>Acer rubrum</u>	2	N	FAC	at breast height (DBH), regardless of height.
8. <u>Rubus pubescens</u>	2	N	FACW	Sapling/shrub – Woody plants less than 3 in DBH
9. <u>Ranunculus recurvatus</u>	2	N	FACW	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Dryopteris intermedia</u>	2	N	FAC	Herb – All herbaceous (non-woody) plants, regardless
11. <u>Carex gracillima</u>	2	N	FACU	of size, and woody plants less than 3.28 ft tall.
12		_		Woody vines – All woody vines greater than 3.28 ft in
	36	= Total Co	ver	height.
Woody Vine Stratum (Plot size: <u>30</u>)				
1.				
2.				
3				Hydrophytic
4				Vegetation
	0	= Total Co	ver	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	sheet.)			<u> </u>
The canopy is dominated by quaking a	spen, w	hile the	sub-car	nopy is dominated by black ash. The
herbaceous layer is dominated by vario	ous fern	species	S.	

Profile Description: (Describe to the depth needed to document the indicator or co	onfirm the absence of indicators.)
Depth Matrix Redox Features	,
<u>(inches)</u> <u>Color (moist)</u> <u>%</u> <u>Color (moist)</u> <u>%</u> <u>Type¹</u> <u>Lo</u>	c ² Texture Remarks
<u>0-13</u> <u>10YR 2/1</u> <u>100</u> <u>0</u>	MMI
<u>13-20 10YR 2/1 1000</u>	SC
	· · · ·
	· · · ·
Type: C=Concentration D=Depletion RM=Reduced Matrix MS=Masked Sand Grains	² Location: PL=Pore Lining M=Matrix
Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Polyvalue Below Surface (S8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2) MLRA 149B)	Coast Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA *	149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Loamy Mucky Mineral (F1) (LRR K, L)	Dark Surface (S7) (LRR K, L)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	Thin Dark Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4) Redox Depressions (F8)	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5)	Red Parent Material (F21)
Stripped Matrix (So) Dark Surface (S7) (I RR R MI RA 149B)	Very Snallow Dark Sufface (TF12) Other (Explain in Remarks)
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless dist	urbed or problematic.
Restrictive Layer (if observed):	
Туре:	
Depth (inches):	Hydric Soil Present? Yes <u>~</u> No
Remarks:	
The soil profile consists of a dark mucky mineral over a dark	k sandy clay. Loamy Mucky Mineral was
met.	



wire1005f_w2_E



wire1005f_w2_N

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	DMP/ARK			
File #:	Date of visit(s):			
wire1005	2020-06-06			
Location:	Ecological Landscape:			
PLSS: sec 05 T045N R001W	North Central Forest			
Lat: <u>46.407497</u> Long: <u>-90.522850</u>	Watershed:			
County Iron Town/City/Villago, Anderson town				
County. <u>Iton</u> Town/City/Village. Anderson town				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	ТЗК			
Minocqua muck, 0 to 2 percent slopes. Wormet sandy loam, 0 to 3 percent	Wetland Type(s):			
slopes.	PFO - Hardwood swamp			
Field Verified:		·		
The soil profile was not verified. The soil profile consisted of a	Wetland Size:	Wetland Area Impacted		
dark clay loam over a depleted sandy clay loam. Redox was	2.9558	2.9558		
laver at 15 inches	Vegetation:			
	Plant Community Description(s): The tree and shrub layers are fairly uniform throughout the wetland. There are areas			
The hydrologic regime is seasonally saturated. The water				
table was observed just below the soil surface. Some of	throughout the herbaceous laver that become			
the microaepressions throughout the feature were	more dominated by greater bladder sedge			
inundated.		by greater bladder sedge.		

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	Ν	Y	Used for recreation (hunting, birding, hiking, etc.). List: Birding, hiking, hunting
2	Ν	N	Used for educational or scientific purposes
3	Ν	Y	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	Ý	Ý	3 or more strata present (>10% cover)
3	N	Ň	Within or adjacent to habitat corridor or established wildlife habitat area
4	Y	Y	100 m buffer – natural land cover <a>>50% (south) 75% (north) intact
5	Ν	N	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
1	Y	Y	plans
8	Y	Y	Part of a large habitat block that supports area sensitive species
9	Ν	N	Ephemeral pond with water present <u>></u> 45 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	N	N	Along shoreline of a stream, lake, pond or open water area (<u>></u> 1 acre) - if no, not applicable
2	N	N	Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
~	IN	IN	water levels or high flows – if no, not applicable
3	N	N	Densely rooted emergent or woody vegetation
ST			Storm and Floodwater Storage
1	Y	Y	Basin wetland, constricted outlet, has through-flow <u>or</u> is adjacent to a stream
2	Y	Y	Water flow through wetland is NOT channelized
3	Y	Y	Dense, persistent vegetation
4	N	N	Evidence of flashy hydrology
5	N	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 wetland
8	Y	Y	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	Y	Y	Provides substantial storage of storm and floodwater based on previous section
2	Y	Y	Basin wetland <u>or</u> constricted outlet
3	Y	Y	Water flow through wetland is NOT channelized
4	N	N	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	N	Stormwater or surface water from agricultural land is major hydrology source
8	N	N	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	N	N	Springs, seeps or indicators of groundwater present
2	Ν	N	Location near a groundwater divide or a headwater wetland
3	Ν	N	Wetland remains saturated for an extended time period with no additional water inputs
4	Ν	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

HU-1: The wetland is located within county land, and it is possible that the wetland could be used for birding, hunting or hiking.

HU-4: The wetland was aesthetically pleasing due to ecological integrity. WH-7: Saw and heard a variety of different bird species in and around the wetland.

- WH-10: Standing water within the micodepressions could be utilized by amphibians and aquatic insects. FA-4: There was standing water observed throughout the wetland.

ST-1: The feature is a basin wetland.

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

Observed	Potential	Species/Habitat/Comments	
Y	Y	lack throated green warbler, American robin, Black and white warbler, ovenbird, ruffed grous	
	Y	Mammals, herpetofauna, other avian species	

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

Observed	Potential	Species/Habitat
	Y	Aquatic insects
SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata	All strata present 🖌	All strata present,
	or bare due to	present but	and good	conservative species
	invasive species	reduced native	assemblage of	represented
		species	native species	
NHI plant community	S4	S31	S2	S1-S2 (S2 high quality)
ranking				
Relative frequency of	Abundant 🖌	Common	Uncommon	Rare
plant community in				
watershed				
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Fraxinus nigra*			PFO	Patchy
Populus tremuloides*			PFO	Patchy
Carex intumescens			PFO	Rare
Rubus pubescens			PFO	Rare
Abies balsamea			PFO	Rare
Betula papyrifera			PFO	Rare
Alnus incana			PFO	Barren
Athyrium filix-femina			PFO	Barren
Carex crinita			PFO	Barren
Cornus canadensis			PFO	Barren
llex verticillata			PFO	Barren
Prunus virginiana			PFO	Barren
Agrimonia cf. striata			PFO	Barren
Anemone quinquefolia			PFO	Barren
Carex gracillima			PFO	Barren
Cypripedium parviflorum			PFO	Barren
Equisetum arvense			PFO	Barren
Equisetum sylvaticum			PFO	Barren
Fragaria virginiana			PFO	Barren
Ribes triste			PFO	Barren

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

The floristic integrity was high due to an undisturbed and diverse assemblage of native plants.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The hardwood swamp is of higher quality and is relatively undisturbed.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The floristic integrity was high due to an undisturbed and diverse assemblage of native plants.
Human Use Values	The wetland is located within public land, but is somewhat far from the nearest road/trial. There is still a chance for it to be used for recreational activities.
Wildlife Habitat	The interspersion of habitat types could provide good habitat for mammals, birds, reptiles, amphibians, and aquatic insects.
Fish and Aquatic Life Habitat	The feature itself wasn't completely inundated, however there were numerous microdepressions with standing water. Those areas, in addition to woody debris and emergent vegetation, could provide habitat for amphibians and aquatic insects.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland was very extensive, with decently sloped transitions to the upland. There is a high potential for storm water storage.
Water Quality Protection	The wetland was large and has the potential to provide good water quality protection and filter precipitation inputs.
Groundwater Processes	The feature primarily exhibits groundwater recharge, although it is possible for more complex hydrology to be exhibited in parts of the feature due to its size.

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	Samplir	ng Date: <u>2020-06-06</u>
Applicant/Owner: Enbridge		State: Wisconsin Sam	pling Point: <u>wire1005_u1</u>
Investigator(s): DMP/ARK	Section, Township, Range:	sec 05 T045N R00 ²	1W
Landform (hillslope, terrace, etc.): <u>Rise</u>	_ Local relief (concave, convex, r	none): <u>None</u>	Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.407</u>	'436 Long: <u>-</u>	90.522613	Datum: WGS84
Soil Map Unit Name: Minocqua muck, 0 to 2 percen	nt slopes	NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes 🖌 No	_ (If no, explain in Remarks.))
Are Vegetation, Soil, or Hydrology significa	antly disturbed? Are "Norn	nal Circumstances" present?	Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturall	y problematic? (If needed	l, explain any answers in Rer	marks.)
SUMMARY OF FINDINGS – Attach site map show	ving sampling point locat	ions, transects, impo	rtant features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No	Is the Sampled Area	a Yes No	<u> </u>
Wetland Hydrology Present? Yes No	/ If yes, optional Wetla	nd Site ID:	
Remarks: (Explain alternative procedures here or in a separate of The upland sample plot was taken on a rise however no other wetland indicators were o	report.) within the landscape. bserved.	Hydrophytic vegeta	ation was met,

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wire1005_u1</u>

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	Species?	Status	Number of Dominant Species
1. <u>Populus tremuloides</u>	40	Y	FAC	That Are OBL, FACW, or FAC: (A)
2. <u>Fraxinus nigra</u>	5	N	FACW	Total Number of Dominant
3. <u>Acer rubrum</u>	5	N	FAC	Species Across All Strata: (B)
4. <u>Abies balsamea</u>	2	N	FAC	Percent of Dominant Species
5				That Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	52	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size:15)				FACW species <u>22</u> x 2 = <u>44</u>
1. <u>Fraxinus nigra</u>	5	Y	FACW	FAC species76 x 3 =228
2. <u>Ilex verticillata</u>	2	Y	FACW	FACU species <u>49</u> x 4 = <u>196</u>
3. Corvlus cornuta	2	Y	FACU	UPL species $0 \times 5 = 0$
4.				Column Totals: <u>147</u> (A) <u>468</u> (B)
5				Prevalence Index = B/A = <u>3.183673469387755</u>
6			·	Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
··		- Total Co	Vor	_∠ 2 - Dominance Test is >50%
Horb Stratum (Plot size: 5)		- 10(a) 00	vei	3 - Prevalence Index is ≤3.0 ¹
1 Mitcholla ropons	25	V	EACU	4 - Morphological Adaptations ¹ (Provide supporting
2 Triontalis boroalis	<u> </u>	 N	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Cornue considencia</u>	10	<u> </u>		
3. <u>Corrius carradensis</u>		<u>I</u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Rubus pubescens</u>	<u>10</u>	<u> </u>	FACW	be present, unless disturbed or problematic.
5. <u>Hieracium sp.</u>	<u> </u>	<u> </u>		Definitions of Vegetation Strata:
6. <u>Pteridium aquilinum</u>		<u> </u>	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Carex gracıllıma</u>	5	<u> </u>	FACU	at breast height (DBH), regardless of height.
8. <u>Linnaea borealis</u>		<u> </u>	FAC	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Osmunda claytoniana</u>	2	<u> </u>	FAC	and greater than or equal to 3.28 ft (1 m) fall.
10. <u>Milium effusum</u>	2	<u> N </u>	<u>FACU</u>	Herb – All herbaceous (non-woody) plants, regardless
11. <u>Carex pedunculata</u>	2	<u> N</u>	FAC	of size, and woody plants less than 3.26 it tail.
12			·	Woody vines – All woody vines greater than 3.28 ft in height
	91	= Total Co	ver	li sign.
Woody Vine Stratum (Plot size: <u>30</u>)				
1			·	
2			. <u> </u>	
3				Hydrophytic
4				Vegetation Prospet2 Vos v No
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)	T I -		
I ne vegetation is representative of the	upland.	The tre	e and s	nrub layer cause the plot to meet for
nyurophytic vegetation, however the he	ioeosan	us layer	is aomi	inaled by FACU species.

SOIL

Profile Desc	ription: (D	escribe t	to the dept	n needed to docun	nent the i	ndicator	or confirn	n the absence of	of indicators.)	
Depth (inches)	Color (Matrix	0/	Redox	K Feature	S Turne ¹		Taxtura	Р	omorko
(incries)			<u> </u>			<u>Type</u>			K	
0-12	<u>51</u> K	3/3	100		0		<u> </u>	L		
<u> </u>										
1 Type: C=Cc		n D=Denl	etion RM=	Reduced Matrix MS	S=Masker		ains	² Location:	PI =Pore Lining	n M=Matrix
Hvdric Soil I	ndicators:	1, D Dopi			maonee			Indicators	for Problematic	: Hvdric Soils ³ :
Histosol	(A1)			Polvvalue Belov	v Surface	(S8) (LR	RR.	2 cm M	uck (A10) (LRR	K. L. MLRA 149B)
Histic Ep	oipedon (A2	2)	-	MLRA 149B)		(00) (,	Coast F	Prairie Redox (A	16) (LRR K, L, R)
Black His	stic (A3)	,	_	Thin Dark Surfa	ce (S9) (I	.RR R, M	LRA 149B) 5 cm M	ucky Peat or Pe	at (S3) (LRR K, L, R)
Hydroge	n Sulfide (A	\ 4)	_	Loamy Mucky M	lineral (F	1) (LRR K	, L)	Dark Su	urface (S7) (LRF	₹ K, L)
<u> </u>	Layers (A	5)	_	Loamy Gleyed I	Matrix (F2)		Polyval	ue Below Surfac	e (S8) (LRR K, L)
Depleted	Below Da	rk Surface	e (A11)	Depleted Matrix	(F3)			Thin Da	ark Surface (S9)	(LRR K, L)
Thick Da	ark Surface	(A12)	_	Redox Dark Sui	face (F6)			Iron-Ma	inganese Masse	es (F12) (LRR K, L, R)
Sandy M	lucky Miner	ral (S1)	-	Depleted Dark S	Surface (F	7)		Piedmo	nt Floodplain So	oils (F19) (MLRA 149B)
Sandy G	ileyed Matri	ix (S4)	-	Redox Depress	ions (F8)			Mesic S	Spodic (TA6) (M	LRA 144A, 145, 149B)
Sandy R	edox (S5)	`						Red Pa	rent Material (F2	<u>2</u> 1)
Stripped	Matrix (50)							Very Sr	allow Dark Suri	ace (IFIZ)
			ILKA 143D							1185)
³ Indicators of	hvdrophyti	ic vegetati	ion and wet	land hvdrologv mus	t be prese	ent. unles	s disturbed	l or problematic.		
Restrictive L	aver (if ob	served):				,			·	
Type Ro	ncks	,								
Denth (inc	10	0						Hydric Soil I	Prosont? Vos	
Depth (Inc	cnes): <u>12.</u>	.0							resent: res	
Remarks:	avafila a					a al'a f	بر معالم م	lhan 10 in a		
The soll p	profile c	onsist	s of a br	own Ioam. U	nable	o aig r	urther	ran 12 mc	ines que to	a restrictive
rock laye	r. No hy	/dric so	oil indica	ators were ob	serve	d.				



wire1005_u1_NE



wire1005_u1_SW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Pro	Dject City/Co	ounty: Iron	Sampling Date: 2020-(<u>)6-08</u>	
Applicant/Owner: <u>Enbridge</u>			tate: <u>Wisconsin</u> Sampling Point: <u>wire1(</u>)05_u2	
Investigator(s): <u>DMP/ARK</u>	Sectio	n, Township, Range: <u>SEC</u>	05 T045N R001W		
Landform (hillslope, terrace, etc.): <u>Rise</u>	Local relie	ef (concave, convex, none):	None Slope (%): <u>0</u>	-2%	
Subregion (LRR or MLRA): Northcentral Fo	^{orests} Lat: <u>46.406144</u>	Long: <u>-90.5</u>	25958 Datum: <u>WG</u> \$	384	
Soil Map Unit Name: Wormet sandy	loam, 0 to 3 percent sl	opes	NWI classification: PFO1C		
Are climatic / hydrologic conditions on the sit	te typical for this time of year? Ye	es No (If r	o, explain in Remarks.)		
Are Vegetation, Soil, or Hydr	ology significantly disturb	ed? Are "Normal Ci	cumstances" present? Yes 🖌 No		
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attac	ch site map showing sam	pling point locations	, transects, important features,	etc.	
iummary of Findings – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No v Hydrophytic Soil Present? Yes No v If yes, optional Wetland? Yes No v Wetland Hydrology Present? Yes No v If yes, optional Wetland Site ID: Vo v Remarks: (Explain alternative procedures here or in a separate report.) The upland sample plot is located on a rise within the landscape. Hydrophytic vegetation was observed but no other wetland indicators were met.					
HYDROLOGY					
Wetland Hydrology Indicators:		<u>Se</u>	condary Indicators (minimum of two requi	red)	
Primary Indicators (minimum of one is requ	uired; 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)		

	•		`	
Μ	arl De	eposits	(B15)

	man Bope		•)	
	Hydrogen	Sulfide	Odor	(C

Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)

Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)

Iron Deposits (B5)	Thin Muck Surface (C7)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)
Energy Veretated Canadya Surface (D0)	

Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)						
ve Surface	e (B8)		_∠ FAC-Neutral Test (D5)			
Yes	No 🖌	Depth (inches):	_			
Yes	No 🖌	Depth (inches):	_			
Yes	No 🖌	_ Depth (inches):	Wetland Hydrology Present? Yes			
m gauge,	monitoring	well, aerial photos, previous ins	pections), if available:			
	ve Surface Yes Yes Yes n gauge,	ve Surface (B8) Yes No Yes No Yes No m gauge, monitoring v	ve Surface (B8) Yes No ✓ Depth (inches): Yes No _ ✓ Depth (inches): Yes No _ ✓ Depth (inches): m gauge, monitoring well, aerial photos, previous ins			

Remarks:

No primary indicators of wetland hydrology were observed.

No 🖌

VEGETATION – Use scientific names of plants.

Sampling Point: wire1005_u2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1 Acer saccharum	<u></u> 25	V		Number of Dominant Species
2. Fravinus pigra	_ <u>_ 25</u>	 		That are OBL, FACW, or FAC: 4 (A)
2. Pridxinus nigra		 		Total Number of Dominant
				Species Across Air Strata (B)
4		·	·	Percent of Dominant Species
5			·	
6			·	Prevalence Index worksheet:
7		·	·	Total % Cover of:Multiply by:
	60	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size:15)				FACW species <u>62</u> x 2 = <u>124</u>
1. <u>Fraxinus nigra</u>	25	Y	FACW	FAC species 25 x 3 = 75
2				FACU species 30 x 4 = 120
3			<u></u>	$\begin{array}{c} \text{OPL species} \underline{0} x_5 = \underline{0} \\ \text{Column Totals} 117 (A) 210 (B) \end{array}$
4				$\begin{array}{c} \text{Column rotals.} \\ \underline{} \\$
5.				Prevalence Index = B/A = 2.7264957264957266
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	25	- Total Co	vor	_∠ 2 - Dominance Test is >50%
Harb Stratum (Plat aiza: 5	_20	- 10(a) C0	vei	$_$ 3 - Prevalence Index is ≤3.0 ¹
1. Equisetum svlvaticum	10	Y	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2 Carex pedunculata	10	Ŷ	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Athyrium angustum	<u></u> 5	<u> </u>	FAC	
4. Carox gracillima	_ <u></u>			¹ Indicators of hydric soil and wetland hydrology must
	 	N		be present, unless disturbed or problematic.
5. <u>Rubus pubescens</u>		<u> </u>	FACW	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 beight
	32	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2.				
3.				Hydrophytic
4				Vegetation
		= Total Co	ver	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	sheet.)	10101 00		
The vegetation is representative of the	upland.	Hydrop	ohytic ve	egetation was met, however the
vegetation is significantly different from	n that of	the adja	acent we	etland.

Profile Des	cription: (Describe	to the dept	th needed to docum	nent the	indicator	or confirm	the absence of	indicators.)	
Depth	Matrix		Redox	k Feature	s					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-8	<u>10YR 2/1</u>	100		0			SCL			
8-14	7.5YR 3/1	100	4/4	1			SC			
		. <u> </u>								
		·								
		·								
		·								
¹ Type: C=C	oncentration D=Dep	letion RM=	Reduced Matrix MS	S=Maske	d Sand Gr	ains	² Location P	l =Pore Lini	ing M=Matri	ix
Hydric Soil	Indicators:		rioduood matin, me	maono			Indicators for	Problemat	tic Hydric S	oils ³ :
Histoso	I (A1)		Polyvalue Belov	v Surface	e (S8) (LR	RR,	2 cm Muc	k (A10) (LR	R K, L, MLF	RA 149B)
Histic E	pipedon (A2)		MLRA 149B)				Coast Pra	irie Redox (A16) (LRR	K, L, R)
Black H	istic (A3)		Thin Dark Surfa	ce (S9) (LRR R, M	LRA 149B)) 5 cm Muc	ky Peat or F	Peat (S3) (L l	RR K, L, R)
Hydroge	en Sulfide (A4)		Loamy Mucky N	lineral (F	1) (LRR K	, L)	Dark Surfa	ace (S7) (Ll	RR K, L)	
Stratille	d Layers (A5) d Below Dark Surfac	ο (Δ11)	Loamy Gleyed N	(F3)	2)		Polyvalue Thin Dark	Surface (S	ace (58) (LI 9) /I RR K I	KK K, L)
Thick D	ark Surface (A12)	6 (711)	Redox Dark Sur	(F3) face (F6))		Iron-Manc	anese Mas	ses (F12) (L	-) .RR K. L. R)
Sandy I	Mucky Mineral (S1)		Depleted Dark S	Surface (, F7)		Piedmont	Floodplain	Soils (F19) ((MLRA 149B)
Sandy (Gleyed Matrix (S4)		Redox Depressi	ions (F8)	,		Mesic Spo	odic (TA6) (I	MLRA 144A	, 145, 149B)
Sandy F	Redox (S5)						Red Pare	nt Material (F21)	
Stripped	d Matrix (S6)						Very Shal	low Dark Su	urface (TF12	2)
Dark Su	urface (S7) (LRR R, N	/LRA 149B	3)				Other (Ex	plain in Ren	narks)	
³ Indicators o	of hydrophytic vegetat	tion and we	tland hydrology mus	t be pres	ent, unless	s disturbed	or problematic.			
Restrictive	Layer (if observed):		, ,,	•	,		T			
Туре:										
Depth (in	ches):						Hydric Soil Pre	esent? Y	es	No 🖌
Remarks:	,									
The soil	profile consist	s of a d	ark sandy clav	y loan	n over a	a dark s	andy clay. N	No hydri	c soil ind	dicators
were obs	served.			•			<i>y y</i>			



wire1005_u2_NW



wire1005_u2_SE

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	_ City/County: Iron Sampling Date: 2020-05-25				
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wire1002f_w</u>				
Investigator(s): DMP/ARK	_ Section, Township, Range: <u>Sec 05 T045N R001W</u>				
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): Concave Slope (%): 0-2%				
Subregion (I BR or MI BA). Northcentral Forests Lat. 46 4106	17 Long -90.525416 Datum WGS84				
Soil Map Unit Name: Wormet sandy loam, 0 to 3 per	cent slopes NWI classification:				
Are climatic / hydrologic conditions on the site typical for this time of	vear? Yes ✔ No (If no, explain in Remarks.)				
Are Vegetation Soil or Hydrology significant	tlv disturbed? Are "Normal Circumstances" present? Yes ✔ No				
Are Vegetation Soil or Hydrology naturally	problematic? (If needed, evolution any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes 🖌 No	Is the Sampled Area				
Hydric Soil Present? Yes <u>v</u> No	within a Wetland? Yes <u>v</u> No				
Wetland Hydrology Present? Yes 🖌 No	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate re	port.)				
The feature is a hardwood swamp communit	y. Microdepressions and hummocks were observed				
throughout the feature.					
	Coopedary Indicators (minimum of two required)				
Drimony Indicators (minimum of one is required, check all that and	Surface Seil Creaks (PC)				
Primary indicators (minimum of one is required; check all that app	y) Surface Soli Cracks (B6)				
Sunace water (A1) water-Stand	Dialitage Patterns (B10)				
Saturation (A3)	s (B15) Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen S	ulfide Odor (C1) Cravfish Burrows (C8)				
Sediment Deposits (B2) Ovidized Bh	izospheres on Living Roots (C3) Saturation Visible on Aerial Imageny (C9)				
Drift Deposits (B3)	Reduced Iron (C4) Stunted or Stressed Plants (D1)				
Drill Deposits (D3) Presence of Reduced from (C4) Stunied of Stressed Plants (D1)					
Iron Denosits (B5)	urface (C7) Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Expla	in in Remarks)				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No 🗸 Depth (inch	es):				
Water Table Present? Yes v No Depth (inch	es): 2				
Saturation Present? Yes <u>~</u> No <u>Depth</u> (inch (includes capillary fringe)	es): 0 Wetland Hydrology Present? Yes No				
Saturation Present? Yes _ No Depth (inch (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial phone)	es): 0 Wetland Hydrology Present? Yes v No otos, previous inspections), if available:				

Remarks:

The hydrologic regime is seasonally saturated. The water table was observed 2 inches below the surface. Some microdepressions within the feature were inundated at the time of survey.

VEGETATION – Use scientific names of plants.

Sampling Point: wire1002f_w

	Absolute	Dominan	t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	<u>Species?</u>	<u>Status</u>	Number of Dominant Species
1. <u>Acer rubrum</u>	25	<u> </u>	FAC	That Are OBL, FACW, or FAC: (A)
2. <u>Populus tremuloides</u>	25	<u> </u>	FAC	Total Number of Dominant
3. <u>Fraxinus nigra</u>	25	Y	FACW	Species Across All Strata:6_ (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 83 (A/B)
6			<u> </u>	Prevalence Index worksheet
7				Total % Cover of Multiply by
	75	= Total Co	ver	$\frac{1}{\text{OBL species}} = 25 \text{ x 1} = 25$
Sapling/Shrub Stratum (Plot size: 15)				FACW species 34 x 2 = 68
1 Corvlus cornuta	5	Y	FACU	FAC species <u>50</u> x 3 = <u>150</u>
2 llex verticillata	<u> </u>	 		FACU species <u>6</u> x 4 = <u>24</u>
		I		UPL species x 5 =
3				Column Totals: <u>115</u> (A) <u>267</u> (B)
4				Prevalence Index = $B/A = 2.3217391304347825$
5			<u> </u>	Hydrophytic Vegetation Indicators
o				1 - Rapid Test for Hydrophytic Vegetation
/				2 - Dominance Test is >50%
_		= Total Co	over	\checkmark 3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Carex crinita</u>	25	Y	OBL	data in Remarks or on a separate sheet)
2. <u>Rubus pubescens</u>	2	<u> N</u>	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Equisetum pratense</u>	2	N	FACW	¹ Indicators of hydric soil and watland hydrology must
4. <u>Pyrola elliptica</u>	1	N	FACU	be present, unless disturbed or problematic.
5			<u> </u>	Definitions of Vegetation Strata:
6				
7				at breast height (DBH), regardless of height.
8				Sanling/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
	30	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1.				
2				
3				Hudronhutio
0				Vegetation
4		- Total Ca	- <u></u>	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	U		wei	
The vegetation is representative of the	ALLERY 1			
	hardwo	od swa	mp. Tree	e layeris dominated by black ash,
quaking aspen and red maple. The shr	hardwo ub layer	od swa [.] has sp	mp. Tree arse cov	e layeris dominated by black ash, ver of winterberry and beaked hazel.

Profile Des	cription: (Descri	be to the de	oth needed to	o docum	ent the in	ndicator	or confirm	the absence	of indicators.)
Depth	Matri	x		Redox	Features				
<u>(inches)</u>	Color (moist)	%	Color (mo	oist)	%	Type'	Loc ²	Texture	Remarks
0-4	<u>10YR 2/</u>	<u>1 100</u>			0			CL	
4-20	10YR 3/	1 90	7.5YR	4/4	10	С	Μ	CL	
	<u></u>		<u></u>		v_				
——									
							·		
				<u> </u>		. <u> </u>			
¹ Type: C=C	oncentration, D=[Depletion, RM	Reduced Ma	atrix, MS	=Masked	Sand Gra	ains.	² Location	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:	<i>,</i>		,		-		Indicators	for Problematic Hydric Soils ³ :
Histosol	l (A1)		Polyvalı	ue Below	Surface	(S8) (LR	RR,	2 cm M	1uck (A10) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)		MLR	A 149B)				Coast	Prairie Redox (A16) (LRR K, L, R)
Black H	istic (A3)		Thin Da	rk Surfac	ce (S9) (L	RR R, M	LRA 149B)	5 cm M	Nucky Peat or Peat (S3) (LRR K, L, R)
Hydroge Stratifie	d Lavers (A5)			NUCKY IVI Gloved M	Ineral (F1 Iatrix (F2)) (LRR K	, L)	Dark S	UITACE (S7) (LRR K, L)
Otratilie	d Below Dark Sur	face (A11)	Deplete	d Matrix	(F3)			Thin D	ark Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)		Redox [Dark Surf	face (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Sandy M	Aucky Mineral (S ²	1)	Deplete	d Dark S	urface (F	7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy C	Gleyed Matrix (S4)	Redox [Depressio	ons (F8)			Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)							Red Pa	arent Material (F21)
Stripped	d Matrix (S6)							Very S	hallow Dark Surface (TF12)
Dark Su	Inace (S7) (LRR I	R, MLRA 149	в)					Other (Explain in Remarks)
³ Indicators o	of hvdrophytic vea	etation and w	etland hvdrolo	oav must	be prese	nt. unles	s disturbed	or problematic	2.
Restrictive	Layer (if observe	ed):	,	57	•	,			
Туре:									
Depth (in	ches):							Hydric Soil	Present? Yes <u><</u> No
Remarks:									
The soil	profile cons	ists of a o	dark clav	loam.	Redo	x cond	entratio	ons were d	observed throughout the
second I	aver Redox	Chark Si	irface wa	s met					3
o o o o na n				0	-				



wire1002f_w_N



wire1002f_w_W

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

Project name:	Evaluator(s):	
Line 5 Relocation Project	ARK/DMP	
File #:	Date of visit(s):	
wire1002	2020-05-25	
Location:	Ecological Landsca	ape:
PLSS: sec 05 T045N R001W	Superior Mineral Benge	
	Superior Mineral Ranges	5
Lat: 46.410617 Long: -90.525416	Watershed:	
•	LS13, Tyler Forks	
County: Iron Town/City/Village: Anderson town		
· · · · · · · · · · · · · · · · · · ·		
SITE DESCRIPTION		
Soils:	WWI Class:	
Mapped Type(s):	N/A	
Wormet sandy loam 0 to 3 percent slopes	Wetland Type(s)	
reality reality to be percent depec	PFO - hardwood	1 swamp
Field Verified:		, on amp
Soil series not verified. Profile is dark clav loam	Wetland Size	Wetland Area Impacted
with reday below 1 inches	0 0254	
	Vegetation:	0.0204
	Diant Community F	Description(a):
Hydrology:		Description(s).
Seasonally saturated basin receiving overland	Hardwood swan	np dominated by red maple
Seasonally saturated basin receiving overland	and quaking asp	ben. Black ash was domimant
flow from surrounding upland forest.	in the understory	v. The herb laver was sparse.
		, <u> </u>

SITE MAP

SECTION 1: Functional Value Assessment

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

HU-4, -6: Part of a large forest preserve with potential habitat for diverse rare species. WH-7: Potential habitat for bird species requiring large tracts of unfragmented forest. WH-10: Standing water has potential to support aquatic invertebrates. FA-2: Potential habitat for amphibians. WQ-2, -3: Basin receives overland flow from adjacent forest.

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

Observed	Potential	Species/Habitat/Comments
	Y	Potential habitat for birds requiring large tracts of unfragmented forest
	Y	Potential habitat for amphibians

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

Observed	Potential	Species/Habitat
	Y	Potential habitat for aquatic invertebrates.

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Acer rubrum*			PFO	Patchy
Fraxinus nigra*			PFO	Patchy
Populus tremuloides*			PFO	Patchy
Carex crinita			PFO	Rare
Caltha palustris			PFO	Rare
llex verticillata			PFO	Rare
Pyrola elliptica			PFO	Rare
Rubus pubescens			PFO	Rare
Corylus cornuta			PFO	Barren
Equisetum pratense			PFO	Barren

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

The floristic integrity is moderate to high. The wetland as a whole is small and has a moderate diversity of native species, but the smaller portion included within the survey area had a more limited diversity. Invasive species were absent.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

Wetland is in good condition.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Wetland is small and supports a lower diversity of native species than similar nearby wetlands. Invasive or exotic species are absent
Human Use Values	The wetland is part of a large forest preserve that is used for hunting, with potential for casual or scientific nature study.
Wildlife Habitat	Large forest preserve has high potential to support diverse wildlife species.
Fish and Aquatic Life Habitat	Conditions are suitable for aquatic invertebrates.
Shoreline Protection	N/A
Flood and Stormwater Storage	Small basin has small capacity.
Water Quality Protection	Potential to protect water quality, but for a small acreage.
Groundwater Processes	The wetland appears to support groundwater recharge.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/Cour	nty: <u>Iron</u>	Sa	mpling Date: <u>2020-05-25</u>
Applicant/Owner: Enbridge			State: Wisconsin	Sampling Point: <u>wire1002_u</u>
Investigator(s): DMP/ARK	Section,	Township, Range: Se	ec 05 T045N R	2001W
Landform (hillslope, terrace, etc.): Rise	Local relief (concave, convex, non	e): None	Slope (%): 0-2%
Subregion (I BR or MI BA) Northcentral Forests	t 46 410539	Long -90	525452	Datum ⁻ WGS84
Soil Map Unit Name: Wormet sandy loam.	0 to 3 percent slop)es	NWI classificatio	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	significantly disturbed	2 Are "Normal	Circumstances" pres	ent? Ves 🖌 No
Are Vegetation, Soil, or Hydrology			volain any answers in	Remarks)
SUMMARY OF FINDINGS - Attach site	man showing sampli	ing point locatio	ne transacte in	nortant foaturos oto
				inportant leatures, etc.
Hydrophytic Vegetation Present? Yes 🗸	No Is	the Sampled Area	Voc	
Hydric Soil Present? Yes	No		165	
Wetland Hydrology Present? Yes	<u>No </u> If <u>y</u>	yes, optional Wetland	Site ID:	
The upland sample plot was taken	upslope of the we	tland, Hydroph	vtic vegetation	n was met, but the
herbaceous vegetation at the same	ble plot is verv diffe	erent from that	of the wetland	. No other wetland
narameters were observed				
parameters were observed.				
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators	s (minimum of two required)
Primary Indicators (minimum of one is required; che	ck all that apply)		Surface Soil Cra	cks (B6)
Surface Water (A1)	Water-Stained Leaves (E	39)	Drainage Patterr	ns (B10)
High Water Table (A2)	_ Aquatic Fauna (B13)	,	Moss Trim Lines	(B16)
Saturation (A3)	Marl Deposits (B15)		Dry-Season Wat	ter Table (C2)
Water Marks (B1)	_ Hydrogen Sulfide Odor (C1)	Crayfish Burrows	s (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres of	on Living Roots (C3)	Saturation Visibl	e on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iro	on (C4)	Stunted or Stress	sed Plants (D1)
Algal Mat or Crust (B4)	_ Recent Iron Reduction in	Tilled Soils (C6)	Geomorphic Pos	sition (D2)
Iron Deposits (B5)	_ Thin Muck Surface (C7)		Shallow Aquitarc	d (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remark	ks)	Microtopographic	c Relief (D4)
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Tes	st (D5)
Field Observations:				
Surface Water Present? Yes No _	_ Depth (inches):			
Water Table Present? Yes No _	_ Depth (inches):			
Saturation Present? Yes <u>No </u>	Depth (inches):	Wetland H	ydrology Present?	Yes No
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previou	us inspections), if avai	lable:	
	, , ,	1 <i>//</i>		
Remarks:	ware cheering			
No indicators of wetland hydrology	were observed.			

VEGETATION – Use scientific names of plants.

Sampling Point: wire1002_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan Species?	t Indicator	Dominance Test worksheet:
1. Populus tremuloides	<u>35</u>	V		Number of Dominant Species
2 Acor rubrum	<u> </u>	 		Inat Are OBL, FACW, or FAC: <u>3</u> (A)
				Total Number of Dominant
		IN	TACM	$\frac{1}{2}$
4		·		Percent of Dominant Species
5		·		
6		·		Prevalence Index worksheet:
7		·		Total % Cover of:Multiply by:
	50	= Total Co	over	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species 12 $x^2 = 24$
1. <u>Fraxinus nigra</u>	5	<u>Y</u>	<u>FACW</u>	FAC species 50 $x_3 = 150$
2. <u>Corylus cornuta</u>	5	<u> </u>	FACU	FACU species 37 $x = 148$
3				Column Totals: 99 (A) 322 (B)
4				
5		·		Prevalence Index = $B/A = 3.25252525252525252525252525252525252525$
6		· ·		Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	10	= Total Co	over	∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹
1 Mitchella repens	25	Y	FACU	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2 Trientalis borealis	5	N	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Majanthemum canadense	<u> </u>	 N	FACU	
	<u> </u>	N		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Fruitus Virginiaria</u>		N		be present, unless disturbed or problematic.
				Definitions of Vegetation Strata:
6		·		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
/		·		at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9		·		and greater than or equal to 3.28 it (1 m) tall.
10		·		Herb – All herbaceous (non-woody) plants, regardless
11				
12		·		Woody vines – All woody vines greater than 3.28 ft in height
	39	= Total Co	over	
Woody Vine Stratum (Plot size: <u>30</u>)				
1		·		
2				
3		·		Hydrophytic
4				Vegetation Present? Yes v No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)			
I ne vegetation is representative of the	upland.	Hyaro		egetation was met because of the
Tacultative species in the tree layer. Th	e nerba	ceous I	ayer is h	ιοι πγατορηγιίο.

SOIL

Profile Desc	ription: (Describe	to the depth	n needed to document the indicator or confirm	the absence of indi	cators.)
Depth (inches)	Matrix Color (moist)	%	<u></u>	Texture	Remarks
0-11	<u>10YR 2/2</u>	100	0	SL	
11-20	5YR 3/4	100	0	SL	
	-			,	
·					
¹ Type: C=C	oncentration, D=Dep	oletion, RM=F	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=F	ore Lining, M=Matrix.
Hydric Soil	Indicators:		Debashing Debase Quife and (202) (I DD D	Indicators for Pro	blematic Hydric Soils ³ :
Histosol Histic Er	(AT) pipedon (A2)	-	MLRA 149B)	Coast Prairie	Redox (A16) (LRR K, L, R)
Black Hi	stic (A3)	_	Thin Dark Surface (S9) (LRR R, MLRA 149B)	5 cm Mucky F	Peat or Peat (S3) (LRR K, L, R)
Hydroge Stratified	en Sulfide (A4) d Lavers (A5)	-	Loamy Mucky Mineral (F1) (LRR K, L)	Dark Surface Polyvalue Bel	(S7) (LRR K, L) ow Surface (S8) (LRR K, L)
Depleted	d Below Dark Surfac	e (A11)	Depleted Matrix (F3)	Thin Dark Sur	face (S9) (LRR K, L)
Thick Da	ark Surface (A12)	-	Redox Dark Surface (F6)	Iron-Mangane	edulain Saila (E10) (LRR K, L, R)
Sandy N Sandy G	Gleved Matrix (S4)	-	Redox Depressions (F8)	Mesic Spodic	(TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)	_		Red Parent M	aterial (F21)
Stripped	l Matrix (S6) rface (S7) (I BB B I			Very Shallow Other (Explain	Dark Surface (TF12)
					Thirtemano)
³ Indicators o	f hydrophytic vegeta	tion and wetl	and hydrology must be present, unless disturbed o	or problematic.	
Type:	Layer (II observed)	•			
Depth (in	ches) [.]			Hydric Soil Prese	nt? Yes No 🖌
Remarks:				-	
The soil	profile consist	ts of dry	sandy loam. No hydric soil indicat	ors were obse	erved.



wire1002_u_SE

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: <u>Iron</u>	Sampling Date: <u>2020-06-06</u>
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Sampling Point: <u>wire1004f_w</u>
Investigator(s): DMP/ARK	Section, Township, Range	sec 05 T045N R001W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex,	none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.408	557 Long: -	90.521831 Datum: WGS84
Soil Map Unit Name: Minocqua muck, 0 to 2 percent	t slopes	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time o	f year? Yes <u>✓</u> No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? Are "Nor	mal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If neede	d, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ing sampling point loca	itions, transects, important features, etc.
Hydrophytic Vegetation Present? Yes _ No Hydric Soil Present? Yes _ No	Is the Sampled Are within a Wetland?	ea Yes∕No
Wetland Hydrology Present? Yes <u> Ves No</u>	If yes, optional Wetl	and Site ID:
The feature is a hardwood swamp that occu was observed throughout the feature.	rs within a depressio	n in the landscape. Standing water
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	ly)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stain	ed Leaves (B9)	Drainage Patterns (B10)
_ ✓ High Water Table (A2) _ Aquatic Fau	ına (B13)	Moss Trim Lines (B16)

	•			•	
	Marl	De	posits	(B1	5)

	Marl Deposits (B15)
_	Hydrogen Sulfide Odor (C1)

Saturation (A3)	Mari Deposits (B15)	Dry-Season water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	_ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)

Field Observations:		
Surface Water Present?	Yes No 🖌 Depth (inches):	
Water Table Present?	Yes <u>v</u> No <u>Depth (inches): 1</u>	
Saturation Present? (includes capillary fringe)	Yes <u>v</u> No <u>Depth (inches)</u> : <u>0</u>	Wetland Hydrology Present? Yes <u>< No</u> No

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

Remarks:

Saturation (A3)

The hydrologic regime is seasonally saturated. The water table was observed just below the surface at the sample point. Standing water was observed throughout the wetland.

_ Dry-Season Water Table (C2)

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wire1004f_w</u>

	Absolute	Dominan	t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	Species?	<u>Status</u>	Number of Dominant Species
1. <u>Fraxinus nigra</u>	_ <u>_ 50</u>	<u> </u>	FACW	That Are OBL, FACW, or FAC: (A)
2. <u>Populus tremuloides</u>	5	<u> </u>	<u>FAC</u>	Total Number of Dominant
3. <u>Acer rubrum</u>	5	<u> N </u>	FAC	Species Across All Strata:5_ (B)
4		·		Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6		·	<u> </u>	Prevalence Index worksheet:
7		·		Total % Cover of:Multiply by:
	60	= Total Co	over	OBL species <u>37</u> x 1 = <u>37</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>66</u> x 2 = <u>132</u>
1. <u>Fraxinus nigra</u>	5	Y	FACW	FAC species X 3 =3
2. Ilex verticillata	5	Y	FACW	FACU species x 4 =8
3.				UPL species <u>0</u> x 5 = <u>0</u>
4		· · · · · · · · · · · · · · · · · · ·		Column Totals: <u>116</u> (A) <u>210</u> (B)
5				Prevalence Index = B/A = <u>1.81</u>
6				Hydrophytic Vegetation Indicators:
7				 1 - Rapid Test for Hydrophytic Vegetation
/·	10			\sim 2 - Dominance Test is >50%
E S			over	3 - Prevalence Index is ≤3.0 ¹
<u>Herb Stratum</u> (Plot size: <u>5</u>)	25	Y	OBI	4 - Morphological Adaptations ¹ (Provide supporting
2 Carex lentalea	<u>0</u>	 		Problematic Hydrophytic Vegetation ¹ (Explain)
$\frac{2}{3} Pop sp$	_ <u>_ 10</u> 5	 		
5. <u>Foasp.</u>	<u> </u>	<u> </u>	EACU	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Carex gracillina</u>		N		be present, unless disturbed or problematic.
5. <u>Onoclea sensibilis</u>		<u> </u>		Definitions of Vegetation Strata:
6. <u>Equisetum sylvaticum</u>		<u> </u>	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Solidago gigantea</u>		<u> </u>	FACW	at breast height (DBH), regardless of height.
8. <u>Caltha palustris</u>	2	<u> </u>	OBL	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Cypripedium parviflorum</u>	1	<u>N</u>	FAC	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		·		Weedu vince All weedu vince greater than 2.29 ft in
12				height.
	51	= Total Co	over	
Woody Vine Stratum (Plot size: <u>30</u>)				
1		·		
2		·		
3		·		Hydrophytic
4		·	<u> </u>	Vegetation Present? Yes ✔ No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)			nington the persony while fringed
The vegetation is representative of the	welland	J. BIACK	asn dor	ninates the canopy while innged
seuge and phole-staiked seuge domin				сı.

SOIL

Profile Desc	ription: (I	Describe t	o the dep	oth needed	to docun	nent the i	indicator	or confirm	n the absence	of indicators.)
Depth		Matrix			Redo	x Feature	s			
(inches)	Color ((moist)	%	<u>Color (r</u>	noist)	%	Type ¹	Loc ²	Texture	Remarks
0-5	5YR	3/2	100			0			CL	
5-18	5YR	4/2	90	<u>7.5YR</u>	4/6	10	C	M	SCL	
18-20	5YR	4/4	100			0			FS	
							·			
		<u> </u>				·				
							·			
						·	·			
						· . <u></u>	·			
						·				
						·	·			
¹ Type: C=Co	oncentratio	n, D=Depl	etion, RM	Reduced N	/atrix, MS	S=Masked	Sand Gra	ains.	² Location	1: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators	:							Indicators	for Problematic Hydric Soils":
Histosol	(A1) Ninodon (A1	ור		Polyva		w Surface	(S8) (LR F	RR,	2 cm N	Muck (A10) (LRR K, L, MLRA 149B)
Black Hi	stic (A3)	2)		Thin D	ark Surfa) Ice (S9) (I		RA 149B) 5 cm N	Vlucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	n Sulfide (/	A4)		Loamy Mucky Mineral (F1) (LRR K, L)					, <u> </u>	Surface (S7) (LRR K, L)
Stratified Layers (A5) Loan				Loamy	∟oamy Gleyed Matrix (F2)					alue Below Surface (S8) (LRR K, L)
_ Depleted Below Dark Surface (A11) _ Deplete			ed Matrix	: (F3)			Thin D	Jark Surface (S9) (LRR K, L)		
Thick Dark Surface (A12)			Redox	Dark Su	rface (F6)			Iron-M	anganese Masses (F12) (LRR K, L, R)	
Sandy Mucky Mineral (S1)			Deplet	ed Dark S	Surface (F	-7)		Piedm	ont Floodplain Soils (F19) (MLRA 149B) Specie (TA6) (MLBA 144A 145 149B)	
Sandy G	edox (S5)	IX (34)			Depress				Red P	arent Material (F21)
Stripped Matrix (S6)									Very S	Shallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 149			B)					Other	(Explain in Remarks)	
2										
°Indicators of	f hydrophyt	ic vegetati	ion and w	etland hydro	ology mus	t be prese	ent, unless	disturbed	or problemation	o
Restrictive	Layer (if of	oserved):								
Type:									Undelse O ell	
Depth (ind	ches):								Hyaric Soli	Present? Yes <u>v</u> No
Remarks:	a nafila a			امتار مامر			مامیمام			
I ne soli	profile c	consists	sorac	ark clay	/ ioam	over a	a depie	ted sar	ndy clay io	am and a red fine sand.
Redox w	as obse	erved ti	hrough	out the	middle	e layer	and tw	o hydri	ic indicato	rs were met.



wire1004f_w_SE



wire1004f_w_SW

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	DMP/ARK		
File #:	Date of visit(s):		
wire1004	2020-06-06		
Location:	Ecological Landsca	ape:	
PLSS: sec 05 T045N R001W	North Control Forost		
	North Central Polest		
Lat: <u>46.408492</u> Long: <u>-90.521858</u>	Watershed:		
	LS13, Tyler Forks		
County: <u>Iron</u> Town/City/Village: <u>Anderson town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	тзк		
Minocqua muck, 0 to 2 percent slopes	Wetland Type(s):		
	PFO - Hardwood swamp		
Field Verified:		·	
The soil profile was not verified. The soil profile consisted of a	Wetland Size:	Wetland Area Impacted	
dark clay loam over a depleted sandy clay loam and a red	1.1692	1.1692	
sand. Redox was observed throughout the middle layer and	Vegetation:		
depleted matrix was met.	Plant Community Description(s):		
Hydrology:	The vegetation is fairly uniform throughout the wetland.		
The hydrologic regime is seasonally saturated. The water	Black ash dominated the canopy while fringed sedge and		
table was observed just below the soil surface at the	bristle stalked sedge dominated the herbaceous laver.		
sample point. Standing water was observed throughout	although the herbaceous layer itself is somewhat sparse		
the wetland.	and varied.		

SITE MAP

SECTION 1: Functional Value Assessment

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

Section 1 Comments (Refer to Section 1 numbers)

HU-1: The wetland is located within county land, and it is possible that the wetland could be used for birding, hunting, or hiking.

HU-4: The wetland is aesthetically pleasing due to ecological integrity.

WH-2: Observed a tree, shrub and herbaceous layer throughout the wetland. WH-7: A variety of different bird species are present in and around the wetland.

- WH-10: Standing water within the micodepressions could be utilized by amphibians and aquatic insects.
- FA-4: There was standing water observed throughout the wetland.

ST-1: The feature is a basin wetland.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	American robin, black and white warbler, ovenbird, black throated green warbler, woodpecke
	Y	Mammals, herpetofauna, other avian species
Y	Y	Toad

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

Observed	Potential	Species/Habitat
	Y	Aquatic insects

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata 🛛 🗌	All strata present 🖌	All strata present,
	or bare due to	present but	and good	conservative species
	invasive species	reduced native	assemblage of	represented
		species	native species	
NHI plant community	S4	S3V	S2	S1-S2 (S2 high quality)
ranking				
Relative frequency of	Abundant 🖌	Common	Uncommon	Rare
plant community in				
watershed				
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Fraxinus nigra*			PFO	Interrupted
Populus tremuloides*			PFO	Rare
Acer rubrum			PFO	Rare
Carex crinita			PFO	Rare
Carex gracillima			PFO	Rare
Equisetum arvense			PFO	Rare
llex verticillata			PFO	Rare
Carex stipata			PFO	Barren
Dryopteris intermedia			PFO	Barren
Onoclea sensibilis			PFO	Barren
Packera aurea			PFO	Barren
Viburnum lentago			PFO	Barren
Actaea sp.			PFO	Barren
Athyrium filix-femina			PFO	Barren
Cardamine pensylvanica			PFO	Barren
Carex intumescens			PFO	Barren
Carex leptalea			PFO	Barren
Carex tenera			PFO	Barren
Clematis virginiana			PFO	Barren
Cypripedium parviflorum			PFO	Barren
Equisetum sylvaticum			PFO	Barren
Glyceria cf. striata			PFO	Barren
Impatiens capensis			PFO	Barren
Poa sp.			PFO	Barren
Ranunculus abortivus			PFO	Barren
Solidago gigantea			PFO	Barren
Symphyotrichum puniceum			PFO	Barren
Trillium cernuum			PFO	Barren

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

The floristic integrity of the wetland is high due to good diversity and lack of disturbance. In addition to that, there were no non-native species present.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The hardwood swamp is of moderate quality, and is relatively undisturbed by any stressors.
SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The floristic integrity of the wetland is high due to good diversity, and lack of disturbance. In addition to that, there were no non-native species present.
Human Use Values	The wetland is a distance away from the trail/road, so there is a small chance that it could be used for recreational activities. It is possible since it is located within public land.
Wildlife Habitat	The interspersion of habitat types provide good habitat for mammals, birds, reptiles, amphibians, and insects.
Fish and Aquatic Life Habitat	There were pockets of surface water, along with woody debris and emergent vegetation, that could support aquatic invertebrates.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is moderately sized, with decently sloped transitions to the upland. There is a high potential for stormwater storage.
Water Quality Protection	The wetland moderately sized and has good potential for water quality protection.
Groundwater Processes	Groundwater recharge feature.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: <u>Iron</u>	Sampling	Date: 2020-06-06
Applicant/Owner: Enbridge		_ State: <u>Wisconsin</u> Samplir	ng Point: <u>wire1004_u</u>
Investigator(s): <u>ARK/DMP</u>	Section, Township, Range: <u>S</u>	<u>ec 05 T045N R001V</u>	N
Landform (hillslope, terrace, etc.): <u>Rise</u>	Local relief (concave, convex, nor	ne): <u>None</u>	Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.4087	726 Long: <u>-90</u>	.521991	Datum: WGS84
Soil Map Unit Name: Wormet sandy loam, 0 to 3 per	cent slopes	NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time o	f year? Yes No ((If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology signification	ntly disturbed? Are "Normal	Circumstances" present? Y	∕es No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, e	xplain any answers in Rema	irks.)

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

Hydrophytic Vegetation Present?	Yes	No	Is the Sampled Area
Hydric Soil Present?	Yes	No	within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No 🖌	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed	dures here or in	a separate report.)	
Mesic hardwood forest su	Jrrounds th	e wetland.	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living 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 <u>v</u> Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ Depth (include): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No Depth (include). (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No Depth (include). (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ Depth (include). (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ Depth (include). (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ Depth (include). (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ Depth (inches): [includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No

VEGETATION – Use scientific names of plants.

Sampling Point: wire1004_u

	Absolute	Dominant	t Indicator	Dominance Test worksheet:
<u>Iree Stratum</u> (Plot size: <u>30</u>)	% Cover	Species?		Number of Dominant Species
1. <u>Acer saccharum</u>	40	<u> </u>	FACU	That Are OBL, FACW, or FAC: (A)
2. <u>Populus grandidentata</u>	40	<u> </u>	FACU	Total Number of Dominant
3. <u>Acer rubrum</u>	<u>10</u>	<u> </u>		Species Across All Strata: (B)
4. <u>Abies balsamea</u>	5	N	FAC	Percent of Dominant Species
5				
6			<u> </u>	Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
	95	= Total Co	over	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species $10 \times 2 = 20$
1. <u>Fraxinus nigra</u>	10	<u> </u>	<u>FACW</u>	FAC species 25 $x_3 = 75$
2. <u>Corylus cornuta</u>	5	<u> Y </u>	<u>FACU</u>	$\frac{107}{107} \times 7 = \frac{120}{107}$
3. <u>Lonicera canadensis</u>	5	Y	FACU	Column Totals: <u>144</u> (A) <u>533</u> (B)
4. <u>Amelanchier sp.</u>	2	N		
5. <u>Quercus rubra</u>	1	N	<u>FACU</u>	Prevalence Index = B/A = <u>3.701388888888888888</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	23	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)				3 - Prevalence Index is ≤3.0°
1. <u>Carex pedunculata</u>	10	Y	FAC	data in Remarks or on a separate sheet)
2. <u>Pteridium aquilinum</u>	10	Y	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Mitchella repens</u>	3	N	FACU	
4. <u>Eurybia macrophylla</u>	2	N	UPL	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Maianthemum canadense	1	N	FACU	Definitions of Vegetation Strata:
6. Carex gracillima	1	N	FACU	Deminions of Vegetation Strata.
7. Pvrola elliptica	1	N	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height
8. Orvzopsis asperifolia	1	N		
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
·	29	= Total Co		height.
Woody Vine Stratum (Plot size: 30)		- 1000100		
1				
1				
2				
3				Hydrophytic Vegetation
4			. <u> </u>	Present? Yes No 🗸
Remarks: (Include photo numbers here or on a separate	<u> </u>		iver	
Mesic hardwood forest.	511001.)			

I

Profile Desc	cription: (Describe	to the depth	n needed to docum	nent the	indicator or	confirm	the absence of indica	tors.)
Depth	Matrix		Redox	<pre>K Feature</pre>	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7	<u>10YR 2/1</u>	100		0			L	
7-20	7.5YR 3/4	100		0			SII	
	<u>1.0110/1</u>							
		·					·	
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		·					·	
		. <u></u>			<u> </u>			
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		·						
		·						
'Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, MS	S=Masked	d Sand Grain	IS.	Location: PL=Por	e Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators for Probl	lematic Hydric Soils":
Histosol	(A1)	_	Polyvalue Belov	v Surface	e (S8) (LRR F	ર ,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Ep	pipedon (A2)		MLRA 149B)				Coast Prairie Re	edox (A16) (LRR K, L, R)
Black Hi	ISTIC (A3)	-	_ Thin Dark Surfa	ce (S9) (I linoral (E		A 149B)	5 cm Mucky Pea	at or Peat (S3) (LRR K, L, R)
Hydroge Stratifio	d Lavors (A5)	_	_ Loamy Gloved N	Ineral (F Actrix (E2	1) (LKK K, L 2)	.)	Dark Surface (S	$(\mathbf{LRR}, \mathbf{L})$
Stratified	d Below Dark Surface		Depleted Matrix	(E3)	-)		Thin Dark Surfac	r = (SQ) (IRR K I)
Depicted	ark Surface (A12)		Bedox Dark Sur	(F6) face (F6))		Iron-Manganese	Masses (F12) (IRR K I R)
Sandy M	/uckv Mineral (S1)		Depleted Dark S	Surface (F	, =7)		Piedmont Flood	plain Soils (F19) (MLRA 149B)
Sandy G	Gleved Matrix (S4)	_	Redox Depressi	ons (F8)	.,		Mesic Spodic (T	A6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)			()			Red Parent Mate	erial (F21)
Stripped	Matrix (S6)						Very Shallow Da	ark Surface (TF12)
Dark Su	rface (S7) (LRR R, M	ILRA 149B)					Other (Explain ir	n Remarks)
³ Indicators o	f hydrophytic vegetat	tion and wetl	and hydrology mus	t be pres	ent, unless d	isturbed	or problematic.	
Restrictive	Layer (if observed):							
Type:								
Depth (in	ches):						Hydric Soil Present?	Yes No
Remarks:								
Dark loai	m over red-bro	own silt l	oam.					



wire1004_u_E



wire1004_u_NW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron	San	npling Date: <u>2020-06-06</u>
Applicant/Owner: Enbridge		State: Wisconsin S	ampling Point: <u>wire1003f_w</u>
Investigator(s): DMP/ARK	Section, Township,	Range: <u>sec 05 T045N R(</u>	001W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, c	convex, none): <u>Concave</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.4	409855 I	_ong: <u>-90.523634</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Wormet sandy loam, 0 to 3	percent slopes	NWI classification	: <u>PFO1C</u>
Are climatic / hydrologic conditions on the site typical for this t	time of year? Yes <u> </u>	o (If no, explain in Remar	ks.)
Are Vegetation, Soil, or Hydrology sig	nificantly disturbed? A	re "Normal Circumstances" prese	nt? Yes 🖌 No
Are Vegetation, Soil, or Hydrology nat	turally problematic? (I	f needed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS – Attach site map sl	howing sampling poin	t locations, transects, im	portant features, etc.
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No Wetland Hydrology Present? Yes ✓ No	Is the Samp within a We	led Area tland? Yes <u>✓</u> I	No
Remarks: (Explain alternative procedures here or in a sepa The hardwood swamp occurs within a de	rate report.) epression in the land	dscape. There are mar	ny inundated
microaepressions throughout the feature	3.		
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators	(minimum of two required)

	<u></u>
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	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes <u>No</u> Depth (inches):	
Water Table Present? Yes No	Wetland Hydrology Present? Yes <u>v</u> No
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Ves No ✓ Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)	Wetland Hydrology Present? Yes No ctions), if available:
Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	Wetland Hydrology Present? Yes <u>v</u> No ctions), if available:
Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	Wetland Hydrology Present? Yes <u>v</u> No ctions), if available:
Water Table Present? Yes No _ Depth (inches): Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: The hydrologie regime is accumed to be accessed by acture	Wetland Hydrology Present? Yes <u>v</u> No <u>ctions</u>), if available:
Water Table Present? Yes No _ Depth (inches): Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: The hydrologic regime is assumed to be seasonally satura	Wetland Hydrology Present? Yes <u>v</u> No <u>No v</u> No <u>No v</u> No <u>v</u> No <u>No <u>N</u> No <u>v</u> No <u>No v</u> No <u>v</u> No </u>
Water Table Present? Yes No _ Depth (inches): Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: The hydrologic regime is assumed to be seasonally satura that have quite a bit of standing water.	Wetland Hydrology Present? Yes No ctions), if available: No atted. There are areas within the wetland
Water Table Present? Yes No _ Depth (inches): Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: The hydrologic regime is assumed to be seasonally satura that have quite a bit of standing water.	Wetland Hydrology Present? Yes _ v No ctions), if available: ted. There are areas within the wetland
Water Table Present? Yes No _ ✓ Depth (inches): Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: The hydrologic regime is assumed to be seasonally satura that have quite a bit of standing water.	Wetland Hydrology Present? Yes <u>v</u> No <u>No v</u> No <u>No v</u> No <u>v</u> No <u>No <u>N</u> No <u>v</u> No <u>No v</u> No <u>v</u> No </u>
Water Table Present? Yes No _ ✓ Depth (inches): Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is assumed to be seasonally satura that have quite a bit of standing water.	Wetland Hydrology Present? Yes <u>v</u> No <u>No v</u> No <u>v</u> No <u>No <u>N</u> No <u>v</u> No</u>
Water Table Present? Yes No _ ✓ Depth (inches): Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: Remarks: The hydrologic regime is assumed to be seasonally satura that have quite a bit of standing water.	Wetland Hydrology Present? Yes <u>v</u> No <u>No <u>N</u> No <u>v</u> No <u>No <u>N</u> No <u>v</u> No <u>v</u> No <u>v</u> No <u>v</u> No <u>No <u>N</u> No <u>No <u>N</u> No <u>No <u>N</u> No <u>N</u> No <u>No <u>N</u> No <u>No <u>N</u> No <u>N</u> No <u>No <u>N</u> No <u>N</u> No <u>No <u>N</u> No <u>No <u>N</u> No <u>No No <u>N</u> No <u>No No</u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u>
Water Table Present? Yes No _ ✓ Depth (inches): Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is assumed to be seasonally satura that have quite a bit of standing water.	Wetland Hydrology Present? Yes <u>v</u> No <u>No <u>N</u> No <u>v</u> No <u>No <u>N</u> No <u>v</u> No <u>v</u> No <u>v</u> No <u>v</u> No <u>No <u>N</u> No <u>No <u>N</u> No <u>No <u>N</u> No <u>N</u> No <u>No <u>N</u> No <u>N</u> No <u>No <u>N</u> No <u>No <u>N</u> No <u>No No <u>N</u> No <u>No No <u>N</u> No</u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u>
Water Table Present? Yes No _ ✓ Depth (inches): Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is assumed to be seasonally satura that have quite a bit of standing water.	Wetland Hydrology Present? Yes <u>v</u> No <u>No <u>N</u> No <u>v</u> No <u>No <u>N</u> No <u>v</u> No <u>v</u> No <u>v</u> No <u>v</u> No <u>No <u>N</u> No <u>No <u>N</u> No <u>No <u>N</u> No <u>N</u> No <u>No <u>N</u> No <u>N</u> No <u>No <u>N</u> No <u>No <u>N</u> No <u>No No <u>N</u> No <u>No No <u>N</u> No</u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u>
Water Table Present? Yes No _ ✓ Depth (inches): Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: The hydrologic regime is assumed to be seasonally satura that have quite a bit of standing water.	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> to <u>v</u> No <u>No <u>N</u> No <u>v</u> No <u>No <u>N</u> No <u>v</u> No <u>v</u> No <u>v</u> No <u>v</u> No <u>No <u>N</u> No <u>No <u>N</u> No <u>No <u>N</u> No <u>N</u> No <u>No <u>N</u> No <u>N</u> No <u>No <u>N</u> No <u>No <u>N</u> No <u>No No <u>N</u> No <u>No No <u>N</u> No</u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u>

VEGETATION – Use scientific names of plants.

Sampling Point: wire1003f_w

Tree Stratum (Plot size: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1 Populus tremuloides	<u>25</u>	V	FAC	Number of Dominant Species
2. Fravinus nigra	25	 		That are OBL, FACW, of FAC: <u>b</u> (A)
			FACW	Total Number of Dominant
3	_	·		Species Across All Strata. (B)
4				Percent of Dominant Species
5		·		
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	50	= Total Co	ver	OBL species x 1 =0
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>75</u> x 2 = <u>150</u>
1. <u>Fraxinus nigra</u>	25	Y	FACW	FAC species 25 x 3 = 75
2. <u>Ilex verticillata</u>	10	Y	FACW	FACU species 9 x 4 = 36
3				$\begin{array}{c} \text{UPL species} \underline{0} x = \underline{0} \\ \text{Column Tatalax} \underline{100} (A) \underline{201} (B) \end{array}$
4.				Column Totals: 109 (A) 261 (B)
5				Prevalence Index = B/A = 2.3944954128440368
6		· · · · · · · · · · · · · · · · · · ·		Hydrophytic Vegetation Indicators:
7		·		1 - Rapid Test for Hydrophytic Vegetation
/	25	- Tetal Ca		2 - Dominance Test is >50%
E S			ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:)	40	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Rubus pubescens</u>		<u> </u>	FACW	data in Remarks or on a separate sheet)
2. <u>Fragaria virginiana</u>	5	<u> </u>	FACU	Problematic Hydrophytic Vegetation (Explain)
3. <u>Carex intumescens</u>	5	<u> </u>	<u>FACW</u>	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Pyrola elliptica</u>	2	N	<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Carex gracillima</u>	2	N	<u>FACU</u>	Definitions of Vegetation Strata:
6				Tree Weedy plants 2 in (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in DBH
9.				and greater than or equal to 3.28 ft (1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless
11	_			of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
12	24	- Total Ca		height.
Wester (Plateine 20	4		ver	
Woody Vine Stratum (Plot size:)				
1				
2		· - <u></u>		
3				Hydrophytic
4		·		vegetation Present? Yes <u>v</u> No
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

The herbaceous layer is not representative of the hardwood swamp. Most of the swamp has fringed sedge, greater bladder sedge, brownish sedge and Canada bluejoint. The canopy is dominated by black ash and quaking aspen.

SOIL

Profile Desc	ription: (I	Describe t	to the dep	oth needed	to docun	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth		Matrix			Redo	x Features	S 1	. 2	- ·		
(inches)		moist)		Color (n	noist)		Type	LOC		Remarks	
	<u>5YR</u>	3/2	100			0		·			
8-15	<u>5YR</u>	4/2	90	<u>7.5YR</u>	5/6	10	<u> </u>	M	SCL		
15-20	5YR	4/2	85	<u>7.5R</u>	5/6	15	C	M	SCL		
						<u></u>					
						- <u> </u>		·			
			. <u> </u>			. <u> </u>	. <u> </u>				
						<u> </u>					
		n D-Don	otion PM	-Roducod N	Antrix MG	- Maskod	Sand Gr	aine	² Location	· DI - Doro Lipipa M-Matrix	
Hydric Soil I	ndicators	: :						airið.	Indicators	for Problematic Hydric Soils ³ :	
Histosol	(A1)			Polyva	alue Belov	w Surface	(S8) (LRF	RR,	2 cm N	/luck (A10) (LRR K, L, MLRA 149B)	
Histic Ep	pipedon (A2	2)		MLF	RA 149B))			Coast	Prairie Redox (A16) (LRR K, L, R)	
Black His Hydroge	stic (A3) n Sulfide (/	44)		I nin D	ark Suna / Mucky N	ice (S9) (L /lineral (F1	. K K K , MI	LRA 149B) . I.)	Dark S	Aucky Peat or Peat (S3) (LRR K, L, R)	
Stratified	l Layers (A	.5)		Loamy	/ Gleyed I	Matrix (F2)	, _/	Polyva	lue Below Surface (S8) (LRR K, L)	
Depleted	l Below Da	rk Surface	e (A11)	Deplet	ed Matrix	(F3)			Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R)		
Thick Da	irk Surface	(A12)		Redox	Dark Su	rface (F6) Surface (F	7)				
Sandy N Sandy G	ileved Matr	ix (S4)		Deplet Redox	Depress	ions (F8)	")		Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)	
Sandy R	edox (S5)	、 ,				`` ,			Red Pa	arent Material (F21)	
Stripped	Matrix (S6			-					Very S	shallow Dark Surface (TF12)	
Dark Sui	face (S7)	(LRR R, №	ILRA 149	B)					Other	(Explain in Remarks)	
³ Indicators of	hydrophyt	ic vegetat	ion and w	etland hydro	ology mus	t be prese	ent, unless	s disturbed	or problematio	2.	
Restrictive I	ayer (if ol	oserved):									
Туре:											
Depth (inc	ches):								Hydric Soil	Present? Yes <u>~</u> No	
Remarks:	orofilo d			ام ار مام			ماممام	10 d 0 0 0	du alavia	am There are reday	
The soll		ithin t		ar 2 love	/ ioam	overa	i depie	led san	idy clay lo	am. There are redox	
concentra				el 2 laye	515.						





wire1003f_w_SW

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	ARK/DMP		
File #:	Date of visit(s):		
wire1003	2020-06-06		
Location:	Ecological Landsca	ipe:	
PLSS: sec 05 T045N R001W	North Central Forest		
Lat: <u>46.409732</u> Long: <u>-90.523735</u>	Watershed:		
Country Iron Tour (City) (illows Anderson town	LOTO, TYTELT OIKS		
County: <u>Iron</u> Town/City/Village: Anderson town			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	ТЗК		
Wormet sandy loam, 0 to 3 percent slopes. Minocqua muck, 0 to 2 percent	Wetland Type(s) [.]		
slopes.	PFO - hardwood swamp		
Field Verified:		onamp	
Soil series not verified. Soils were reddish and	Wetland Size:	Wetland Area Impacted	
were a clay loam over reduced sandy clay loam.			
	Vegetation:		
	Plant Community Description(s):		
Hydrology:	Hardwood swamp dominated by quaking		
Seasonally saturated depression. Receives	aspen and black ash. Dwarf raspherry and		
overland flow from the surrounding upland forest.	various codaos are abundant in the barb		
	various sedges are abundant in the herb		
	layer.		

SITE MAP

SECTION 1: Functional Value Assessment

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

HU-1, -2, -3: Remote but accessible for ambitious recreators.

HU-6, WH-8: Part of a large tract of forest in which the Wisconsin Special Concern plant arctic sweet coltsfoot occurs. The wetland is potential habitat for this and other rare species.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Black-throated green warbler, veery, ovenbird, American robin, black and white warbler
	Y	Mammals, herpetofauna, other bird species

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

Observed	Potential	Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata	All strata present 🖌	All strata present,
	or bare due to	present but	and good	conservative species
	invasive species	reduced native	assemblage of	represented
		species	native species	
NHI plant community	S4	S3	S2	S1-S2 (S2 high quality)
ranking	_	_	_	
Relative frequency of	Abundant 🖌	Common	Uncommon	Rare
plant community in				
watershed				
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,
			550	Abundance)
Fraxinus nigra*			PFO	Continuous
Populus tremuloides*			PFO	Patchy
Carex intumescens			PFO	Rare
Carex gracillima			PFO	Rare
Rubus pubescens			PFO	Rare
Calamagrostis canadensis			PFO	Rare
llex verticillata			PFO	Rare
Carex brunnescens			PFO	Barren
Athyrium filix-femina			PFO	Barren
Carex crinita			PFO	Barren
Glyceria cf. striata			PFO	Barren
Micranthes pensylvanica			PFO	Barren
Epilobium ciliatum			PFO	Barren
Ranunculus abortivus			PFO	Barren
Ranunculus recurvatus			PFO	Barren
Solidago gigantea			PFO	Barren

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

Moderate species diversity. Non-native species are lacking.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

Condition is moderate, and the feature appears to be relatively undisturbed.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Moderate species diversity with no non-native species.
Human Use Values	Remote but located on public land.
Wildlife Habitat	Large tract of forest with scattered wetlands, with habitat for diverse species.
Fish and Aquatic Life Habitat	
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature potentially stores a significant amount of water. The feature is not densely vegetated, but is a large depressional forested feature.
Water Quality Protection	See above.
Groundwater Processes	Groundwater recharge feature.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary trenching, soil storage, and backfilling.	Low
Secondary Impacts (including impacts which are indirectly attributable to the project)	Vegetation removal for construction.	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	San	npling Date: <u>2020-06-06</u>			
Applicant/Owner: Enbridge		State: Wisconsin S	ampling Point: <u>wire1003_u</u>			
Investigator(s): DMP/ARK	Section, Township, Range: <u>S</u>	Section, Township, Range: <u>sec 05 T045N R001W</u>				
Landform (hillslope, terrace, etc.): <u>Rise</u>	Local relief (concave, convex, no	one): <u>None</u>	Slope (%): 0-2%			
Subregion (LRR or MLRA): Northcentral Forests La	at: <u>46.409741</u> Long: <u>-9</u>	0.523466	Datum: <u>WGS84</u>			
Soil Map Unit Name: Wormet sandy loam, 0 to 3 percent slopes NWI classification:						
Are climatic / hydrologic conditions on the site typical	for this time of year? Yes <u>v</u> No	(If no, explain in Rema	rks.)			
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Norma	al Circumstances" prese	nt? Yes 🖌 No			
Are Vegetation, Soil, or Hydrology	naturally problematic? (If needed,	explain any answers in	Remarks.)			
SUMMARY OF FINDINGS – Attach site	map showing sampling point location	ons, transects, im	portant features, etc.			
Hydrophytic Vegetation Present? Yes	No Is the Sampled Area					
Hydric Soil Present? Yes	No <u>v</u> within a Wetland?	Yes	No <u>/</u>			
Wetland Hydrology Present? Yes	No If yes, optional Wetlan	d Site ID:				
Remarks: (Explain alternative procedures here or in	n a separate report.)	oono Uudronbut	tio vogotation was			

The upland sample plot was taken on a slight rise within the landscape. Hydrophytic vegetation was observed, but no other wetland indicators were met.

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 <u>v</u> Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Pepth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No primary indicators of wetland bydrology were observed	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No primary indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No primary indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No primary indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No primary indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No Depth (incluse): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No primary indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No primary indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No primary indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes <u>No</u> Depth (inches): <u>(includes capillary fringe)</u> Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No primary indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes <u>No</u> Depth (inches): <u>(includes capillary fringe)</u> Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No primary indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No primary indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No _ ✓ ions), if available:

VEGETATION – Use scientific names of plants.

Sampling Point: wire1003_u

	Absolute	Dominant	Indicator	Dominance Test worksheet
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	Species?	<u>Status</u>	Number of Dominant Species
1. <u>Fraxinus nigra</u>	25	<u> </u>	FACW	That Are OBL, FACW, or FAC: (A)
2. <u>Populus tremuloides</u>	25	<u> </u>	<u>FAC</u>	Total Number of Dominant
3. <u>Acer rubrum</u>	2	<u> N</u>	FAC	Species Across All Strata: (B)
4			·	Percent of Dominant Species
5				That Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	52	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>50</u> x 2 = <u>100</u>
1. <u>Fraxinus nigra</u>	20	Y	FACW	FAC species <u>36</u> x 3 = <u>108</u>
2. <u>Ilex verticillata</u>	5	N	FACW	FACU species <u>72</u> x 4 = <u>288</u>
3. Corvlus cornuta	2	Ν	FACU	UPL species $0 \times 5 = 0$
4. Ribes triste	2	N	OBI	Column Lotals: <u>160</u> (A) <u>498</u> (B)
5				Prevalence Index = B/A = <u>3.11</u>
6.				Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
	29	= Total Co	vor	2 - Dominance Test is >50%
Horb Stratum (Plot size: 5)	_25		VEI	3 - Prevalence Index is $≤3.0^1$
1 Mitchelle renene	50	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Initchella repens</u>	10	 	EACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Ptendium aquimum</u>	<u></u>			
3. <u>Cornus canadensis</u>		<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Carex gracillima</u>		<u> </u>	FACU	be present, unless disturbed or problematic.
5. <u>Arisaema triphyllum</u>	2	<u>N</u>	FAC	Definitions of Vegetation Strata:
6. <u>Maianthemum canadense</u>	2	<u> N </u>	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Trientalis borealis</u>	2	<u> N</u>	FAC	at breast height (DBH), regardless of height.
8. <u>Pyrola elliptica</u>	2	N	<u>FACU</u>	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Nabalus albus</u>	1	<u> N</u>	<u>FACU</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 backt
	79	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4.				Vegetation
	0	= Total Co	ver	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	sheet.)			1
The vegetation is representative of the	surroun	iding up	land. Hy	ydrophytic vegetation is met due to the
tree and shrub layer, however the herb	aceous	layer is	domina	ited by FACU species.

Profile Desc	cription: (Describe t	to the depth	needed to docur	nent the indicat	or or confirm	the absence of ir	ndicators.)
Depth (inches)	Color (moist)	%	Color (moist)	<u>x Features</u> % Type	¹ Loc ²	Texture	Remarks
0-6	7.5YR 2 5/2	100		0			
6-20	7 5VR 3/2	100					
0-20	<u>7.31K 3/2</u>	100					
						·	
				<u> </u>			
·							
		etion RM=E	Peduced Matrix M	S=Masked Sand	Grains	² Location: PL	=Pore Lining M=Matrix
Hydric Soil	Indicators:					Indicators for I	Problematic Hydric Soils ³ :
Histosol	(A1)	_	Polyvalue Belov	w Surface (S8) (L	.RR R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
Histic E	oipedon (A2)		MLRA 149B))		Coast Prair	ie Redox (A16) (LRR K, L, R)
Black Hi	istic (A3) an Sulfide (A4)	-	Thin Dark Surfa	ace (S9) (LRR R, dineral (E1) (LRE	MLRA 149B)	5 cm Mucky	y Peat or Peat (S3) (LRR K, L, R)
Stratified	d Lavers (A5)	-	Loamy Gleved I	Matrix (F2)	κ, μ)	Polyvalue E	Below Surface (S8) (LRR K, L)
Deplete	d Below Dark Surface	e (A11)	Depleted Matrix	(F3)		Thin Dark S	Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)	_	_ Redox Dark Su	rface (F6)		Iron-Manga	inese Masses (F12) (LRR K, L, R)
Sandy N	Aucky Mineral (S1)	-	_ Depleted Dark S	Surface (F7)		Piedmont F	Toodplain Soils (F19) (MLRA 149B)
Sandy G	Redox (S5)	-	_ Redux Depress	1011S (FO)		Red Parent	Material (F21)
Stripped	I Matrix (S6)					Very Shallo	w Dark Surface (TF12)
Dark Su	rface (S7) (LRR R, M	ILRA 149B)				Other (Expl	ain in Remarks)
³ Indicators o	f hydronhytic yegetat	ion and weth	and hydrology mus	t he present un	ass disturbed	or problematic	
Restrictive	Layer (if observed):		and hydrology mus	st be present, uni			
Туре:	,						
Depth (in	ches):					Hydric Soil Pres	sent? Yes No
Remarks:	,						
The soil	profile consists	s of a br	own loam ov	er a clay lo	am. No h	ydric soil ind	icators were observed.
	-			-		-	



wire1003_u_SE



wire1003_u_SW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling Date: 2020-07-03			
Applicant/Owner: Enbridge		_ State: <u>Wisconsin</u> Sampling Point: <u>wirb040f_xw</u>			
Investigator(s): DMP/AGG	Section, Township, Range: <u>Se</u>	ec 32 T046N R001W			
Landform (hillslope, terrace, etc.): Depress	Local relief (concave, convex, nor	ne): <u>Concave</u> Slope (%): <u>0-2%</u>			
Subregion (LRR or MLRA): Northcentral Fore	^{ests} Lat: <u>46.417845</u> Long: <u>-90</u>	0.518086 Datum: WGS84			
Soil Map Unit Name: Chabeneau-Ann	alake complex, 0 to 6 percent slopes	NWI classification:			
Are climatic / hydrologic conditions on the site	typical for this time of year? Yes No ((If no, explain in Remarks.)			
Are Vegetation , Soil , or Hydrole	ogy significantly disturbed? Are "Normal	Circumstances" present? Yes 🖌 No			
Are Vegetation . Soil . or Hydrol	ogy naturally problematic? (If needed, e	explain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach	site map snowing sampling point locatio	ons, transects, important features, etc.			
Hydrophytic Vegetation Present?YesHydric Soil Present?Yes	S V No S V No Is the Sampled Area within a Wetland?	Yes 🖌 No			
Wetland Hydrology Present? Yes	S No If yes, optional Wetland	Site ID:			
The hardwood swamp occurs	in a depression within the landscape.	. There is forest road on the east			
end of the feature.					
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is require	ed; check all that apply)	Surface Soil Cracks (B6)			
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)			
High Water Table (A2)	High Water Table (A2) Aquatic Fauna (B13)				
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)			
Algel Mat or Crust (B4)	Persont Iron Reduction in Tilled Soils (C6)	Coomorphic Bosition (D2)			

			$(C6) \rightarrow C60$ Geomorphic Position (D2)		
Iron Deposits (B5)		Thin Muck Surface (C7)	Shallow Aquitard (D3)		
Inundation Visible on Ae	rial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)		
Sparsely Vegetated Con	icave Surface (B	\$8)	FAC-Neutral Test (D5)		
Field Observations:					
Surface Water Present?	Yes N	Jo _ ✔_ Depth (inches):			
Water Table Present?	Yes N	Jo _ ✔_ Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes N	lo 🖌 Depth (inches):	Wetland Hydrology Present? Yes <u>v</u> No		
Remarks: The hydrologic regin	me is seas	onally saturated. We did no	t observe a water table at the sample plot.		

VEGETATION – Use scientific names of plants.

Sampling Point: wirb040f_xw

Trop Stratum (Plot size: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1 Fravinus nigra	<u>25</u>	<u>Species</u>		Number of Dominant Species
	10			That Are OBL, FACW, or FAC: 5 (A)
		<u> </u>		Total Number of Dominant
3				Species Across All Strata: <u> </u>
4			·	Percent of Dominant Species
5				That are OBL, FACW, of FAC(A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	45	= Total Co	ver	OBL species <u>52</u> x 1 = <u>52</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>71</u> x 2 = <u>142</u>
1. <u>Ilex verticillata</u>	10	Y	FACW	FAC species <u>17</u> x 3 = <u>51</u>
2. <u>Populus tremuloides</u>	5	Y	FAC	FACU species x 4 =
3. Fraxinus nigra	2	Ν	FACW	UPL species $0 \times 5 = 0$
4. Acer rubrum	2	N	FAC	Column Totals: <u>140</u> (A) <u>245</u> (B)
5				Prevalence Index = B/A = <u>1.75</u>
6				Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
/	10	Tatal Oa		2 - Dominance Test is >50%
	19		ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Carex crinita</u>	50	<u> </u>	OBL	data in Remarks or on a separate sheet)
2. <u>Rubus pubescens</u>	10	<u> N</u>	<u>FACW</u>	Problematic Hydrophytic Vegetation' (Explain)
3. <u>Poa cf palustris</u>	5	N	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Solidago gigantea</u>	5	<u> N </u>	FACW	be present, unless disturbed or problematic.
5. <u>Calamagrostis canadensis</u>	2	N	OBL	Definitions of Vegetation Strata:
6. <u>Equisetum palustre</u>	2	N	FACW	Tree Weedy plants 2 in (7.6 cm) or more in diameter
7. <u>Equisetum sylvaticum</u>	2	N	FACW	at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				
12				Woody vines – All woody vines greater than 3.28 ft in height
	76	= Total Co	ver	in ign.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4.				Vegetation
	0	= Total Co	ver	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	sheet.)			<u> </u>
The sample vegetation is representativ	a of the	hardwc	nod swai	mp. The canopy is dominated by black

The sample vegetation is representative of the hardwood swamp. The canopy is dominated by black ash, while the ground layer is dominated by fringed sedge. Canada bluejoint becomes dominant to the east and west of the sample plot.

SOIL

Profile Desc	ription: (Describe t	o the dep	oth needed t	o docun	nent the i	ndicator	or confirn	n the absence	of indicators.)	
Depth		Matrix			Redo	x Features	s				
(inches)	Color (moist)	%	Color (m	ioist)	%	Type'	Loc ²	Texture	Remarks	
0-15	5YR	4/2	98	<u>7.5YR</u>	4/6	2	C	M	<u> </u>		
15-20	5YR	4/3	100			0			COSL		
						·					
						·					
						·					
¹ Type: C=Co	oncentratio	n, D=Depl	etion, RM	Reduced N	latrix, MS	S=Masked	Sand Gra	ains.	² Location	: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:								Indicators	for Problematic Hydric Soils ³ :	
Histosol	(A1)			Polyval	ue Belov	v Surface	(S8) (LRF	RR,	2 cm N	Auck (A10) (LRR K, L, MLRA 149B)	
HISUC Ep Black Hi	stic (Δ3)	2)		Thin D:	A 149B) ark Surfa	(102) (1		RA 149R	$\sim - \frac{1}{5}$ coast	Aucky Peat or Peat (S3) (IRR K, I, R)	
Hydroge	n Sulfide (A	4)		Loamy	Mucky M	/lineral (F1	I) (LRR K	, L)	Dark S	Surface (S7) (LRR K, L)	
Stratified	d Layers (À	5)		Loamy	Gleyed I	Matrix (F2)	. ,	Polyva	lue Below Surface (S8) (LRR K, L)	
Depleted	d Below Da	rk Surface	e (A11)	_∠ Deplete	ed Matrix	: (F3)			Thin D	ark Surface (S9) (LRR K, L)	
Thick Da	ark Surface	(A12)		Redox	Dark Su	face (F6)			Iron-M	anganese Masses (F12) (LRR K, L, R)	
Sandy IV	lucky wine	ral (S1) ix (S4)		Deplete Redox	Depress	SUITACE (F ions (F8)	()		Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A 145 149B)		
Sandy C	ledox (S5)	IX (04)			Depress	10113 (1 0)			Red Pa	arent Material (F21)	
Stripped	Matrix (S6)							Very S	hallow Dark Surface (TF12)	
Dark Surface (S7) (LRR R, MLRA 149B)							Other	(Explain in Remarks)			
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, uplace disturbed or problematic											
Restrictive	aver (if ot	served):			logy mus	t be plead	int, unicos	s distuibed			
Type [.]											
Depth (in	chec):								Hvdric Soil	Present? Yes ✔ No	
Deptil (III									,		
The soil	orofile c	onsist	sofac	lepleted	clay l	oam ov	ver a re	eddish	hrown coa	arse sandy loam Redox	
concentr	ations v	vere of		d throug	hout th	he ton	laver :	and De	pleted Ma	atrix was met	
oonoonu				a anoug		ic top	layer, t				



wirb040f_xw_S



wirb040f_xw_W

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	DMP/AGG			
File #:	Date of visit(s):			
wirb040_x	2020-07-03			
Location:	Ecological Landsca	ipe:		
PLSS: sec 32 T046N R001W	North Control Ecropt			
	North Central Forest			
Lat: 46.417854 Long: -90.518095	Watershed:			
•	LS13, Tyler Forks			
County: Iron Town/City/Village: Gurney town				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Chabeneau-Annalake complex, 0 to 6 percent slopes, Moquah-Armheim	Wetland Type(s)			
complex, 0 to 3 percent slopes	PFO - Hardwood swamp			
Field Verified:				
The soil profile was not verified. The soil profile consisted of a	Wetland Size [.]	Wetland Area Impacted		
depleted clay loam over top of a reddish brown course sandy	1.478	1.478		
loam. Redox concentrations were observed throughout the	Vegetation:			
top layer and depleted matrix was met.	Plant Community Description(s):			
Hvdroloay:	The wetlend is a bordwood even with a			
The hydrologic regime is seasonally saturated				
We did not observed a water table at the sample	canopy dominate	canopy dominated by black ash, while the		
	ground layer was dominated by Canada			
plot.	bluejoint and fringed sedge.			
	,	5 5		

SITE MAP

SECTION 1: Functional Value Assessment

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

Section 1 Comments (Refer to Section 1 numbers)

HU-3: The feature is located in county land and there is a forest road that runs by the feature.

HU-4: The wetland is relatively undisturbed.

WH-1/4/7/8: The wetland is located within a large block of forest that likely provides habitat for sensitive species.

- FA-2: The feature is likely inundated in the spring after snow melt and after rain vents. Were. Inundated, it is likely that amphibians and aquatic insects utilize the feature.
- ST-5: The feature is located near a forest road and there is potential for non point inputs to enter the wetland from that land use.

WQ-1: The feature is a basin wetland that occurs within a depression in the landscape.

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	Red squirrel
Y	Y	d hawk, Ovenbird, woodthrush, common yellow throat, American redstart, white throated sp
	Y	Mammals, 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	Amphibians and aquatic insects

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Acer rubrum*			PFO	Rare
Athyrium filix-femina			PFO	Barren
Calamagrostis canadensis*			PFO	Patchy
Caltha palustris			PFO	Barren
Carex crinita*			PFO	Patchy
Carex intumescens			PFO	Barren
Carex intumescens			PFO	Barren
Carex projecta			PFO	Barren
Carex stipata			PFO	Barren
Equisetum palustre			PFO	Barren
Equisetum sylvaticum			PFO	Barren
Fraxinus nigra*			PFO	Patchy
Galium triflorum			PFO	Barren
llex verticillata			PFO	Rare
Impatiens capensis			PFO	Barren
Iris versicolor			PFO	Barren
Onoclea sensibilis			PFO	Barren
Osmunda claytoniana			PFO	Barren
Poa cf palustris			PFO	Barren
Populus tremuloides			PFO	Barren
Ranunculus acris			PFO	Barren
Rubus pubescens			PFO	Barren
Solidago gigantea			PFO	Barren

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

The floristic integrity is moderate to high due to moderate diversity and a lack of invasive species.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
	Х		L	UC	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		L	UC	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
	Х		L	UC	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 feature is located near a forest road. There is potential for non-point inputs and sediment to enter the feature from that land use.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The floristic integrity is moderate due to moderate diversity and a lack of invasive species.
Human Use Values	The feature is accessible to the public and there is potential for it to be used for hunting, birding and other uses.
Wildlife Habitat	The feature is relatively undisturbed and there is potential for mammals, reptiles to use the wetland. There was a female broad winged hawk calling from the trees above the wetland. It is likely that there is a nest there,
Fish and Aquatic Life Habitat	The feature was not inundated during the field survey. It is likely that there is standing water during the spring after snow melt and after heavy rains. Amphibians and aquatic insects could use the feature during those times.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a moderately sized basin wetland that has the potential to hold a decent amount of stormwater,
Water Quality Protection	The feature is a moderately sized basin wetland that has the potential to play a significant role in water quality protection.
Groundwater Processes	The wetland likely serves as groundwater recharge.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling Date: 2020-07-03
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Sampling Point: <u>wirb040f_xu</u>
Investigator(s): <u>DMP/AGG</u>	Section, Township, Range: <u>S</u>	ec 32 T046N R001W
Landform (hillslope, terrace, etc.): Rise	Local relief (concave, convex, no	one): None Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests	Lat: 46.418011 Long: -9	0.518276 Datum: WGS84
Soil Map Unit Name: Chabeneau-Annala	ke complex. 0 to 6 percent slopes	NWI classification:
Are climatic / hydrologic conditions on the site typic	al for this time of year? Yes 🖌 No	(If no. explain in Remarks.)
Are Vegetation Soil or Hydrology	significantly disturbed? Are "Norma	al Circumstances" present? Yes 🖌 No
Are Vegetation Soil or Hydrology	naturally problematic? (If pooded	explain any answers in Romarks)
Are vegetation, 301, 01 Trydrology _		explain any answers in Remarks.
SUMMARY OF FINDINGS – Attach site	e map showing sampling point locati	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes Remarks: (Explain alternative procedures here of The upland sample point was take were observed.	No v No v No v Is the Sampled Area within a Wetland? If yes, optional Wetlan r in a separate report.) en in a mesic forest upslope of th	Yes <u>No </u>
HYDROLOGY Watland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: c	heck all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)	Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)

Iron Deposits (B5)		_	_ Thin Muck Surface (C7)	Shallow Aquitard	(D3)	
Inundation Visible on A	erial Imager	y (B7)	Other (Explain in Remarks)	Microtopographic	Relief (D4)	
Sparsely Vegetated Co	ncave Surfa	ce (B8)		FAC-Neutral Tes	t (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 🖌
Remarks:	atland by	drology	were observed			
	suanu ny	ulology				

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wirb040f_xu</u>

Trop Stratum (Plot size: 30)	Absolute	Dominan	Indicator	Dominance Test worksheet:
1 Abies halsamea	<u>78 Cover</u>	<u>Species</u> ?		Number of Dominant Species
Approx papehorum	_ <u>40</u> 20			That Are OBL, FACW, or FAC: (A)
			FACO	Total Number of Dominant
3			<u> </u>	Species Across Air Strata (B)
4			·	Percent of Dominant Species That Are OBL_FACW_or_FAC: 3.3 (A/B)
5				
6			·	Prevalence Index worksheet:
7			·	Total % Cover of: Multiply by:
	60	= Total Co	ver	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15)				FACW species 2 $x^2 = 4$
1. <u>Fraxinus nigra</u>	2	<u> N</u>	<u>FACW</u>	FAC species 45 $x_3 = 135$
2. <u>Corylus cornuta</u>	2	N	<u>FACU</u>	$\frac{112}{112}$
3			·	Column Totals: 75 (A) 251 (B)
4				
5			·	Prevalence Index = $B/A = 3.3466666666666666666666666666666666666$
6			<u> </u>	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	4	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹
1 Carex pensylvanica	50	Y		4 - Morphological Adaptations ¹ (Provide supporting
2 Carex pedianculata	_ <u>0</u> 5	 N	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Majonthomum canadansa	 			
3. <u>Malanthemum racemeeum</u>	<u> </u>			¹ Indicators of hydric soil and wetland hydrology must
4. <u>Malanunemum racemosum</u>			FACU	be present, unless disturbed or problematic.
5			·	Definitions of Vegetation Strata:
6			·	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7			·	at breast height (DBH), regardless of height.
8			·	Sapling/shrub – Woody plants less than 3 in. DBH
9			·	and greater than or equal to 3.28 ft (1 m) tall.
10			·	Herb – All herbaceous (non-woody) plants, regardless
11		. <u></u>		or size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in height
	61	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2.				
3.				Hydrophytic
4.				Vegetation
	0	= Total Co	ver	Present? Yes No V
Remarks: (Include photo numbers here or on a separate	sheet.)			1
The vegetation is representative of the	upland.	The ca	nopy is	dominated by balsam fir and the
ground layer is dominated by Pennsylv	vania seo	dge.		

SOIL

Profile Desc	ription: (Describe t	to the depth	needed to document the indicator or confirm	the absence of indicators.)	
Depth (inches)	<u>Matrix</u> Color (moist)	%	<u>Redox Features</u> Color (moist) % Type ¹ Loc ²	Texture Remarks	
0-15	7.5YR 2.5/2	100			
15 20	5VD 3/2	100			
15-20	<u> 31K 3/3</u>		0		
			· · · · · · ·		
17				21 and the DL Dave Linia M M	4-1
Hydric Soil	oncentration, D=Depi	etion, RM=H	educed Matrix, MS=Masked Sand Grains.	Location: PL=Pore Lining, M=Ma	Soils ³ :
Histosol	(A1)		Polyvalue Below Surface (S8) (LRR R,	2 cm Muck (A10) (LRR K, L, M	LRA 149B)
Histic Ep	pipedon (A2)		MLRA 149B)	Coast Prairie Redox (A16) (LRF	R K, L, R)
Black Hi	stic (A3)	—	_ Thin Dark Surface (S9) (LRR R, MLRA 149B)	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	n Sulfide (A4)	_	Loamy Mucky Mineral (F1) (LRR K, L)	Dark Surface (S7) (LRR K, L)	
Stratilied	Below Dark Surface	- (A11)	Depleted Matrix (F2)	Thin Dark Surface (S9) (LRR K	LRR R, L)
Thick Da	ark Surface (A12)		Redox Dark Surface (F6)	Iron-Manganese Masses (F12)	(LRR K, L, R)
Sandy M	lucky Mineral (S1)	_	Depleted Dark Surface (F7)	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy G	leyed Matrix (S4)	_	_ Redox Depressions (F8)	Mesic Spodic (TA6) (MLRA 144	4A, 145, 149B)
Sandy R	edox (S5) Matrix (S6)			Red Parent Material (F21)	12)
Dark Su	face (S7) (LRR R. M	ILRA 149B)		Other (Explain in Remarks)	12)
		- /			
³ Indicators of	f hydrophytic vegetat	ion and wetla	and hydrology must be present, unless disturbed	or problematic.	
Restrictive I	_ayer (if observed):				
Туре:					
Depth (ind	ches):			Hydric Soll Present? Yes	NO <u>v</u>
Remarks:	orofilo oppoint	o of o dr	, brown loom over a raddiah brow	we alow loom. No hydrio og	
indicator		s or a ur	y brown loant over a reduistr brow	wit clay loant. No flyunc sc	201
indicators	s were observ	eu.			



wirb040f_xu_E



wirb040f_xu_N
WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/	County: Iron Sampling Date: 2020-07-03
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wirb037f_xw
Investigator(s): DMP/AGG Sect	non. Township, Range: Sec 32 T046N R001W
Landform (billslope terrace etc.): Floodplain	lief (concave, convex, none): CONCAVE Slope (%): 0-2%
Subragion (LRB or MLRA). Northcentral Forests Lat. 46 422323	Long: -90 517584
Sublegion (LRR of MLRA) Lat. <u>40,423323</u>	Long. <u>-90.017304</u> Datum. <u>WG304</u>
Soil Map Unit Name: <u>MOQUAN-Arnheim complex, U to 3 percent si</u>	
Are climatic / hydrologic conditions on the site typical for this time of year?	∕es No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distu	rbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally problem	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sar	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>v</u> No	Is the Sampled Area
Hydric Soil Present? Yes <u>v</u> No	within a wetland? Yes <u>v</u> No
Wetland Hydrology Present? Yes <u>v</u> No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	the floodplain of Tyler Forks. There are
temporarily flooded drainage swales running throu	ine hoodplain of Tyler Forks. There are
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leave	es (B9)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hvdrogen Sulfide Oc	dor (C1) Cravfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosphe	res on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduce	d Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction	on 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 Re	marks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No V Depth (inches):	Wetland Hydrology Present? Yes ✓ No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:
Remarks:	
The hydrologic regime is temporarily flooded. We	observed drainage patterns throughout the
floodplain.	

VEGETATION – Use scientific names of plants.

Sampling Point: wirb037f_xw

Index stratum Status Number of Dominant Species 1. Acer saccharinum 50 Y FACW 1. Acer saccharinum 50 Y FACW Number of Dominant Species That Are OBL, FACW, or FAC: 4 2.							
1. Acer saccharmum 50 Y FACW That Are OBL, FACW, or FAC: 4 (A) 2.							
2.							
3.							
4.							
5 Inat Are OBL, FACW, of FAC:OU (A/B)							
6 Prevalence Index worksheet:							
7 Total % Cover of: Multiply by:							
<u>50</u> = Total Cover OBL species <u>0</u> x 1 = <u>0</u>							
Sapling/Shrub Stratum (Plot size:15) FACW species69 x 2 =138							
1. Fraxinus nigra 5 Y FACW FAC species <u>10</u> × 3 = <u>30</u>							
2. Acer saccharum 2 Y FACU FACU species 4 x4 = 16							
$\frac{1}{2} = \frac{1}{1} + \frac{1}{2} = \frac{1}{1} + \frac{1}{2} = \frac{1}$							
Column Totals: <u>83</u> (A) <u>184</u> (B)							
+ Prevalence Index = B/A = 2.216867469879518							
e Hydronhytic Vegetation Indicators:							
= Total Cover 3 - Prevalence Index is ≤3.0 ¹							
Herb Stratum (Plot size: <u>5</u>) 4 - Morphological Adaptations ¹ (Provide supporting							
1. <u>Thalictrum dasycarpum</u> <u>10</u> <u>Y</u> <u>FACW</u> data in Remarks or on a separate sheet)							
2. <u>Matteuccia struthiopteris</u> <u>10 Y FAC</u> Problematic Hydrophytic Vegetation' (Explain)							
3. <u>Fraxinus nigra</u> <u>2</u> <u>N</u> <u>FACW</u> Indicators of hydric soil and wotland hydrology must							
4. <u>Elymus hystrix</u> <u>2</u> <u>N</u> <u>FACU</u> be present, unless disturbed or problematic.							
5. Onoclea sensibilis 2 N FACW Definitions of Vegetation Strata:							
6 Trace _ Weathy plants 2 in (7.0 arr) as more in diameters							
7.							
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.							
12. Woody vines – All woody vines greater than 3.28 ft in							
26 = Total Cover							
Woody Vine Stratum (Plot size: 30)							
1							
·· <u> </u>							
2							
3 Hydrophytic							
⁺ Present? Yes <u>✓</u> No							
<u>U</u> = Total Cover							
Remarks: (include photo numbers here or on a separate sheet.) The sample vegetation is representative of the floodplain forest. Silver maple dominates the capopy							
There are a few black ash and sugar maple saplings present on the nearby terrace. Wood nettle							
was also observed in the ground laver throughout the wetland.							

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox	Feature	s			
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	<u>Texture</u>	Remarks
0-2	<u>7.5YR 3/3</u>	100						
2-12	<u>7.5YR 4/2</u>	98	<u>7.5YR 4/6</u>	2	<u> </u>	IVI		
12-20	<u>7.5YR 4/2</u>	100		0	- <u> </u>		COSL	
					<u> </u>			
					- <u> </u>			
1						<u> </u>	2	
Type: C=C Hydric Soil	oncentration, D=Deple Indicators:	etion, RM	=Reduced Matrix, MS	=Masked	d Sand Gra	ains.	Location:	PL=Pore Lining, M=Matrix.
Histosol	(A1)		Polyvalue Below	/ Surface	e (S8) (LRF	RR,	2 cm N	1uck (A10) (LRR K, L, MLRA 149B)
Histic Ep	pipedon (A2)		MLRA 149B)		. , .		Coast I	Prairie Redox (A16) (LRR K, L, R)
Black Hi	stic (A3)		Thin Dark Surfac	ce (S9) (I		LRA 149B) 5 cm N	lucky Peat or Peat (S3) (LRR K, L, R)
Stratified	d Lavers (A5)		Loamy Gleved N	/atrix (F2	1) (LKK K 2)	, L)	Polvva	lue Below Surface (S8) (LRR K. L)
Depleted	d Below Dark Surface	(A11)	 Depleted Matrix 	(F3)	-)		Thin Da	ark Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)	. ,	Redox Dark Sur	face (F6))		Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Sandy M	lucky Mineral (S1)		Depleted Dark S	Surface (F	=7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy G	Bleyed Matrix (S4)		Redox Depressi	ons (F8)			Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)
Sanuy P	L Matrix (S6)						Verv S	hallow Dark Surface (TE12)
Dark Su	rface (S7) (LRR R, M	LRA 149	3)				Other (Explain in Remarks)
³ Indicators o	f hydrophytic yogotati	on and w	atland bydrology must	the prop	ont unloss	disturbod	l or problomatic	
Restrictive	Layer (if observed):			t be pies	ent, uniess	sustuibeu		·-
Туре:	,							
Depth (in	ches):						Hydric Soil	Present? Yes 🖌 No
Remarks:	*						· · ·	
The soil	profile consists	s of a b	prown loam ove	er a de	epleted	l sandy	clay loam	and a coarse sandy loam.
Redox co	oncentrations	vere o	bserved throug	ghout	the mic	dle lay	ver, and De	epleted Matrix was met.



wirb037f_xw_NE



wirb037f_xw_W

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	DMP/AGG			
File #:	Date of visit(s):			
wirb037_x	2020-07-03			
Location:	Ecological Landsca	ape:		
PLSS: sec 32 T046N R001W	North Central Forest			
	North Ochilar Forest			
Lat: <u>46.423334</u> Long: <u>-90.517587</u>	Watershed:			
	LS13, Tyler Forks			
County: <u>Iron</u> Town/City/Village: Gurney town				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	T3Kw			
Moquah-Arnheim complex, 0 to 3 percent slopes, frequently flooded,	Wetland Type(s):			
Chabeneau-Annalake complex, 0 to 6 percent slopes	PFO - Floodplain forest			
Field Verified:				
The soils were not verified. The soil profile consisted of a	Wetland Size:	Wetland Area Impacted		
brown loam over a depleted clay loam and a course sandy	0.0136	0.0136		
toam. There were redox concentrations observed throughout	Vegetation:			
the middle layer and depleted matrix was met.	Plant Community Description(s):			
Hydrology:	The wetland is a floodplain forest along Tyler Forks River.			
The hydrologic regime is temporarily flooded. We	Silver maple was dominating the canopy. There were a			
observed drainage patterns throughout the	few black ash and sugar maple saplings present on the			
floodplain	nearby terrace. Wood nettle was also observed in the			
	ground layer through	nout the wetland.		

SITE MAP

SECTION 1: Functional Value Assessment

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

Section 1 Comments (Refer to Section 1 numbers)

HU-5/6: The wetland is within the floodplain of Tyler Forks River, a designated trout stream. HU-3: The wetland is located within public land and there is a forest road that leads to a nearby location. WH-2/6: Three strata are present as well as interspersion with upland habitat. WH-1/7/8: The wetland is fairly large and within intact forest that likely provides habitat for sensitive species. WH-10: There was no standing water within the feature during the field survey, however it is likely that the feature is inundated from spring flooding and heavy rain events. FA-1: The feature is located on the floodplain of the Tyler Forks. SP-1/ST-1: The feature is a basin wetland that occurs within the floodplain of the Tyler Forks. Flood water enters the feature over a terrace. WQ-4: The wetland was vegetated, but not densely vegetated.

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	d eyed verio, verio, red breasted nuthatch, white throated sparrow, American redstart, ovenb
Y	Y	Red squirrel
	Y	Mammals, 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	Amphibians, reptiles and fish

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata	All strata present 🥑	All strata present,
	or bare due to	present but	and good	conservative species
	invasive species	reduced native	assemblage of	represented
		species	native species	
NHI plant community	S4	S3 V	S2	S1-S2 (S2 high quality)
ranking				
Relative frequency of	Abundant	Common 🖌	Uncommon	Rare
plant community in				
watershed				
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	Interrupted
Acer saccharum			PFO	Barren
Carex crinita			PFO	Rare
Carex intumescens			PFO	Barren
Carex lupulina			PFO	Barren
Caulophyllum thalictroides			PFO	Barren
Elymus hystrix			PFO	Barren
Fraxinus nigra			PFO	Barren
llex verticillata			PFO	Barren
Impatiens capensis			PFO	Barren
Laportea canadensis			PFO	Barren
Matteuccia struthiopteris*			PFO	Rare
Onoclea sensibilis			PFO	Barren
Ribes americanum			PFO	Barren
Rubus idaeus			PFO	Barren
Rubus pubescens			PFO	Barren
Solidago gigantea			PFO	Barren
Thalictrum dasycarpum			PFO	Barren

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

The floristic integrity is moderate due to diversity of native species and the lack of invasive species. There were quite a few areas within the drainage swales that had bare soil.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
_					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
		Х	L	UC	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		L	UC	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
	Х	Х	L	UC	Sediment input
	x		L	UC	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
					Removal of tree or shrub strata – logging, unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
					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)

There is a recently mowed, trimmed forest road located just to the east of the feature. There is a possibility of that land use to introduce non point pollutants and sediment

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The floristic integrity is moderate due to the lack of invasive species and moderate diversity. There were quite a few areas within the drainage swales that had bare soil.
Human Use Values	The feature is located within pubilc land. There is a forest road that leads to a nearby area. The feature is also located next to navigatable waterway. People could access the feature.
Wildlife Habitat	The feature is located next to a perennial river. It is likely that many different animals utilize the feature, but we only observed red squirrels and birds.
Fish and Aquatic Life Habitat	The feature is located on the floodplain of a perennial river. When the wetland it flooded, it is possible that fish, amphibians and aquatic insects could utilize the feature.
Shoreline Protection	The feature is vegetated and located along the floodplain of the Tyler Forks. The wetland plays a role in flood storage as well as providing a buffer to help control erosion.
Flood and Stormwater Storage	The feature is located along the floodplain of the Tyler Forks. The wetland provides flood water storage after snow melt and heavy rain events.
Water Quality Protection	The feature is located along the floodplain of the Tyler Forks. The wetland provides flood water storage after snow melt and heavy rain events. The wetland plays a significant role in filtering out floodwater,
Groundwater Processes	The wetland likely serves as groundwater recharge.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron	_ Sampling Date: <u>2020-07-03</u>
Applicant/Owner: Enbridge	State: Wiscon	sin Sampling Point: wirb037f_xu
Investigator(s): DMP/AGG	Section, Township, Range: <u>Sec 32 T0461</u>	N R001W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): <u>Convex</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.4232	251 Long: <u>-90.517595</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Moquah-Arnheim complex, 0 to 3 per	rcent slopes, frequently flooded NWI classified	cation:
Are climatic / hydrologic conditions on the site typical for this time o	f year? Yes 🔽 No (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology signification	ntly disturbed? Are "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answe	ers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No <u> </u>	Is the Sampled Area within a Wetland?	Yes	No
Wetland Hydrology Present?	Yes	No 🖌	If yes, optional Wetland S	ite ID:	
Remarks: (Explain alternative proced The upland sample plot w observed.	dures here or in a vas taken o	a separate report.) n a terrace, u	oslope of a floodpla	ain. No wet	tland indicators were

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 Sc	bils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No</u> Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No 🖌 Depth (inches):	Wetland Hydrology Present? Yes No _
Saturation Present? Yes No V Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No

VEGETATION – Use scientific names of plants.

Sampling Point: wirb037f_xu

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominar Species?	nt Indicator 2 Status	Dominance Test worksheet:
1 Acer saccharum	30	V		Number of Dominant Species That Are OBL EACING or EAC: 2 (A)
2 Tilia americana	20	 	FACU	$\begin{array}{c} \text{That Ale OBL, FACW, of FAC.} \\ \underline{} \\ \underline{} \\ \underline{} \\ \phantom{aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa$
3 Abies balsamea	<u></u> 	 	FAC	Total Number of Dominant Species Across All Strata: 5 (B)
4 Prunus serotina	2	 N	FACU	Demonst of Deminerat Crossics
5 Fraxinus nigra	2	 N	FACW	That Are OBL, FACW, or FAC:(A/B)
6	L		<u> 17000</u>	
7		·		Prevalence Index worksheet:
/·	60			I otal % Cover of: Multiply by:
Contine (Christian Christian 15	09		Jver	$\begin{array}{c} \text{OBL species} \\ \text{EACW} \text{ species} \\ \text{A} \\ \text{Y} 2 = 8 \end{array}$
Sapling/Shrub Stratum (Plot size: 15)	0	NI		FAC species $42 \times 3 = 126$
1. <u>Acer saccharum</u>		<u> </u>		FACU species 79 $x 4 = 316$
2. <u>Dirca palustris</u>	2	<u> N </u>	FAC	UPL species x 5 =
3		·		Column Totals: <u>125</u> (A) <u>450</u> (B)
4		·		
5		·		Prevalence Index = $B/A = 3.6$
6		·		Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	4	= Total Co	over	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹
1 Allium tricoccum	25	Y	FACU	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2 Athyrium angustum	25	Ŷ	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Thalictrum dasvoarnum	<u> </u>	<u> </u>		
4.			<u> 1 AOW</u>	¹ Indicators of hydric soil and wetland hydrology must
5				
6		·		Definitions of Vegetation Strata:
7		·		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		·		
10		·		Herb – All herbaceous (non-woody) plants, regardless
11		·		
12		·		Woody vines – All woody vines greater than 3.28 ft in height
	52	= Total Co	over	in organization of the second s
Woody Vine Stratum (Plot size: 30)				
1		. <u></u>		
2		·		
3				Hydrophytic
4.				Vegetation
	0	= Total Co	over	Present? Yes No V
Remarks: (Include photo numbers here or on a separate	sheet.)			
The sample vegetation is representativ	e of the	uplanc	I. The ca	nopy is dominated by a mixture of
upland species, while the herbaceous l	ayer is	domina	ted by w	rild leek and lady fern.

SOIL

Profile Desc	ription: (D	escribe t	o the dept	h needed to docum	nent the i	indicator	or confirm	the absence of	of indicators.)
Depth (inches)	<u> </u>	Matrix	%	Color (moist)	x Feature	S Type ¹		Texture	Remarks
		<u>) /)</u>	400			<u>' îhc</u>			
	<u>51</u> K	3/3	100				·		
					·				
					·				
		<u> </u>			·	·	·		
					·	·			
					·		·		
					·				
			<u> </u>		·	·	<u> </u>		
			<u> </u>						
		D-Dopl	otion PM-	Poducod Matrix MS			aine	² Location:	PL-Poro Lining M-Matrix
Hvdric Soil	Indicators:	, D-Depi				i Sanu Gi	aii 15.	Indicators f	for Problematic Hydric Soils ³ :
Histosol	(A1)			Polyvalue Belov	v Surface	(S8) (LR	RR.	2 cm M	uck (A10) (LRR K. L. MLRA 149B)
Histic Ep	pipedon (A2))	-	MLRA 149B))	() (,	Coast F	Prairie Redox (A16) (LRR K, L, R)
Black Hi	stic (A3)		-	Thin Dark Surfa	ice (S9) (I	_RR R, M	LRA 149B)) 5 cm M	ucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	n Sulfide (A	4)	-	Loamy Mucky N	/lineral (F	1) (LRR K	, L)	Dark Su	urface (S7) (LRR K, L)
Stratified	d Layers (A5	5) - Of	(444)	Loamy Gleyed I	Matrix (F2	<u>')</u>		Polyval	ue Below Surface (S8) (LRR K, L)
Depleted	a Below Dari		(A11) _	Depleted Matrix Rodox Dark Sur	(F3) faco (E6)			I nin Da	ark Sufface (S9) (LRR K, L)
Sandy M	lucky Miner	(A12) al (S1)	-	Redux Dark Sul	Surface (F0)	7)		Piedmo	ingariese Masses (F12) (LRR R, L, R) ant Floodolain Soils (F19) (MI RA 1498)
Sandy G	Bleved Matrix	x (S4)	-	Redox Depress	ions (F8)	')		Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy R	edox (S5)	(-)	-		(-)			Red Pa	rent Material (F21)
Stripped	Matrix (S6)							Very Sł	nallow Dark Surface (TF12)
Dark Su	rface (S7) (L	RR R, M	LRA 149B)				Other (I	Explain in Remarks)
3									
Indicators of	r hydrophytic	c vegetati	on and wet	land hydrology mus	t be prese	ent, unles	s disturbed	or problematic.	
	Layer (IT OD:	servea):							
Type:									
Depth (inc	ches):							Hydric Soil I	Present? Yes No
Remarks:									
The soil p	profile co	onsists	s of a ur	niform reddisl	h brow	n clay	Ioam. N	No hydric s	soil indicators were
observed	1.								



wirb037f_xu_S



wirb037f_xu_SW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron Sampling Date: 2020-07-07
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wirc023f_xw
Investigator(s): DMP/AGG	Section, Township, Range: <u>sec 32 T046N R001W</u>
Landform (hillslope, terrace, etc.): Depression	ocal relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.42379	3 Long: <u>-90.517140</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Moquah-Arnheim complex, 0 to 3 perce	ent slopes, frequently flooded NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🖌 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes <u>v</u> 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 <u>v</u> No	Is the Sampled Area within a Wetland? Yes <u>✓</u> No
Wetland Hydrology Present? Yes _	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report The wetland sample plot was taken within the vegetated depressions scattered throughout the	floodplain of the Tyler Forks River. There are sparsely ne wetland.

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: wirc023f_xw

	Absolute	Dominant	Indicator	Dominance Test worksheet
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1. <u>Ulmus americana</u>	50	<u> </u>	<u>FACW</u>	That Are OBL, FACW, or FAC: 2 (A)
2. Acer saccharinum	10	N	FACW	Total Number of Dominant
3. <u>Prunus serotina</u>	2	N	FACU	Species Across All Strata: <u>2</u> (B)
4.				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
o				
0			·	Prevalence Index worksheet:
7			·	Total % Cover of:Multiply by:
	62	= Total Co	ver	OBL species <u>5</u> x 1 = <u>5</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>110</u> x 2 = <u>220</u>
1. <u>Prunus serotina</u>	2	N	FACU	FAC species x 3 =6
2.				FACU species <u>4</u> x 4 = <u>16</u>
3				UPL species x 5 =
			·	Column Totals: <u>121</u> (A) <u>247</u> (B)
4				Prevalence Index = $B/A = 2.04$
5				Hydrophytic Vegetation Indicators:
-			·	1 - Rapid Test for Hydrophytic Vegetation
/				\sim 2 - Dominance Test is >50%
	2	= Total Co	ver	\sim 3 - Prevalence Index is <3.0 ¹
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Onoclea sensibilis</u>	50	Y	FACW	data in Remarks or on a separate sheet)
2. <u>Carex cf. tuckermanii</u>	5	N	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Matteuccia struthiopteris</u>	2	N	FAC	¹ Indicators of hydric coil and watland hydrology must
4				be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				
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	<u> </u>			Woody vines – All woody vines greater than 3.28 ft in
	57	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1.				
2				
3				I hadron ha dia
				Vegetation
4			·	Present? Yes <u>v</u> No
Pomarka: (Include photo numbers here or on a comparts	U	= Total Co	ver	
The plot vegetation is representative of	the wei	land. T	he cano	py is dominated by American elm and
the herbaceous laver is dominated by	sensitive	fern S	ilver ma	aple is more abundant in other areas of
the wetland.				

US Army Corps of Engineers

SOIL

Profile Desc	cription: (D	escribe t	o the dep	th needed	to docur	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth		Matrix			Redo	x Features	S _			
(inches)	Color (moist)	%	Color (r	noist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	5YR	3/3	95	5YR	4/6	5	_C_	_M_	<u> </u>	
6-20	5YR	4/2	95	5YR	4/6	5	С	Μ		
			·			·		·		
						·				
						·				
	. <u></u>									
						·				
Type: C=C	oncentratio	n, D=Depl	etion, RM	Reduced I	Matrix, MS	S=Masked	Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soli	Indicators:					o ((00) (I D		Indicators	for Problematic Hydric Solls :
Histosol	(A1) ninodon (A2					N Surface	(58) (LR I	К ,		UCK (A10) (LRR K, L, MLRA 149B)
Black H	pipedon (A2 istic (A3)	.)		τhin Γ	ra 1496))ark Surfa) Ice (S9) (I		RA 1498	$\sim 5 \text{ cm M}$	ucky Peat or Peat (S3) (LRR K I R)
Hydroge	en Sulfide (A	\ 4)		Loam	v Mucky N	/lineral (F	I) (LRR K	. L)	Dark S	urface (S7) (LRR K, L)
Stratifie	d Layers (À	5)		Loam	y Gleyed I	Matrix (F2)	. ,	Polyval	ue Below Surface (S8) (LRR K, L)
Deplete	d Below Da	rk Surface	e (A11)	Deple	ted Matrix	(F3)			Thin Da	ark Surface (S9) (LRR K, L)
Thick Da	ark Surface	(A12)		Redox	d Dark Su	rface (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Sandy N	Aucky Mine	al (S1)		Deple	ted Dark S	Surface (F	7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy C	Sleyed Matr	ix (S4)		Redox	Depress	ions (F8)			Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Kedox (55) 1 Matrix (S6	`							Red Pa	Irent Material (F21)
Dark Su	irface (S7) (, IRRR M		3)					Other (Explain in Remarks)
				-)						
³ Indicators o	f hydrophyt	ic vegetati	ion and we	etland hydro	ology mus	st be prese	ent, unless	s disturbed	or problematic	
Restrictive	Layer (if ob	served):		-		-			-	
Туре:										
Depth (in	ches).								Hydric Soil	Present? Yes <u><</u> No
Remarks:	<u> </u>								-	
The soil	profile c	onsiste	sofar	eddish	hrown	loam c	ver a	denlete	d loam R	edox concentrations were
observer	d throug	hout th	o nrofi	lo and l	Donlat	od Mat	riv wa	a mot		
00361760	i unoug	nout ti			Jepieu	eu mai		s met.		



wirc023f_xw_E



wirc023f_xw_S

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	DMP/AGG			
File #:	Date of visit(s):			
wirc023_x	2020-07-07			
Location:	Ecological Landsca	ape:		
PLSS: sec 32 T046N R001W	North Central Forest			
	North Ochtar Forest			
Lat: <u>46.423798</u> Long: <u>-90.517201</u>	Watershed:			
	LS13, Tyler Forks			
County: Iron Town/City/Village: Gurney town				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	T3Kw			
Moquah-Arnheim complex, 0 to 3 percent slopes, frequently flooded	Wetland Type(s):			
	PFO - Floodplain forest			
Field Verified:				
The soil profile was not verified. The soil profile consisted of a	Wetland Size:	Wetland Area Impacted		
reddish brown loam over a depleted loam. Redox	0.7444	0.7444		
concentrations were observed throughout the profile and	Vegetation:			
	Plant Community Description(s):			
Hydrology:	The canopy was de	ominated by American elm and		
The hydrologic regime is seasonally saturated.	silver maple. The herbaceous laver was dominated			
Water-stained leaves were observed throughout	by sensitive fern and ostrich fern. Wood nettle was			
the wetland	observed in some areas of the feature.			

SITE MAP

SECTION 1: Functional Value Assessment

1 N Used for recreation (hunding, birding, hiking, etc.). List: 2 N W Usually or physically accessible to public 4 Y Y Vasibility of roduction or scientific purposes 5 Y Y Assthetically pleasing due to diversity of habitat types, lack of pollution or degradation 6 N N Supports or provides habitat for endangered, threatened or special concern species 7 N N N N 1 Y Y Weltand and contiguous habitat >10 acres 2 Y Y O or more strata present (>10% cover) 3 N N Within or adjacent to habitat corridor or explo%(south) 75% (north) intact 5 N N Occurs in a Joint Venture priority township 6 Y V Interspersion of habitat tor CS(N or birds listed in the WI All-Bird Cons. Plan, or other 8 N Y Part of a large habitat block that supports area sensitive species 9 N N Performeral pond with water present - 245 days 10 N Y Standing water provides habi	HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
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3 N N Dense, persistent vegetation 4 Y Y Evidence of flashy hydrology 5 N N Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with <10% wetland	2	Y	Y	Water flow through wetland is NOT channelized
4 Y Y Evidence of flashy hydrology 5 N N Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with ≤10% wetland 8 N Y Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection Water Quality Protection 1 N Y Povides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 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 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50%	3	Ν	N	Dense, persistent vegetation
5 N N Point or non-point source inflow 6 N N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with ≤10% wetland 8 N Y Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N Y Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 Y Y Vegetated wetland associated with a lake or stream 5 N N Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50%	4	Y	Y	Evidence of flashy hydrology
6 N Impervious surfaces cover >10% of land surface within the watershed 7 N N Within a watershed with ≤10% wetland 8 N Y Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N Y Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 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 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50%	5	Ν	N	Point or non-point source inflow
7 N N Within a watershed with ≤10% wetland 8 N Y Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N Y Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 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 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50%	6	Ν	N	Impervious surfaces cover >10% of land surface within the watershed
8 N Y Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event WQ Water Quality Protection 1 N Y Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 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 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50%	7	Ν	N	Within a watershed with <10% wetland
WQ Water Quality Protection 1 N Y Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 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 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50%	8	Ν	Y	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
1 N Y Provides substantial storage of storm and floodwater based on previous section 2 Y Y Basin wetland or constricted outlet 3 Y Y Water flow through wetland is NOT channelized 4 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 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50%	WQ			Water Quality Protection
2 Y Y 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 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50%	1	N	Y	Provides substantial storage of storm and floodwater based on previous section
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 N N Discharge to surface water 9 N Natural land cover in 100m buffer area < 50%	2	Y	Y	Basin wetland or constricted outlet
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 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50%	3	Y	Y	Water flow through wetland is NOT channelized
5 N N Dense, persistent vegetation 6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50%	4	Y	Y	Vegetated wetland associated with a lake or stream
6 N N Signs of excess nutrients, such as algae blooms, heavy macrophyte growth 7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50%	5	Ν	N	Dense, persistent vegetation
7 N N Stormwater or surface water from agricultural land is major hydrology source 8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50%	6	Ν	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
8 N N Discharge to surface water 9 N N Natural land cover in 100m buffer area < 50%	7	Ν	N	Stormwater or surface water from agricultural land is major hydrology source
9 N N Natural land cover in 100m buffer area < 50%	8	N	Ν	Discharge to surface water
GW Groundwater Processes 1 N N 2 N N 3 N N 4 N N 5 N N	9	Ν	N	Natural land cover in 100m buffer area < 50%
1 N N Springs, seeps or indicators of groundwater present 2 N N Location near a groundwater divide or a headwater wetland 3 N N Wetland remains saturated for an extended time period with no additional water inputs 4 N N Wetland soils are organic 5 N N Wetland is within a wellbead protection area	GW			Groundwater Processes
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 wellbead protection area	1	N	N	Springs, seeps or indicators of groundwater present
2 N N Declaring a groundwater divide of a freadwater 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 wellbead protection area	2	N	N	Location near a droundwater divide or a headwater wetland
4 N Wetland soils are organic 5 N N Wetland is within a wellbead protection area	2			Wetland remains saturated for an extended time period with no additional water inputs
5 N Wetland is within a wellhead protection area	1			Wetland soils are organic
	5		N N	Wetland is within a wellbead protection area

Section 1 Comments (Refer to Section 1 numbers)

HU-3: The wetland is located within public land. The feature is not easily accessible unless crossing the river from the south.

WH-7: Heard and observed a variety of different bird species in the immediate area. It is likely that they utilize the vegetation within the wetland.

FA-2: We did not observe any standing water during the field survey, however it is likely that the feature is inundated during the early spring after snow melt and after heavy rain events.

SP-1: The feature is occurs within the floodplain of the Tyler Forks River. ST-1: The feature is a basin wetland that stores floodwater from the Tyler Forks River.

WQ-1: The feature has the potential to store a substantial amount of floodwater from the Tyler Forks River once water flows over the banks.

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	redstart, red-eyed vireo, black and white warbler, red-breasted nuthatch, ovenbird, veery, wo
	Y	Mammals, 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	Y	Frogs
	Y	Other amphibians and aquatic insects

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata	All strata present 🖌	All strata present,
	or bare due to	present but	and good	conservative species
	invasive species	reduced native	assemblage of	represented
		species	native species	
NHI plant community	S4	S3 🖌	S2	S1-S2 (S2 high quality)
ranking	_			
Relative frequency of	Abundant	Common	Uncommon	Rare
plant community in				
watershed				
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	Interrupted
Matteuccia struthiopteris*			PFO	Patchy
Ulmus americana			PFO	Rare
Carex crinita			PFO	Rare
Onoclea sensibilis			PFO	Rare
Thalictrum dasycarpum			PFO	Rare
Carex cf bromoides			PFO	Barren
Carex cf. tuckermanii			PFO	Barren
Caulophyllum thalictroides			PFO	Barren
Fraxinus nigra			PFO	Barren
Impatiens capensis			PFO	Barren
Laportea canadensis			PFO	Barren
Abies balsamea			PFO	Barren
Athyrium filix-femina			PFO	Barren
Brachyelytrum erectum			PFO	Barren
Carex lupulina			PFO	Barren
Poa palustris			PFO	Barren
Prunus serotina			PFO	Barren
Thuja occidentalis			PFO	Barren
Tilia americana			PFO	Barren

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities) The floristic integrity is moderate due to moderate diversity and the lack of invasive species.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

No disturbances or alterations were observed during the field survey.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The floristic integrity is moderate due to moderate diversity and the lack of invasive species.
Human Use Values	The wetland is located within public land near a major waterway. The feature is not easily accessible unless crossing the river from the south side. It is possible that people hunt and fish from the wetland, and it is associated with the Tyler Forks Trout Stream RED FLAG area.
Wildlife Habitat	The wetland has moderate significance to wildlife due to its location along a major waterway. It is likely that mammals, reptiles and other animals utilize the feature.
Fish and Aquatic Life Habitat	The feature is located along the floodplain of the Tyler Forks River. It is possible that fish species utilize the wetland when the river floods over the banks. It is also likely that aquatic insects and amphibians use the feature when it is inundated.
Shoreline Protection	The feature acts as a buffer as well as floodplain for the Tyler Forks River. The wetland was not densely vegetated during the survey, however it still plays a significant role in shoreline protection.
Flood and Stormwater Storage	The feature plays a significant role in floodwater storage after snow melt and after heavy rain events.
Water Quality Protection	The feature plays a significant role in water quality protection being as it is located along the floodplain of a major waterway.
Groundwater Processes	No significant groundwater processes, as the feature primarily has floodplain hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling Date: 2020-07-07
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Sampling Point: <u>wirc023f_xu</u>
Investigator(s): DMP/AGG	Section, Township, Range: <u>Sec</u>	32 T046N R001W
Landform (hillslope, terrace, etc.): Rise	Local relief (concave, convex, none)	: <u>None</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat:	46.424037 Long: -90.5	517115 Datum: WGS84
Soil Map Unit Name: Moquah-Arnheim complex,	0 to 3 percent slopes, frequently floode	d NWI classification: PFO1C
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes <u>v</u> No (If	no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Normal C	rcumstances" present? Yes <u>r</u> No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If needed, exp	lain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>No</u>
Wettarid Hydrology Present?	res		If yes, optional Wetland Site ID:
The upland sample plot w were observed.	as taken in	a separate report.) a mesic fore:	st upslope of a floodplain. No wetland indicators

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: wirc023f_xu

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan Species?	t Indicator	Dominance Test worksheet:
1 Acer saccharum	<u>- 70 00001</u> 50	V	FACU	Number of Dominant Species
2 Thuia occidentalis	<u></u> 5	 N	FACW	
3			<u> 17.011</u>	Total Number of Dominant Species Across All Strata: 4 (B)
0		·		
T		·		That Are OBL, FACW, or FAC: 25 (A/B)
6.		·		
7		·		Prevalence Index worksheet:
1				<u>Total % Cover of:</u> <u>Multiply by:</u>
			over	OBL species 0 $x_1 = 0$
Sapling/Shrub Stratum (Plot size: 15)	-	V		FAC species $30 \times 3 = 90$
1. <u>Acer saccharum</u>	5	<u> </u>	FACU	FACU species 59 $\times 4 = 236$
2		·		UPL species x 5 =
3		·		Column Totals: <u>94</u> (A) <u>336</u> (B)
4				Provalance Index = P/A = -3.574468085106383
5		·		Prevalence index = B/A = 3.374460065106363
6				Hydrophytic Vegetation Indicators:
7		·		1 - Rapid Test for Hydrophytic Vegetation
	5	= Total Co	over	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Athyrium angustum</u>	25	Y	FAC	data in Remarks or on a separate sheet)
2. <u>Caulophyllum thalictroides</u>	10	Y		Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Dryopteris intermedia</u>	5	N	FAC	
4. <u>Allium tricoccum</u>	2	N	FACU	be present, unless disturbed or problematic.
5. <u>Prunus virginiana</u>	2	N	FACU	Definitions of Vegetation Strata:
6				
7				at breast height (DBH), regardless of height.
8				Sapling/chrub Woody plants loss than 3 in DPH
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
	44	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30)				
(Hot size:)				
1		·		
2		·		
3				Hydrophytic Vegetation
4				Present? Yes No 🗸
Pomarka: (Include photo numbers here or on a constate	0	= Total Co	over	
The plot vegetation is representative of	f the upl	and. Th	ne canop	y is dominated by sugar maple and
the herbaceous layer is mixed with FA	C and F	ACU sp	ecies.	,
,				

Profile Desc	cription: (Describe	to the dep	th needed to docum	nent the	indicator	or confirm	the absence	of indicators.)		
Depth	epth Matrix Redox Features					- .				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	<u>Loc</u> [∠]	Texture	Remarks		
0-6	<u>7.5YR 3/3</u>	100		0			<u> S </u>			
6-20	7.5YR 3/4	100		0			LS			
					·					
	·				·					
					·					
¹ Type: C=C	oncentration, D=De	pletion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gra	ains.	² Location:	PL=Pore Lining, M=Matrix.		
Hydric Soil	Indicators:		,,,				Indicators	for Problematic Hydric Soils ³ :		
Histosol	l (A1)		Polyvalue Below	v Surface	(S8) (LRF	RR,	2 cm N	luck (A10) (LRR K, L, MLRA 149B)		
Histic E	pipedon (A2)		MLRA 149B)				Coast I	Coast Prairie Redox (A16) (LRR K, L, R)		
Black H	istic (A3)		Thin Dark Surfa	ce (S9) (I	LRR R, MI	LRA 149B)	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)			
Hydroge Stratifie	en Sulfide (A4) d Lavers (A5)		Loamy Mucky IV	ilneral (F	1) (LRR K 2)	, L)	Dark S	unace (S7) (LRK K, L)		
Otratilie	d Below Dark Surfa	ce (A11)	Depleted Matrix	(F3)	-)		Thin Da	Thin Dark Surface (S9) (LRR K, L)		
Thick Da	ark Surface (A12)		Redox Dark Sur	face (F6))		Iron-Ma	anganese Masses (F12) (LRR K, L, R)		
Sandy N	Mucky Mineral (S1)		Depleted Dark S	Surface (F	=7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)		
Sandy Gleyed Matrix (S4) Redox Depressions (F8)							Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy Redox (S5)							Red Pa	arent Material (F21)		
Stripped	Matrix (S6)		2)				Very Si	hallow Dark Surface (TF12) Explain in Remarks)		
Dark Surrace (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)										
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.										
Restrictive	Layer (if observed)):		-						
Туре:										
Depth (in	ches):						Hydric Soil	Present? Yes No		
Remarks:	,									
The soil	profile consis	ts of a b	rown sand ov	er a bi	rown lo	amv sa	nd. The p	rofile is dry and no hydric		
soil indic	ators were ob	oserved.				,	•	, ,		
1										



wirc023f_xu_N



wirc023f_xu_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling Date: 2020-07-02		
Applicant/Owner: Enbridge		State: _Wisconsin_Sampling Point: _wirc022f_xw		
Investigator(s): DMP/AGG	Section. Township. Range: S	ec 32 T046N R001W		
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, no	ne): Concave Slope (%): 0-2%		
Subregion (I BB or MI BA). Northcentral Forests Lat: 46	424591 Long: -9() 516853 Datum: WGS84		
Soil Man Unit Name: Moguah-Arnheim complex. 0 to	3 percent slopes frequently floo	ded NWI classification:		
Soli Map Onit Name. <u>Moquali-Armient Complex, 0 to</u>				
Are climatic / hydrologic conditions on the site typical for this	time of year? Yes No	(If no, explain in Remarks.)		
Are Vegetation, Soil, or Hydrology sig	gnificantly disturbed? Are "Norma	I Circumstances" present? Yes <u>v</u> No		
Are Vegetation, Soil, or Hydrology na	aturally problematic? (If needed,	explain any answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map s	howing sampling point location	ons, transects, important features, etc.		
Hydrophytic Vegetation Present? Ves 🖌 No	Is the Sampled Area			
Hydrophylle Vegetation reserver reser	within a Wetland?	Yes 🖌 No		
Wetland Hydrology Present? Yes No	If ves. optional Wetland	d Site ID:		
Remarks: (Explain alternative procedures here or in a sepa	arate report.)			
The feature is a hardwood swamp that of	occurs within a swale in the	landscape. Areas within the		
swale were sparsely vegetated and ther	e was a vernal pool that wa	as also sparsely vegetated		
onale here spareery regetated and ther	e nue a venia poer alar na	a alos oparoly rogotatoa.		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required: check all th	nat apply)	Surface Soil Cracks (B6)		
Surface Water (A1)	r Stained Leaves (B0)	Drainage Batterns (B10)		
→ Surface Water (A1) Wate	tic Found (P13)	Moss Trim Lines (B16)		
Saturation (A3)	Denosits (B15)	Dry-Season Water Table (C2)		
Water Marks (B1)	ogen Sulfide Odor (C1)	Cravfish Burrows (C8)		
Sediment Deposits (B2)	zed Rhizospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3)	ence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4) Rece	Int Iron Reduction in Tilled Soils (C6)	 Geomorphic Position (D2) 		
Iron Deposits (B5)	Muck Surface (C7)	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7)	r (Explain in Remarks)	Microtopographic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)	· · · /	FAC-Neutral Test (D5)		
Field Observations:				
Surface Water Present? Yes 🗸 No Dep	th (inches): 1			
Water Table Present? Yes V No Dep	th (inches): 0			
Saturation Present? Yes _ No _ Dep	th (inches): 0 Wetland I	Hydrology Present? Yes ✓ No		
(includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring well, a	erial photos, previous inspections), if ava	ailable:		
Remarks:				
The hydrologic regime is seasonally sat	urated. We observed surfa	ce water and a high water table		
during the survey.		0		

VEGETATION – Use scientific names of plants.

Sampling Point: wirc022f_xw

Tree Stratum (Plot size: 30)	Absolute	Dominar	t Indicator	Dominance Test worksheet:
1 Acer rubrum	<u>70 COVEL</u>	V		Number of Dominant Species
2 Acor saccharinum	<u> </u>	 		That Are OBL, FACVV, of FAC: <u>3</u> (A)
2. <u>Acer sacchannum</u>		. <u> </u>		Total Number of Dominant
5. <u>Detula allegitarilerisis</u>		N		$\frac{1}{2}$
4. <u>Fraxinus nigra</u>		IN		Percent of Dominant Species That Are OBL_EACW_or_EAC: 100 (A/B)
5. <u>Aples paisamea</u>		N		
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	56	= Total Co	over	OBL species $5 \times 1 = 5$
Sapling/Shrub Stratum (Plot size: 15)				FACW species $54 \times 2 = 108$
1. <u>Fraxinus nigra</u>	2	<u> N</u>	<u>FACW</u>	FAC species 31 $x_3 = 93$
2				$\frac{112}{112} = 0$
3				Column Totals: 90 (A) 206 (B)
4				
5				Prevalence Index = B/A = <u>2.288888888888888888888888888888888888</u>
6		<u>.</u>		Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	2	= Total Co	over	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				\sim 3 - Prevalence Index is $\leq 3.0^{1}$
1. Carex cf bromoides	25	Y	FACW	 4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2 Carex crinita	5	N	OBI	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Athyrium angustum	2	N	FAC	
4	L			¹ Indicators of hydric soil and wetland hydrology must
5				
6				Definitions of Vegetation Strata:
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
ő				Sapling/shrub – Woody plants less than 3 in. DBH
9		·		
10		- <u> </u>		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3 28 ft tall
11				
12		· .		height.
	32	= Total Co	over	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes ✔ No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)			amon mare common to the west
The vegetation is representative of the	wettand	J. BIACK	asn bec	comes more common to the west.
			at is mun	idated and has no vegetation.

SOIL

Profile Des	cription: (Describe	to the de	pth needed	to docur	nent the i	ndicator	or confirm	the absence of	f indicators.)
Depth	Matrix			Redox Features					
(inches)	Color (moist)	%	Color (r	noist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	<u>7.5YR 3/2</u>	98	<u>7.5YR</u>	4/6	2	_C_	M	<u> </u>	
4-20	<u>7.5YR 3/1</u>	98	<u>7.5YR</u>	4/6	2	_C_	Μ	CL	
					<u> </u>				
					<u> </u>				
					·		. <u> </u>		
¹ Type: C=C	concentration, D=Depl	etion, RM	I=Reduced N	Aatrix, MS	S=Masked	Sand Gra	ains.	² Location: I	PL=Pore Lining, M=Matrix.
Histoso			Polyva	lue Relov	v Surface	(S8) (I RE	2 R	2 cm Mu	ck (A10) (I RR K I MIRA 149R)
Histose	pipedon (A2)		noiyva	RA 149B))	(00) (EI	х IX,	Coast Pr	airie Redox (A16) (LRR K, L, R)
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B						RA 149B)	5 cm Mu	cky Peat or Peat (S3) (LRR K, L, R)	
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L)						Dark Sur	face (S7) (LRR K, L)		
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3)						Thin Dar	k Surface (S9) (LRR K, L)		
Depicted Delew Dark Gundee (((1)) Depicted Matrix ((10)) Thick Dark Surface (A12) Redox Dark Surface (F6)						Iron-Man	iganese Masses (F12) (LRR K, L, R)		
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)							Piedmon	t Floodplain Soils (F19) (MLRA 149B)	
Sandy Gleyed Matrix (S4) Redox Depressions (F8)								Mesic Sp	oodic (TA6) (MLRA 144A, 145, 149B)
Stripped Matrix (S6)						Verv Sha	allow Dark Surface (TF12)		
Dark Surface (S7) (LRR R, MLRA 149B)							Other (Ex	xplain in Remarks)	
3									
endicators of Restrictive	aver (if observed):	ion and w	etland hydro	logy mus	t be prese	ent, unless	s disturbed	or problematic.	
Type [.]									
Depth (ir	iches):							Hydric Soil P	resent? Yes <u><</u> No
Remarks:									
The soil	profile consists	s of a	dark loai	n ovei	r a darl	k clay l	oam. R	edox conce	entrations were observed
through	out the profile,	and R	edox Da	rk Sur	face w	as met			
1									



wirc022f_xw_E



wirc022f_xw_W

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

WETLAND IDENTIFICATION					
Project name:	Evaluator(s):				
Line 5 Relocation Project	DMP/AGG (
File #:	Date of visit(s):				
wirc022_x	2020-07-02				
Location:	Ecological Landsca	Ecological Landscape:			
PLSS: sec 32 T046N R001W	North Central Forest				
	North Ochian Forest				
Lat: <u>46.424555</u> Long: <u>-90.516892</u>	Watershed:				
	LS13, Tyler Forks				
County: <u>Iron</u> Town/City/Village: Gurney town					
SITE DESCRIPTION	1				
Soils:	WWI Class:				
Mapped Type(s):	ТЗКw				
Moquah-Arnheim complex, 0 to 3 percent slopes, frequently flooded	Wetland Type(s):				
	PFO - Hardwood swamp				
Field Verified:		-			
The soils were not verified.	Wetland Size:	Wetland Area Impacted			
	0.3978	0.3978			
	Vegetation:				
· · · ·	Plant Community E	Description(s):			
Hydrology:	The wetland is a	a hardwood swamp			
The hydrologic regime is seasonally saturated.	dominated by si	lver maple, red maple, and			
We observed surface water and a high water	black ash with a sparse herbaceous laver				
table during the survey.	dominated by native codece				
	dominated by ha	auve seuges.			

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	N	Y	Used for recreation (hunting, birding, hiking, etc.). List: hunting, birding
2	Ν	Ν	Used for educational or scientific purposes
3	Y	Y	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Y	Y	In or adjacent to RED FLAG areas
6	NI	V	LISI. Tylef FURS River
7	IN NI	T NI	In or adjacent to archaeological or cultural resource site
/ \//Н	IN	IN	Wildlife Habitat
1	V	X	Wetland and contiguous habitat >10 acres
2	Y	Ý V	3 or more strate present (>10% covor)
2	Y N	Y	Within or adjacent to babitat corrider or established wildlife babitat area
3	N X	N N	100 m buffor
4	Y	Y	Cooura in a Joint Venture priority township
5	N	N	Decuis in a joint venture phonty township
0	Y	Ý	Interspersion of habitat structure (nemi-maish, shrub/emergent, wetland/upiand complex, etc.)
7	Y	Y	plans
8	Y	Y	Part of a large habitat block that supports area sensitive species
9	Ň	Ň	Ephemeral pond with water present > 45 days
10	Y	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	Ň	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	V	× ×	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4			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
- 1	IN	IN	Potential for erosion due to wind fetch, waves, heavy heat traffic, erosive soils, fluctuating
2	Ν	N	water levels or high flows – if no, not applicable
3	N	N	Densely rooted emergent or woody vegetation
ST	IN		Storm and Floodwater Storage
1	V	V	Basin wetland constricted outlet has through-flow or is adjacent to a stream
2	T N	I N	Water flow through wetland is NOT channelized
3	IN N		
3	IN N		Evidence of flashy hydrology
5	IN N		Point or non point source inflow
6	IN N		Imporvious surfaces cover >10% of land surface within the watershed
7	IN NI	IN N	Within a watershed with <10% wetland
0	IN NI	IN N	Detential to hold $>10\%$ we liable constributing area from a 2 year 24 hour storm event.
0 WO	IN	IN	Water Quality Protection
1	NI	NI	Provides substantial storage of storm and floodwater based on providus soction
2		N N	Provides substantial storage of storm and hoodwater based on previous section
2	Y NI	Y	Water flew through wetland in NOT channelized
3	IN N	IN N	Vegeteted wetland essesiated with a lake or stream
4	N	N	
5	N	N	Cigne of evenes putriante, such as alrea blasma beaux macrophyte growth
0	N	N	Signs of excess numerics, such as algae ploons, neavy macrophyte growth
	N	N N	Stormwater or surface water from agricultural land is major hydrology source
×	N	N N	Discharge to sufface water
9	N	<u>N</u>	INatural land cover in 100m putter area < 50%
GW			Groundwater Processes
1	N	N	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	Ν	Ν	Wetland soils are organic
5	Ν	N	Wetland is within a wellhead protection area
Section 1 Comments (Refer to Section 1 numbers)

HU-1/3: The feature is located within public land and could be used for recreational purposes.

HU-4: The feature has been relatively undisturbed.

HU-5: The wetland is near Tyler Forks River, a designated trout stream. WH-2/6: All strata are present and there is interspersion with nice upland habitats located adjacent to the feature.

WH-1/7/8: The wetland is large and located within a large block of forest that likely provides habitat for sensitive species.

WH-10: Areas within the wetland had standing water during the field survey. It is likely that amphibians and aquatic insects utilize the feature.

ST-1: The feature is a basin wetland that occurs within a swale in the landscape.

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, reptiles
Y	Y	Ovenbird, red eyed verio, white throated sparrow

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

Observed	Potential	Species/Habitat
	Y	Aquatic insects and amphibians

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Abies balsamea			PFO	Rare
Acer rubrum*			PFO	Rare
Acer saccharinum*			PFO	Patchy
Athyrium filix-femina			PFO	Barren
Betula alleghaniensis			PFO	Barren
Caltha palustris			PFO	Barren
Carex cf bromoides*			PFO	Rare
Carex crinita			PFO	Barren
Carex gracillima			PFO	Barren
Carex lupulina			PFO	Barren
Fraxinus nigra*			PFO	Patchy
Galium sp.			PFO	Barren
Glyceria striata			PFO	Barren
Impatiens capensis			PFO	Barren
Onoclea sensibilis			PFO	Barren
Osmunda claytoniana			PFO	Barren
Ranunculus acris			PFO	Barren
Solidago sp.			PFO	Barren

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities) The floritic integrity is moderate. Areas of the wetland were unvegetated, but the feature had little to no cover of non-native species.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

There were no disturbances observed.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The floritic integrity is moderate. Areas of the wetland were unvegetated, but the feature had little to no cover of non native species.
Human Use Values	The feature is located within public land and could be used for recreational purposes.
Wildlife Habitat	The feature is located relatively close to Tyler Forks River, a designated trout stream. It is likely that a variety of different animals utilize the feature.
Fish and Aquatic Life Habitat	Areas within the feature were inundated during the field survey. There is potential for amphibians and aquatic insets to utilize the feature.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a basin wetland that occurs within a swale in the landscape. It likely plays a moderate role in storm or floodwater storage, especially since it is located near a river.
Water Quality Protection	The feature is a basin wetland that occurs within a swale in the landscape. The feature is located relatively close to a river and it likely plays a role in water quality protection.
Groundwater Processes	The wetland likely serves as groundwater recharge.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron	Sampling	Data: 2020-07-02
Project/Sile. LITE 5 NEIOCALIOT FTOJECI			2020-01-02
Applicant/Owner: <u>Enbridge</u>		State: Wisconsin Sampl	ing Point: <u>wirc022f_xu</u>
Investigator(s): AGG/DMP	Section, Township, Ra	nge: <u>sec 32 T046N R001</u>	W
Landform (hillslope, terrace, etc.): Rise	_ Local relief (concave, conv	vex, none): <u>None</u>	Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Morthcentral Forests Lat: 46.424	1467 Lon	g: <u>-90.516969</u>	Datum: WGS84
Soil Map Unit Name: Moquah-Arnheim complex, 0 to 3 p	<u>ercent slopes, frequentl</u>	<u>y flooded</u> NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes 🖌 No _	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology signific	antly disturbed? Are "	Normal Circumstances" present?	Yes 🖌 No
Are Vegetation, Soil, or Hydrology natural	ly problematic? (If ne	eded, explain any answers in Rema	arks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes No			If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced The sample point is locate maple and balsam fir.	ures here or in a ed on a rise	a separate report.) e within mesic	hardwood forest. The dominant species are sugar

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: wirc022f_xu

Incondum (i) Inconduction (ii) I Accer saccharum 50 Y FACL 2 Ables balsamea 10 N FACL 3 Ostrya virginiana 5 N FACL 4 Frazinus nigra 5 N FACL 5 N FACL Species Across Al Stratz 4 6	Tree Stratum (Plot size: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:
2. Abies Jaissmea 10 N FACU Text (N) of FAC 10 3. Ostrya virginiana 5 N FACU Species Across All Strats: 4 (B) 4. Eraxinus nigra 5 N FACU Species Across All Strats: 4 (B) 5. N FACU Species Across All Strats: 4 (B) 6.	1 Acer saccharum	<u>50</u>	V		Number of Dominant Species
2 Distrya wirginiana 6 N FACU 4 Fraxinus nigra 5 N FACW 5 N FACW Species Arrows Al Strata: 4 (e) 6	2 Abios balsamoa	<u>0</u>	 N		That Are OBL, FACW, or FAC: <u>3</u> (A)
3. Joshya ungunania 0 IA FACM 4. Eraxinus nigra 5 N FACM 5. S. FACM Percent of Dominant Species 7. 70 = Total Cover Total X Cover of Multiply by: 7. 70 = Total Cover OBL species 0 x 1 = 0 7. 70 = Total Cover FAC species 5 x 2 = 0 7. 70 = Total Cover FAC species 5 x 2 = 0 7. 22 25 Y FAC FAC species 5 x 4 = -220 9. UPL, species 0 x 5 = 0 0 x 5 = 0 0 Column Totals: 105 (A) 365 (B) 9. 20 25 Y FAC Species 55 x 4 = -220 UPL, species 5 x 4 = -20	2. <u>Ables balsallea</u>	_ <u></u>			Total Number of Dominant
** Pressure Percent of Dominant Speeds Z5	3. <u>Ostrya virginiana</u>	 	<u>IN</u>		$\frac{4}{1000}$
5.	4. <u>Fraxinus nigra</u>	<u> </u>	IN	FACW	Percent of Dominant Species That Are OBL_EACW_or_EAC: 75 (A/B)
0	5			·	
7.	6			·	Prevalence Index worksheet:
	7			·	Total % Cover of:Multiply by:
SapelingShub Stratum (Plot size: 15) 7		70	= Total Co	ver	OBL species x 1 =
1 Abies balsamea 25 Y FAC FAC Species 3.5 X 3 = 135 2	Sapling/Shrub Stratum (Plot size: 15)				FACW species $5 \times 2 = 10$
2.	1. <u>Abies balsamea</u>	25	<u> </u>	FAC	FAC species 45 x 3 = 135
3.	2				FACU species $55 \times 4 = 220$
4	3.				$\begin{array}{c} \text{UPL species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{105} (x) = \underline{005} \\ \text{Output the species} \underline{105} (x) = \underline{005} \\ \text{Output the species} \underline{105} (x) = \underline{105} \\ \text{Output the species} $
8. Prevalence Index = B/A = 3.4761901751901753 8.	4				Column Totals: <u>105</u> (A) <u>365</u> (B)
6.	5	_			Prevalence Index = B/A = <u>3.4761904761904763</u>
7.	6			·	Hydrophytic Vegetation Indicators:
25 = Total Cover 25 = Total Cover 25 = Total Cover 26 = Total Cover 27 - Prevalence Index is 53 0 ¹ 2. Carex pedunculata 5 Y 3. Caulophyllum thalictroides 2 N 4. - - 5. Y FAC 6. - - 7. - - 8. - - 9. - - 10. - - 11. - - 12. - - 8. - - 9. - - 11. - - 12. = Total Cover - Woody Vine Stratum (Plot size: 30) - - 1. - - - 2. - - - - 10. - - - - 11. - - - - 2. -	7			·	1 - Rapid Test for Hydrophytic Vegetation
	/			·	2 - Dominance Test is >50%
Herb Stratum (Plot size:	_	25	= Total Co	ver	3 - Prevalence Index is ≤3.0 ¹
1. Dryopteris intermedia 5 Y FAC 2. Carex pedunculata 5 Y FAC 3. Caulophyllum thalictroides 2 N 4.	Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
2. Carex pedunculata 5 Y FAC	1. Dryopteris intermedia	5	<u> </u>	FAC	data in Remarks or on a separate sheet)
3. Caulophyllum thalictroides 2 N 'Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 4.	2. <u>Carex pedunculata</u>	5	Y	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
4.	3. <u>Caulophyllum thalictroides</u>	2	N		¹ Indiastors of hydric coil and watland hydrology must
5.	4			·	be present, unless disturbed or problematic.
6.	5				Definitions of Vegetation Strata:
7.	6.				Definitions of Vegetation of ata.
8.	7.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast beight (DBH) regardless of beight
Sapling/shrub – Woody plants less than 3 in. DBH 9.	8				
3.	0			·	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10.	9			·	
11.	10			·	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
12.	11			·	
12 = Total Cover Woody Vine Stratum (Plot size:30)	12				height.
Woody Vine Stratum (Plot size: 30)		12	= Total Co	ver	
1.	Woody Vine Stratum (Plot size: 30)				
2.	1			. <u> </u>	
3.	2				
4	3.				Hydrophytic
Remarks: (Include photo numbers here or on a separate sheet.) The sample plot is located within a hardwood forest dominated by sugar maple. The ground layer is sparsely vegetated and dominated by intermediate woodfern.	4				Vegetation
Remarks: (Include photo numbers here or on a separate sheet.) The sample plot is located within a hardwood forest dominated by sugar maple. The ground layer is sparsely vegetated and dominated by intermediate woodfern.	··		- Total Co	vor	Present? Yes <u>v</u> No
The sample plot is located within a hardwood forest dominated by sugar maple. The ground layer is sparsely vegetated and dominated by intermediate woodfern.	Pomarka: (Include photo numbers here or on a separate			vei	
sparsely vegetated and dominated by intermediate woodfern.	The sample plot is located within a har	dwood f	orest do	ominated	d by sugar maple. The ground laver is
	sparsely vegetated and dominated by	intermed	liate wo	odfern	
	sparsely vegetated and dominated by			ourenn.	

SOIL

Profile Desc	cription: (Describe	to the depth	n needed to document the indicator or confirm	the absence of inc	licators.)
(inches)	Color (moist)	%	Color (moist) % Type ¹ Loc ²	Texture	Remarks
0-10	<u>7.5YR 3/2</u>	100	0	SIL	
10-20	7.5YR 3/3	100	0	SIL	
			· · · · · · · · · · · · · · · · · · ·	<u> </u>	
				<u> </u>	
				<u> </u>	
¹ Type: C=C	oncentration, D=Dep	pletion, RM=F	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=	Pore Lining, M=Matrix.
Histosol			Polyvalue Below Surface (S8) (I RR R	2 cm Muck (
Histic E	pipedon (A2)	_	MLRA 149B)	Coast Prairie	Redox (A16) (LRR K, L, R)
Black H	istic (A3)	_	Thin Dark Surface (S9) (LRR R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)	_	Loamy Mucky Mineral (F1) (LRR K, L)	Dark Surface	(S7) (LRR K, L)
Deplete	d Below Dark Surfac	e (A11)	Depleted Matrix (F3)	Thin Dark Su	Inface (S9) (LRR K, L)
Thick Da	ark Surface (A12)	_	Redox Dark Surface (F6)	Iron-Mangan	ese Masses (F12) (LRR K, L, R)
Sandy N	Mucky Mineral (S1)	_	Depleted Dark Surface (F7)	Piedmont Flo	odplain Soils (F19) (MLRA 149B)
Sandy C	Redox (S5)	_	Redox Depressions (F8)	Red Parent I	(TA6) (MLRA 144A, 145, 149B) Material (F21)
Stripped	d Matrix (S6)			Very Shallow	/ Dark Surface (TF12)
Dark Su	ırface (S7) (LRR R, I	MLRA 149B)		Other (Expla	in in Remarks)
³ Indicators o	f hydronhytic vegeta	tion and wetl	and hydrology must be present jupless disturbed	or problematic	
Restrictive	Layer (if observed)	:	and hydrology must be present, unless distarbed (
Type:					
Depth (in	ches):			Hydric Soil Prese	ent? Yes No _ ✓
Remarks:					
No hydri	c soil indicato	rs were o	bserved.		



wirc022f_xu_SE



wirc022f_xu_SW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/C	ounty: Iron Sampling Date: 2020-05-29				
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wirc013f_xw				
Investigator(s): EJO/JSW Section	on, Township, Range: <u>sec 29 T046N R001W</u>				
Landform (hillslope, terrace, etc.): Depression Local reli	ef (concave, convex, none): Concave Slope (%): 0-2%				
Subregion (LRB or MLRA). Northcentral Forests Lat: 46 431000					
Soil Map Unit Name: Pence-Gogebic complex 6 to 18 perce-	cent slopes stopy NWI classification: PFO1/4B				
Are climatic / hydrologic conditions on the site typical for this time of year?					
Are Vegetation Soil or Hydrology significantly distur	hod? Are "Normal Circumstances" present? Vec. 4 No				
Are Vegetation, Soli, or Hydrology significantly distuit	stie? (If needed, eveloin any ensurers in Demarka)				
Are vegetation, Soil, or Hydrology haturally problema	ace? (in needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes _ ✓ No Hydric Soil Present? Yes _ ✓ No Wetland Hydrology Present? Yes _ ✓ No	Is the Sampled Area within a Wetland? Yes <u>✓</u> No If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)	The second secon				
The wetland is a saturated hardwood swamp domi	nated by black ash and northern white cedar. The				
feature is adjacent to a hardwood forest that has be	een recently narvested. Slash is present at the				
edge of the wetland sample plot. The wetland is ex	tensive with variable microtopography. Parts of				
the wetland appear to have been impacted by prev	lous logging operations, which have compacted				
solis and influenced hydrology.					
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
_ Surface Water (A1) Water-Stained Leave	s (B9) Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odd	or (C1) Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizosphere	es on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced	I Iron (C4) Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Reductio	n in Tilled Soils (C6) Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C	7) Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Ren	marks) Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes <u>v</u> No Depth (inches): 0.5	<u>;</u>				
Water Table Present? Yes <u>v</u> No Depth (inches): <u>0</u>					
Saturation Present? Yes <u>v</u> No Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>v</u> No				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:				
Remarks:					
The wetland is saturated, with standing water pres-	ent at the time of the survey. The wetland likely				
exhibits both recharge and discharge hydrology. P	ortions of the wetland's hydrology may be				
influenced by previous logging operations.					

VEGETATION – Use scientific names of plants.

Sampling Point: wirc013f_xw

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u>)	<u>% Cover</u>	<u>Species</u> ?		Number of Dominant Species
1. <u>Fraxinus nigra</u>	40	<u> </u>	FACV	That Are OBL, FACW, or FAC:6(A)
2. <u>Thuja occidentalis</u>		<u> Y </u>	FACW	Total Number of Dominant
3. <u>Betula alleghaniensis</u>		<u> N </u>	FAC	Species Across All Strata:8 (B)
4. <u>Abies balsamea</u>	5	<u> N </u>	FAC	Percent of Dominant Species
5. <u>Acer saccharum</u>	4	<u> N</u>	<u>FACU</u>	That are OBL, FACW, of FAC: <u>75</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co	/er	OBL species <u>51</u> x 1 = <u>51</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>104</u> x 2 = <u>208</u>
1. <u>Fraxinus nigra</u>	10	Y	FACW	FAC species 17 x 3 = 51
2. <u>Acer spicatum</u>	5	Y	<u>FACU</u>	FACU species $14 \times 4 = 56$
3. <u>Tsuga canadensis</u>	5	Y	<u>FACU</u>	$\begin{array}{c} \text{OPL species} \underline{0} x \text{ 5 = } \\ \text{Column Totals:} 186 (A) 366 (B) \\ \end{array}$
4. <u>Abies balsamea</u>	2	N	FAC	
5				Prevalence Index = $B/A = \frac{1.967741935483871}{1.967741935483871}$
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
	22	= Total Co	/er	_∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹
1. Chrysosplenium americanum	20	Y	OBI	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2. Carex bromoides	20	Ŷ	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Caltha palustris	15	Y	OBI	
4 Rubus pubescens	7	N	FACW	¹ Indicators of hydric soil and wetland hydrology must
5 Carex leptalea	5	 N	OBI	
6. Impatiens capensis	5	N		Definitions of Vegetation Strata:
 <u>Impations superios</u> Glyceria striata 	<u> </u>	 N	OBI	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8 Galium asprellum	 	N		a breast height (DBH), regardless of height.
Cardamine pensylvanica	2	<u>N</u>		Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9. <u>Oardannic pensylvanica</u>	2	 		
		IN		of size, and woody plants less than 3.28 ft tall.
11	- <u> </u>			Woody vines – All woody vines greater than 3.28 ft in
12	05		·	height.
20	85	= Total Co	/er	
Woody Vine Stratum (Plot size: 30)				
1				
2				
3				Hydrophytic Vegetation
4				Present? Yes <u>~</u> No
	0	= Total Co	/er	
Remarks: (Include photo numbers here or on a separate s	sheet.)			

The feature is a hardwood swamp with a canopy dominated by black ash and northern white cedar. Black ash and eastern hemlock are among the dominant shrubs at the sample plot. The ground layer is diverse, with marsh marigold, American golden saxifrage, and brome-like sedge dominant at the sample plot. Due to the extensive size of the wetland, the sample is not considered fully representative of the wetland as a whole.

SOIL

Profile Desc	cription: (D	escribe t	o the dep	oth needed	to docun	nent the i	ndicator	or confirm	the absence	e of indicators.)	
Depth (inches)	Color (r	Matrix moist)	%	Color (n	Redo:	x Features %	S Type ¹		Texture	Remarks	
<u>0-3</u>	10YR	2/2	100		10131)	0	_туре		MMI	loam	
3-14	10YR	5/1	99	7.5YR	3/4	1	С	M	SL	<u>100111</u>	
14-20	7.5YR	5/1	90	7.5YR	5/4	10	С	Μ	SL	Prominent redox	
						·					
						·					
						·					
						·					
						·					
						·					
¹ Type: C=C	oncentration	n, D=Deple	etion, RM	=Reduced N	latrix, MS	S=Masked	Sand Gra	ains.	² Locatio	n: PL=Pore Lining, M=Matrix.	
Hyaric Soli Histosol				Polyva	lue Relov	v Surface	(S8) (I RR	P		Stor Problematic Hydric Solis :	
Histic E	pipedon (A2)		I Olyva	RA 149B)	Currace		,	Coast Prairie Redox (A16) (LRR K, L, R)		
Black H	istic (A3)			Thin Dark Surface (S9) (LRR R, MLRA 149B)				RA 149B)	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
Hydroge Stratifie	en Sulfide (A	(4) 5)		Loamy	Loamy Mucky Mineral (F1) (LRR K, L)			L)	Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L)		
Deplete	d Below Dai	rk Surface	(A11)	Deplet	ed Matrix	(F3)			Thin Dark Surface (S9) (LRR K, L)		
Thick Da	ark Surface	(A12)		Redox Dark Surface (F6)					Iron-Manganese Masses (F12) (LRR K, L, R)		
Sandy N	Sleved Matri	ar (ST) x (S4)		Deplet Redox	Depress	ions (F8)	()		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy F	Redox (S5)	~ /				()			Red Parent Material (F21)		
Stripped	d Matrix (S6)			D)					Very Shallow Dark Surface (TF12)		
Dark Su			LKA 149	D)							
³ Indicators o	f hydrophyti	c vegetati	on and w	etland hydro	logy mus	t be prese	nt, unless	disturbed	or problemati	ic.	
Restrictive	Layer (if ob	served):									
Dopth (in	choc):								Hvdric Soi	I Present? Yes ✔ No	
Remarks:	ches).										
Soils obs	served to	o be lo	amy m	nucky mi	neral	over sa	andy lo	am.			
			•				•				



wirc013f_xw_NW



wirc013f_xw_SE

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	EJO/JSW			
File #:	Date of visit(s):			
wirc013_x	2020-05-29			
Location:	Ecological Landsca	ipe:		
PLSS: sec 29 T046N R001W	Superior Mineral Ranges			
Lat: <u>46.431000</u> Long: <u>-90.508355</u>	Watershed:			
0	LS11, Potato River			
County: Iron Town/City/Village: GURNEY TOWN				
SITE DESCRIPTION	1			
Soils:	WWI Class:			
Mapped Type(s):	ТЗ/8К, ТЗК, ТЗ/5К			
Lupton-Pleine-Cathro complex, 0 to 1 percent slopes. Pence-Gogebic complex, 2	Wetland Type(s):			
to o percent slopes, story. Pence-Gogebic complex, o to to percent slopes, story.	PFO - hardwood swamp			
Field Verified:				
Series were not verified. Soils were observed to	Wetland Size:	Wetland Area Impacted		
be loamy mucky mineral over sandy loam.				
	Vegetation:			
	Plant Community Description(s):			
Hydrology:	The feature is a hardwood swamp with a canopy dominated by black ash and northern white cedar. Black ash and eastern			
The wetland is saturated, with standing water present at				
the time of the survey. The wetland appears to exhibit	hemlock are among th	hemlock are among the dominant shrubs. The ground layer is		
both recharge and discharge hydrology.	diverse, with marsh marigold, American golden saxifrage, and			
	brome-like seage dom	indiit.		

SITE MAP

SECTION 1: Functional Value Assessment

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

WH-7: The wetland is a part of a larger forest that may support SGCN species. WH-6: The wetland has variable microtopography supporting both hydrophytic and more upland-associated species. WQ-2, ST-5: The wetland is in a depression that receives stormwater from the surrounding upland.

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

Observed	Potential	Species/Habitat/Comments			
	Y	Veery, white-throated sparrow, and other songbirds were heard near the wetland			
	Y	Mammals, herpetofauna, birds			

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

Observed	Potential	Species/Habitat
	Y	Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 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	S37	S2	S1-S2 (S2 high quality)
Relative frequency of plant community in watershed	Abundant 🗌	Common	Uncommon	Rare
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Fraxinus nigra*			PFO	Patchy
Carex bromoides*			PFO	Rare
Chrysosplenium americanum*			PFO	Rare
Thuja occidentalis*			PFO	Rare
Caltha palustris*			PFO	Rare
Betula alleghaniensis			PFO	Rare
Fraxinus nigra*			PFO	Rare
Rubus pubescens			PFO	Rare
Abies balsamea			PFO	Rare
Acer spicatum*			PFO	Rare
Carex crinita*			PFO	Rare
Carex leptalea			PFO	Rare
Glyceria striata			PFO	Rare
Impatiens capensis			PFO	Rare
Onoclea sensibilis*			PFO	Rare
Tsuga canadensis*			PFO	Rare
Acer saccharum			PFO	Barren
Galium asprellum			PFO	Barren
Abies balsamea			PFO	Barren
Cardamine pensylvanica			PFO	Barren
Cornus canadensis			PFO	Barren
Micranthes pensylvanica			PFO	Barren
Osmunda claytoniana			PFO	Barren
Ribes glandulosum			PFO	Barren
Scutellaria lateriflora			PFO	Barren
Corallorhiza trifida			PFO	Barren
Viburnum opulus			PFO	Barren

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

The wetland has a relatively high species richness, well-developed strata, and no observed exotic species.

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

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

Wetland is adjacent to harvested area and appears to have had previous selective harvests. Earthworms are present in the surrounding forest with potential to impact the wetland's herbaceous layer.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The wetland is a large, intact community, with a high species richness, minimal presence of exotic species, and more conservative species present (e.g. early coralroot).
Human Use Values	The wetland is part of a larger forest that offers multiple recreational opportunities.
Wildlife Habitat	The wetland is an extensive and intact plant community, with well-developed strata. The wetland is part of a larger forest that supports a diversity of wildlife.
Fish and Aquatic Life Habitat	The wetland had many pools of standing water at the time of survey, all of which may support aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is relatively extensive and receives stormwater from the surrounding forest.
Water Quality Protection	The wetland is extensive, has multiple strata, and has dense vegetation. These are all important in intercepting and filtering rainwater and stormwater.
Groundwater Processes	The wetland appears to exhibit both recharge and discharge hydrology, and as the feature is large it likely has fairly complex hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation	<u>Project</u>	City/	County: Iron	S	ampling Date: <u>2020-05-</u> 2	<u>29</u>
Applicant/Owner: Enbridge				State: <u>Wisconsin</u>	Sampling Point: wirc013f	<u>xu</u>
Investigator(s): <u>JSW/EJO</u>		Sect	ion, Township, Range: <u>SeC</u>	<u>; 29 T046N F</u>	R001W	
Landform (hillslope, terrace, etc.): Sig	de Slope	Local re	lief (concave, convex, none)	<u>None</u>	Slope (%): <u>3-70</u>	6
Subregion (LRR or MLRA): Northcen	ral Forests Lat: 46.43	1075	Long: <u>-90.5</u>	08453	Datum: <u>WGS84</u>	<u>. </u>
Soil Map Unit Name: Pence-Gog	ebic complex, 6 to	o 18 pe	cent slopes, stony	_ NWI classificati	on:	
Are climatic / hydrologic conditions on	the site typical for this time	e of year?	Yes No (If	no, explain in Rem	narks.)	
Are Vegetation, Soil, o	r Hydrology signifi	cantly distu	rbed? Are "Normal Ci	rcumstances" pres	sent? Yes 🖌 No 🔄	
Are Vegetation, Soil, o	r Hydrology natura	ally problem	atic? (If needed, exp	lain any answers i	in Remarks.)	
SUMMARY OF FINDINGS -	Attach site map sho	wing sa	npling point location	s, transects, i	mportant features, etc	;_
Hydrophytic Vegetation Present?	Yes No	v	Is the Sampled Area			
Hydric Soil Present?	Yes No	v	within a Wetland?	Yes	No <u> </u>	
Wetland Hydrology Present?	Yes No	~	If yes, optional Wetland S	ite ID:		
Remarks: (Explain alternative proceed	tures here or in a separate	e report.)	l community domin	nated by ber	nlock	
				lated by her	HIUCK.	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: wirc013f_xu

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Tsuga canadensis	30	Y	FACU	Number of Dominant Species That Are OBL EACW, or EAC: 2 (A)
2. Acer rubrum	25	Y	FAC	
3. Abies balsamea	10	 N	FAC	Total Number of Dominant Species Across All Strata: 6 (B)
4. <u>Acer saccharum</u>	10	N	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)
6				
7				Prevalence Index worksheet:
	75	= Total Cov	/or	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15)		- 10101 000		FACW species $0 \times 2 = 0$
1 Abios balsamoa	25	V	EAC	FAC species $70 \times 3 = 210$
1. Aper papeharum	10	 		FACU species <u>75</u> x 4 = <u>300</u>
		<u> </u>	<u>FACU</u>	UPL species x 5 =
3				Column Totals: <u>145</u> (A) <u>510</u> (B)
4				Prevalence index = $B/A = 3.5172413793103448$
5				
6			·	1 - Ranid Test for Hydronhytic Vegetation
7				2 - Dominance Test is >50%
_	35	= Total Cov	/er	$3 - Prevalence Index is \leq 3.0^1$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Maianthemum racemosum</u>	10	<u> Y </u>	<u>FACU</u>	data in Remarks or on a separate sheet)
2. <u>Dendrolycopodium dendroideum</u>	10	<u> Y </u>	<u>FACU</u>	Problematic Hydrophytic Vegetation' (Explain)
3. <u>Clintonia borealis</u>	5	N	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Carex pedunculata</u>	5	N	FAC	be present, unless disturbed or problematic.
5. <u>Acer saccharum</u>	5	<u> N </u>	<u>FACU</u>	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				
10				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	35	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: 30)				
1				
2.				
3.				Hydrophytic
4				Vegetation
	0	= Total Cov	/er	Present? Yes No
Remarks: (Include photo numbers here or on a separate :	sheet.)	10101 001		
The sample plot is located in an uplance	l transiti	onal cor	mmunity	/ between a wet forest and a mesic
hardwood forest.				

Profile Des	cription: (Describe t	o the dept	h needed to docum	ent the	indicator of	or confirm	the absence of in	ndicators.)	
Depth	Matrix		Redox	Feature	s				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remark	s
0-3	<u>10YR 2/2</u>	100		0			<u> </u>		
3-8	<u>7.5YR 3/2</u>	100		0			SIL		
8-20	<u>5YR 3/4</u>	100		0			SIL		
<u>8-20</u> <u>8-20</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u>	oncentration, D=Depl Indicators: I (A1) pipedon (A2)		Reduced Matrix, MS Polyvalue Below MLRA 149B)	0 				=Pore Lining, M=N Problematic Hydr (A10) (LRR K, L, I ie Redox (A16) (LI	Matrix. ic Soils ³ : MLRA 149B) RR K, L, R)
Histic E Black H Hydroge Stratifie Deplete Thick D Sandy N Sandy F Strippec Dark Su ³ Indicators c	pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) d Matrix (S6) inface (S7) (LRR R, M	- - - - - - - - - - - - - - - - - - -	MLRA 149B) Thin Dark Surfat Loamy Mucky M Depleted Matrix Redox Dark Sur Depleted Dark S Redox Depressi Nand hydrology mus	ce (S9) (l lineral (F Aatrix (F2 (F3) face (F6) Surface (f ons (F8) t be pres	LRR R, MI 1) (LRR K 2) - -7) ent, unless	_RA 149B; , L)	 Coast Prair 5 cm Mucky Dark Surface Polyvalue E Thin Dark S Iron-Manga Piedmont F Mesic Spoor Red Parent Very Shallo Other (Expl 	y Peat or Peat (S3 ce (S7) (LRR K, L) Below Surface (S8) Surface (S9) (LRR Inese Masses (F12 Floodplain Soils (F1 dic (TA6) (MLRA 1 Material (F21) bw Dark Surface (T lain in Remarks)	KK K, L, K)) (LRR K, L, R))) (LRR K, L) (K, L) 2) (LRR K, L, R) 19) (MLRA 149B) 44A, 145, 149B) (F12)
Restrictive	Layer (if observed):								
Depth (in	ches):						Hydric Soil Pres	sent? Yes	No 🖌
Remarks: No indica	ators of hydric	soil we	e observed.						





wirc013f_xu_N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	Sampling Date: 2020-05-29
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wirc1022f_w
Investigator(s): FJO/JSW	Section, Township, Range: sec 28 T046N R001W
Landform (hillslope terrace etc.): Depression	al relief (concave, convex, none): Concave, Slope (%): 0-2%
Subragion (I DD or MI DA), Northcentral Forests Lat. 46 42214/	Long: -00.507827
Sublegion (ERR of MERA) Lat. 40.432144	Long. <u>-90.307827</u> Datum. <u>VV9304</u>
Soil Map Unit Name: <u>Pence-Gogebic complex, 6 to 18</u>	Dercent Slopes, Stony NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year	r? Yes 🖌 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	listurbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally pro	ematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🖌 No	Is the Sampled Area
Hydric Soil Present? Yes <u>v</u> No	within a Wetland? Yes <u>v</u> No
Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report	.)
The welland is a seasonally hooded hardwood	swamp dominated by green asn. Stash from harvests
in the surrounding forest is present in the wetla	nd at the time of the survey.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained L	eaves (B9) Drainage Patterns (B10)
→ High Water Table (A2) Aquatic Fauna (313) Moss Trim Lines (B16)
Saturation (A3)	15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfic	e Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizos	pheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Re	luced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Rec	uction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surfa	ce (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain i	Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u> Ves No</u> Depth (inches)	0.5
Water Table Present? Yes <u>v</u> No Depth (inches)	0
Saturation Present? Yes <u>v</u> No <u>Depth</u> (inches)	<u>0</u> Wetland Hydrology Present? Yes <u>✓</u> No
(Includes capillary tringe) Describe Recorded Data (stream gauge monitoring well aerial photo	previous inspections) if available:
Remarks:	The context of the time of even on The context is
I ne wetland is seasonally flooded with standing	water present at the time of survey. The wetland is
a closed depression.	

VEGETATION – Use scientific names of plants.

Sampling Point: wirc1022f_w

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
<u>Tree stratum</u> (Plot size: <u>30</u>)	<u>% Cover</u>	<u>Species</u> ?		Number of Dominant Species	
		<u> </u>	<u>FACW</u>	That Are OBL, FACW, or FAC: 2 (A)	
2				Total Number of Dominant	
3				Species Across All Strata: (B)	
4				Percent of Dominant Species	
5					
6				Prevalence Index worksheet:	
7				Total % Cover of: Multiply by:	
	30	= Total Cov	/er	OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>60</u> x 2 = <u>120</u>	
1. <u>Acer rubrum</u>	2	N	FAC	FAC species x 3 =6	
2				FACU species x 4 =	
3.				UPL species $0 \times 5 = 0$	
4				Column Totals: <u>62</u> (A) <u>126</u> (B)	
5				Prevalence Index = B/A = 2.032258064516129	
6				Hydrophytic Vegetation Indicators:	
7				 1 - Rapid Test for Hydrophytic Vegetation 	
1				 2 - Dominance Test is >50% 	
_		= Total Cov	/er	\sim 3 - Prevalence Index is $\leq 3.0^1$	
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting	
1. <u>Carex cf. intumescens</u>	30	<u> Y </u>	<u>FACW</u>	data in Remarks or on a separate sheet)	
2			·	Problematic Hydrophytic Vegetation' (Explain)	
3				¹ Indicators of hydric soil and wetland hydrology must	
4				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.				C ertific determine We advertise that there there are the DDU	
9				and greater than or equal to 3.28 ft (1 m) tall.	
10				Herb. All herbasseus (nen weedu) plante, regardiese	
10			·	of size, and woody plants less than 3.28 ft tall.	
10			·	Woody vines $-$ All woody vines greater than 3.28 ft in	
12				height.	
		= Total Cov	/er		
Woody Vine Stratum (Plot size: <u>30</u>)					
1			·		
2					
3				Hydrophytic	
4				Vegetation Present? Yes v No	
	0	= Total Cov	/er		
Remarks: (Include photo numbers here or on a separate	sheet.)) -l ·· !	- 1		
The feature is a hardwood swamp (vernal pool) dominated by green ash in the canopy and greater					
bladder sedge in the ground layer. The sample plot appears largely representative of feature.					
Brome-like sedge and interrupted tern are present outside of the sample plot.					

SOIL

Depth (inches) Matrix Redox Features Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks 0-1 10YR 2/2 100 0 MMI Ioam 1-7 7.5YR 5/2 95 5YR 4/3 5 C M SL Prominent redox			
(inches) Color (moist) % Type' Loc' Texture Remarks 0-1 10YR 2/2 100 0 MMI Ioam 1-7 7.5YR 5/2 95 5YR 4/3 5 C M SL Prominent redox			
O-1 10YR 2/2 100 O MMI loam 1-7 7.5YR 5/2 95 5YR 4/3 5 C M SL Prominent redox			
<u>1-7</u> 7.5YR 5/2 95 5YR 4/3 5 C M SL Prominent redox			
<u>7-14 SYR 4/2 80 SYR 4/4 20 C M SL Distinct redox</u>			
· ·			
· · · · · · · · · · · · · ·			
·			
· · · · · · · · · · · · · · · · · · ·			
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix.			
Hydric Soli Indicators: Indicators for Problematic Hydric Solis : Histosol (A1) Polyvalue Below Surface (S8) (LPP P 2 cm Muck (A10) (LPP K 1 MLPA 1498)			
Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)			
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)			
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L)			
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Metrix (F2) This Dark Surface (S0) (LRR K, L)			
\sim Depleted Below Dark Surface (A12) \sim Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L , R)			
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B)			
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 1			
Sandy Redox (S5) Red Parent Material (F21)			
Stripped Matrix (S6) Very Shallow Dark Surface (TF12)			
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)			
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
Restrictive Layer (if observed):			
Type: Gravel/cobble			
Depth (inches): <u>14.0</u> Hydric Soil Present? Yes <u>v</u> No			
Remarks:			
Solis were observed to be loarny mucky mineral over sandy loarn over gravel/cobble.			



wirc1022f_w_N



wirc1022f_w_S

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	EJO/JSW		
File #:	Date of visit(s):		
wirc1022	2020-05-29		
Location:	Ecological Landsca	ape:	
PLSS: sec 28 T046N R001W	Superior Mineral Ranges	5	
		-	
Lat: <u>46.431908</u> Long: <u>-90.507865</u>	Watershed:		
Country Iron Town/City/Villago: GUINAV town			
County. <u>non</u> Town/City/village. <u>Countey town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Pence-Gogebic complex, 6 to 18 percent slopes, stony	Wetland Type(s):		
	PFO - hardwood swamp		
Field Verified:		-	
Series were not verified. Soils were observed to	Wetland Size:	Wetland Area Impacted	
be loamy mucky mineral over sandy loam, with a	0.0595	0.0595	
gravel/cobble restrictive layer.	Vegetation:		
- Hudrology:	Plant Community D	Description(s):	
The wetland is assessed by flooded with standing	The feature is a	hardwood swamp dominated	
The wettand is seasonally hooded with standing	by green ash in the canopy and greater		
water present at the time of survey.	bladder sedge ir	n the ground layer.	
	Ŭ		

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	Ν	Y	Used for recreation (hunting, birding, hiking, etc.). List: birding, hunting
2	N	N	Used for educational or scientific purposes
3	Ν	Y	Visually or physically accessible to public
4	N	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Ν	N	In or adjacent to RED FLAG areas List:
6	Ν	Y	Supports or provides habitat for endangered, threatened or special concern species
7	Ν	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	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>>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	Ν	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	Ν	N	Ephemeral pond with water present <u>> 4</u> 5 days
10	Ν	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	N	N	Wetland is connected or contiguous with perennial stream or lake
2	N	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	Y	Vegetation is inundated in spring
SP			Shoreline Protection
1	N	N	Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable
2	Ν	Ν	water levels or high flows – if no, not applicable
3	Ν	N	Densely rooted emergent or woody vegetation
ST			Storm and Floodwater Storage
1	Y	Y	Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Y	Y	Water flow through wetland is NOT channelized
3	N	N	Dense, persistent vegetation
4	Ν	N	Evidence of flashy hydrology
5	Ν	N	Point or non-point source inflow
6	Ν	N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with 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	Y	Y	Basin wetland or constricted outlet
3	N	Y	Water flow through wetland is NOT channelized
4	N	N	Vegetated wetland associated with a lake or stream
5	N	N	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, neavy macrophyte growth
/	N	N N	Sionnwater or surface water from agricultural land is major hydrology source
8	N	<u>N</u>	Discharge to surface water
9	N	N	recurding to the record of the recursion
GVV			Christian access on indicators of group durates present
	N	N	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	N	Vetland remains saturated for an extended time period with no additional water inputs
4	N	<u>N</u>	vvetiand soils are organic
5	I N	I N	vetiand is within a weilnead protection area

WH-7: The wetland is part of a larger forest with potential to support SGCN species.

ST-1: The wetland is a closed depression. FA-2: The wetland had standing water at the time of survey with potential to support aquatic invertebrates.

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

Observed	Potential	Species/Habitat/Comments
	Y	Mammals, herpetofauna, birds
	Y	Eastern wood peewee, ovenbird heard in vicinity of wetland

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

Observed	Potential	Species/Habitat
	Y	Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata 🛛 🖌	All strata present	All strata present,
	or bare due to	present but	and good	conservative species
	invasive species	reduced native	assemblage of	represented
		species	native species	
NHI plant community	S4	S3V	S2	S1-S2 (S2 high quality)
ranking	_	_	_	_
Relative frequency of	Abundant	Common	Uncommon	Rare
plant community in				
watershed				
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover,
				Abundance)
Carex cf. intumescens*			PFO	Patchy
Fraxinus pennsylvanica*			PFO	Patchy
Osmunda claytoniana*			PFO	Barren
Acer rubrum			PFO	Barren
Carex bromoides			PFO	Barren
Matteuccia struthiopteris			PFO	Barren
Onoclea sensibilis*			PFO	Barren
Ranunculus abortivus*			PFO	Barren
Cardamine pensylvanica			PFO	Barren

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

The wetland was observed to have a low species richness, but no exotic species.

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

Assessment	Buffer	Historic	Impact	Relative	Stressor
Alea (AA)			Levei	Frequency	
					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells,
					impounded water, increased runoff
					Point source or stormwater discharge
					Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
					Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	V		N.4	0	Removal of herbaceous stratum – mowing,
	^		IVI	C	grading, earthworms, etc.
v	V		NA	0	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 in the surrounding forest with slash present in the wetland. earthworms are present in the surrounding upland.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The wetland has a low species richness but good coverage of native species and no observed exotic species.
Human Use Values	The wetland is relatively small but is part of a larger forest that offers recreational opportunities.
Wildlife Habitat	The wetland is relatively small but is part of a larger forest that supports a diversity of wildlife.
Fish and Aquatic Life Habitat	The wetland is relatively small but had standing water at the time of survey, which likely supports aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is a relatively small depressional feature.
Water Quality Protection	The wetland is relatively small but filters and stores stormwater and precipitation.
Groundwater Processes	The wetland appears to have recharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary trenching, soil storage, and backfilling.	Low
Secondary Impacts (including impacts which are indirectly attributable to the project)	Vegetation removal for construction.	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	Sampl	ing Date: <u>2020-05-29</u>
Applicant/Owner: Enbridge		State: Wisconsin San	npling Point: <u>wirc1022_u</u>
Investigator(s): <u>JSW/EJO</u>	Section, Township, Range:	sec 28 T046N R00	1W
Landform (hillslope, terrace, etc.): Talf	_ Local relief (concave, convex,	none): <u>None</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.432	2208 Long: -	90.507961	Datum: <u>WGS84</u>
Soil Map Unit Name: Pence-Gogebic complex, 6 to	18 percent slopes, sto	DNY NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes 🖌 No	_ (If no, explain in Remarks	.)
Are Vegetation, Soil, or Hydrology signific	cantly disturbed? Are "Nor	mal Circumstances" present?	? Yes _ ✔_ No
Are Vegetation, Soil, or Hydrology natura	lly problematic? (If neede	d, explain any answers in Re	marks.)
SUMMARY OF FINDINGS – Attach site map show	wing sampling point loca	tions, transects, impo	ortant features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Are within a Wetland?	a YesNo	· <u>·</u>
Remarks: (Explain alternative procedures here or in a separate The upland sample point is located in a me	report.) sic hardwood forest d	ominated by sugar	maple.
HYDROLOGY			

Primary Indicators (minimum of one is required; check all that apply)
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)
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)
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5)
Field Observations:
Surface Water Present? Yes No 🖌 Depth (inches):
Water Table Present? Yes No <u>v</u> Depth (inches):
Saturation Present? Yes No <u>v</u> Depth (inches): Wetland Hydrology Present? Yes No <u>v</u> (includes capillary fringe)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
No indicators of wetland hydrology were observed.
VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: .30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1 Acer saccharum	75	Y	FACU	Number of Dominant Species		
2			1100	$\begin{array}{c} \text{That Ale OBL, FACW, OF FAC.} \\ \underline{\textbf{U}} \\ \end{array} $		
2				Total Number of Dominant		
3			·			
4			·	Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)		
5			·			
o			·	Prevalence Index worksheet:		
/				Total % Cover of: Multiply by:		
		= Total Co	ver	OBL species x 1 =		
Sapling/Shrub Stratum (Plot size: 15)				FACW species $()$ $x^2 = ()$		
1. <u>Acer saccharum</u>	50	<u> </u>	<u>FACU</u>	FAC species 20 x 3 - 00		
2				$\frac{140}{140} \times 4 = 300$		
3			·	Column Totals: 160 (A) 620 (B)		
4						
5				Prevalence Index = $B/A = 3.875$		
6				Hydrophytic Vegetation Indicators:		
7				1 - Rapid Test for Hydrophytic Vegetation		
	50	= Total Co	ver	2 - Dominance Test is >50%		
Herb Stratum (Plot size: 5)				3 - Prevalence Index is $\leq 3.0^{1}$		
1. Caulophyllum thalictroides	25	Y		4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)		
2 Picea glauca	10	Ŷ	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)		
3 Athyrium angustum	10	N	FAC			
A Acer rubrum	<u> </u>	 N	FAC	¹ Indicators of hydric soil and wetland hydrology must		
5 Dryopteris intermedia	<u> </u>	 N	FAC			
6. Drupus virginiana	<u> </u>	 		Definitions of Vegetation Strata:		
		IN	<u>FACU</u>	Tree – Woody plants 3 in. (7.6 cm) or more in diameter		
<i>1</i>			·	at breast height (DBH), regardless of height.		
8				Sapling/shrub – Woody plants less than 3 in. DBH		
9			·			
10				Herb – All herbaceous (non-woody) plants, regardless		
11						
12			·	Woody vines – All woody vines greater than 3.28 ft in height.		
	60	= Total Co	ver			
Woody Vine Stratum (Plot size: <u>30</u>)						
1			·			
2						
3				Hydrophytic		
4				Vegetation Present? Yes No v		
	0	= Total Co	ver			
Remarks: (Include photo numbers here or on a separate	sheet.)			· ·		
The vegetation is consistent with that o	f a mesi	ic hardv	vood for	est.		

Profile Desc	cription: (Describe	to the dept	h needed to docum	ent the	indicator	or confirm	n the absence of indicat	tors.)		
Depth	Matrix		Redox	Feature	S 1					
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type'	Loc ²	Texture	Remarks		
0-3	<u>10YR 2/1</u>	100		0						
3-8	<u>7.5YR 3/2</u>	100		0			SIL			
8-20	<u>5YR 3/4</u>	100		0			SIL			
		· ·								
							·			
					- <u> </u>					
¹ Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	=Masker	d Sand Gra	ains.	² Location: PL=Pore	e Lining, M=Matrix.		
Hydric Soil	Indicators:		·				Indicators for Probl	ematic Hydric Soils ³ :		
Histosol	(A1)	-	Polyvalue Below	/ Surface	e (S8) (LRF	RR,	2 cm Muck (A10)) (LRR K, L, MLRA 149B)		
Histic El Black Hi	pipedon (A2) istic (A3)		MLRA 149B) Thin Dark Surfa	ce (S9) (l		RA 149B)	Coast Prairie Re	dox (A16) (LRR K, L, R)		
Hydroge	en Sulfide (A4)	-	Loamy Mucky M	ineral (F	1) (LRR K	, L)	Dark Surface (S7	7) (LRR K, L)		
Stratified	d Layers (A5)	-	Loamy Gleyed N	/latrix (F2	2)		Polyvalue Below	Polyvalue Below Surface (S8) (LRR K, L)		
Deplete	d Below Dark Surface	e (A11)	Depleted Matrix	(F3) face (F6)			Thin Dark Surface (S9) (LRR K, L)			
Sandy N	Aucky Mineral (S1)	-	Redux Dark Sur Depleted Dark S	Surface (FO)) =7)		Piedmont Floodplain Soils (F12) (LRR K, L, R)			
Sandy G	Gleyed Matrix (S4)	-	Redox Depressi	ons (F8)	.,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
Sandy F	Redox (S5)						Red Parent Material (F21)			
Stripped	d Matrix (S6)		N N				Very Shallow Da	rk Surface (TF12)		
Dark Su		149D)					Remains)		
³ Indicators o	f hydrophytic vegetat	tion and wet	land hydrology must	t be pres	ent, unless	disturbed	or problematic.			
Restrictive	Layer (if observed):									
Type:							Hydric Soil Procent?	Vos No 🗸		
Depth (in	ches):						Hydric Soll Fresent?			
No indica	ators of hydric	soil we	re observed.							



wirc1022_u_S



WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Iron	San	npling Date: <u>2020-05-29</u>			
Applicant/Owner: Enbridge		State: Wisconsin S	Sampling Point: <u>wirc1021f_w</u>			
Investigator(s): EJO/JSW	Section, Township,	Range: sec 28 T046N R	001W			
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, o	convex, none): Concave	Slope (%): 0-2%			
Subregion (LRR or MLRA): Northcentral Forests Lat:	46.432148	Long: -90.507050	Datum: WGS84			
Soil Map Unit Name: Pence-Gogebic comple	ex. 6 to 18 percent slope	S. Stony NWI classification):			
Are climatic / hydrologic conditions on the site typical for	r this time of year? Yes 🖌 N	o (If no explain in Rema	rks)			
Are Vegetation Soil or Hydrology	significantly disturbed?	re "Normal Circumstances" prese	ent? Yes 🖌 No			
Are Vegetation Soil or Hydrology	naturally problematic? (I	f needed, explain any answers in	Remarks)			
SUMMARY OF FINDINGS – Attach site ma	<u>naturally problematics</u> (i	t locations transects im	nortant features etc			
Hydrophytic Vegetation Present? Yes <u> ✓</u>	No Is the Samp	led Area	No			
Hydric Soil Present? Yes <u> Ves</u>	No Konsection					
Remarks: (Explain alternative procedures here or in a	If yes, option	al wetland Site ID:				
The feature is a saturated hardwood	swamp dominated by t	black ash and sugar ma	aple, with a			
ground layer of sedges and ferns. A	selective harvest has o	occurred in and around	the wetland with			
stumps and slash present.						
Wetland Hydrology Indicators:		Secondary Indicators	(minimum of two required)			
Primary Indicators (minimum of one is required: check	all that apply)	Surface Soil Crac	ks (B6)			
- Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns	Drainage Patterns (B10)			
 High Water Table (A2) 	High Water Table (A2) Aquatic Fauna (B13)					
Saturation (A3)	Marl Deposits (B15)	Dry-Season Wate	Dry-Season Water Table (C2)			
Water Marks (B1) I	Hydrogen Sulfide Odor (C1)	Crayfish Burrows	Crayfish Burrows (C8)			
Sediment Deposits (B2)	Oxidized Rhizospheres on Living R	oots (C3) Saturation Visible	on Aerial Imagery (C9)			
Drift Deposits (B3) F	Presence of Reduced Iron (C4)	Stunted or Stress	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4) I	Recent Iron Reduction in Tilled Soi	is (C6) Geomorphic Posit	tion (D2)			
Iron Deposits (B5) 7	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	t (D5)			
Field Observations:	Denth (inches): 0.5					
Weter Table Present? Yes Vo. No.	Depth (inches): 0.0					
Saturation Present? Yes Vos	Depth (inches): 0	Wotland Hydrology Present?	Vos 🗸 No			
(includes capillary fringe)	Deptil (illelies). <u>0</u>	weiland Hydrology Tresent:				
Describe Recorded Data (stream gauge, monitoring w	ell, aerial photos, previous inspecti	ons), if available:				
Remarks:						
The feature is saturated, with standir	ng water present at the	time of the survey.				

VEGETATION – Use scientific names of plants.

Sampling Point: wirc1021f_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1 Fraxinus nigra	<u>- 25</u>	V	FACW	Number of Dominant Species		
2 Appropriation	20			That are OBL, FACW, of FAC: <u>4</u> (A)		
2. <u>Acel Saccharum</u>	10	 	EAC	Total Number of Dominant		
				Species Across All Strata. \mathbf{D} (B)		
4				Percent of Dominant Species		
5				(A/B)		
6				Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
	55	= Total Co	ver	OBL species <u>15</u> x 1 = <u>15</u>		
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>32</u> x 2 = <u>64</u>		
1. <u>Acer saccharum</u>	10	Y	FACU	FAC species <u>19</u> x 3 = <u>57</u>		
2. Acer rubrum	5	Y	FAC	FACU species <u>30</u> x 4 = <u>120</u>		
3				UPL species x 5 =0		
0				Column Totals: <u>96</u> (A) <u>256</u> (B)		
4				Prevalence Index = B/A = 2.6666666666666666666		
5				Hydrophytic Vegetation Indicators:		
б			·	1 - Rapid Test for Hydrophytic Vegetation		
7			·	2 - Dominance Test is >50%		
		= Total Co	ver	\sim 3 - Prevalence Index is <30 ¹		
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting		
1. <u>Carex crinita</u>	15	Y	OBL	data in Remarks or on a separate sheet)		
2. <u>Carex brunnescens</u>	7	Y	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)		
3. <u>Dryopteris intermedia</u>	2	N	FAC	1		
4. <u>Acer rubrum</u>	2	N	FAC	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
5				Definitions of Vegetation Strata:		
6				Trans (Manada related 2 in (7.0 arr) as many in diamatan		
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		
	26	= Total Co	ver	neight.		
Woody Vine Stratum (Plot size: 30)						
1						
2						
2						
				Hydrophytic Vegetation		
4				Present? Yes <u>v</u> No		
		= Total Co	ver			
The feature is bardwood swamp dominated by black ash and sugar maple in the capany. Sugar						

The feature is hardwood swamp dominated by black ash and sugar maple in the canopy. Sugar maple primarily occurs on hummocks within the wetland. The shrub layer has sparse coverage of sugar maple, and the ground layer is dominated by fringed sedge and brownish sedge. Interrupted fern appears dominant in parts of the wetland outside of the sample plot.

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth		Matrix			Redox	x Features	S				
(inches)	Color (r	<u>noist)</u>	%	Color (r	<u>moist)</u>	%	Type ¹	Loc ²	Texture	Remarks	
0-3	<u>10YR</u>	2/2	100			0			MMI	loam	
3-10	<u>7.5YR</u>	4/2	90	5YR	4/6	10	C	M	SL	Prominent redox	
10-20	5YR	4/2	90	5YR	5/6	10	С	M	SL	Prominent redox	
			<u> </u>					·			
										· · · · · · · · · · · · · · · · · · ·	
¹ Type: C=C	oncentration	n, D=Depl	etion, RM	Reduced I	Matrix, MS	S=Masked	I Sand Gra	ains.	² Location	: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:			.		o (Indicators	for Problematic Hydric Soils":	
Histosol	(A1) ninedon (A2	1		Polyva	alue Belov PA 1/0B)	v Surface	(S8) (LRF	К К,	2 cm Muck (A10) (LRR K, L, MLRA 149B)		
Black Hi	istic (A3))		Thin E	Dark Surfa	ce (S9) (L	.RR R. MI	RA 149B)	5 cm N	Aucky Peat or Peat (S3) (LRR K. L. R)	
Hydroge	en Sulfide (A	4)		Loam	y Mucky N	lineral (F1	1) (LRR K	, L)	Dark S	Surface (S7) (LRR K, L)	
Stratified	d Layers (A	5)		Loam	y Gleyed I	Matrix (F2)		Polyva	lue Below Surface (S8) (LRR K, L)	
Depleted	d Below Dai	k Surface	e (A11)	Deple	ted Matrix	(F3)			Thin D	ark Surface (S9) (LRR K, L)	
I NICK Da	ark Surface Aucky Miner	(A12) al (S1)			CDARK SUR	Tace (F6) Surface (F	7)		Iron-IVI Diedm	anganese Masses (F12) (LRR K, L, R)	
Sandy N	Bleved Matri	x (S4)		Depie Redox	C Depressi	ions (F8)	')		Nesic	Spodic (TA6) (MLRA 144A, 145, 149B)	
Sandy F	Redox (S5)	(-)			-	(- /			Red P	arent Material (F21)	
Stripped	Matrix (S6))							Very S	hallow Dark Surface (TF12)	
Dark Su	rface (S7) (LRR R, M	LRA 1498	3)					Other	(Explain in Remarks)	
³ Indicators o	f hydrophyti	c vegetati	on and we	etland hydro	ology mus	t be prese	ent, unless	disturbed	or problematio	2.	
Restrictive	Layer (if ob	served):									
Туре:											
Depth (in	ches):			<u> </u>					Hydric Soil	Present? Yes <u>~</u> No	
Remarks:					ineral		a na du dia				
20112 002			any m	иску п	merar	over sa		am.			



wirc1021f_w_NE



wirc1021f_w_SW

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

WETLAND IDENTIFICATION					
Project name:	Evaluator(s):				
Line 5 Relocation Project	EJO/JSW				
File #:	Date of visit(s):				
wirc1021	2020-05-29				
Location:	Ecological Landsca	ape:			
PLSS: sec 28 T046N R001W	Superior Mineral Range	s			
		5			
Lat: <u>46.432045</u> Long: <u>-90.507028</u>	Watershed:				
	LS11, Potato River				
County: <u>Iron</u> Town/City/Village: Gurney town					
SITE DESCRIPTION	1				
Soils:	WWI Class:				
Mapped Type(s):	N/A				
Pence-Gogebic complex, 6 to 18 percent slopes, stony. Tula-Gogebic	Wetland Type(s):				
complex, 0 to 6 percent slopes, stony.	PFO - hardwood swamp				
Field Verified:					
Series were not verified. Soils were observed to	Wetland Size:	Wetland Area Impacted			
be loamy mucky mineral over sandy loam.	0.1195	0.1195			
	Vegetation:	Vegetation:			
	Plant Community E	Description(s):			
Hydrology:	The feature is hardwood swamp dominated by black ash and sugar				
The feature is saturated, with standing water	maple in the canopy. Sugar maple primarily occurs in hummocks				
present at the time of the survey.	maple, and the ground la	aver is dominated by fringed sedge and			
ľ	brownish sedge. Interru	oted fern appears dominant in parts of the			
	wetland outside the sam	ple plot.			

SITE MAP

SECTION 1: Functional Value Assessment

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

WQ-2, ST-5: The wetland is a depression and likely receives stormwater from the surrounding uplands. FA-2: Standing water was present in the wetland at the time of survey. WH-8: The wetland is part of a larger intact forest.

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

Observed	Potential	Species/Habitat/Comments
	Y	Birds, mammals, herpetofauna

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

Observed	Potential	Species/Habitat
	Y	Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata 🛛 🖌	All strata present	All strata present,
	or bare due to	present but	and good	conservative species
	invasive species	reduced native	assemblage of	represented
		species	native species	
NHI plant community	S4	S3V	S2	S1-S2 (S2 high quality)
ranking	_	_	_	_
Relative frequency of	Abundant	Common	Uncommon	Rare
plant community in				
watershed				
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Fraxinus nigra*			PFO	Patchy
Acer saccharum*			PFO	Rare
Carex crinita*			PFO	Rare
Acer saccharum*			PFO	Rare
Betula alleghaniensis			PFO	Rare
Osmunda claytoniana*			PFO	Rare
Carex brunnescens*			PFO	Rare
Rubus pubescens*			PFO	Rare
Acer rubrum*			PFO	Rare
Corylus cornuta			PFO	Rare
Acer rubrum			PFO	Barren
Dryopteris intermedia			PFO	Barren
Micranthes pensylvanica			PFO	Barren
Ribes glandulosum			PFO	Barren
Aralia nudicaulis			PFO	Barren
Arisaema triphyllum			PFO	Barren
Athyrium filix-femina			PFO	Barren
Claytonia caroliniana			PFO	Barren
Prunus virginiana			PFO	Barren
Tilia americana			PFO	Barren
Trientalis borealis			PFO	Barren

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

The wetland has a good diversity of native species, with no observed exotic species.

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

Assessment	Buffer	Historic	Impact	Relative	Stressor
Alea (AA)			Levei	Frequency	
					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells,
					impounded water, increased runoff
					Point source or stormwater discharge
					Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
					Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	V		N.4	0	Removal of herbaceous stratum – mowing,
	^		IVI	C	grading, earthworms, etc.
v	V		NA	0	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 in and around the wetland. Earthworms are present in the surrounding forest, and may impact the wetland's herbaceous layer.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The wetland has a good diversity of native species and no observed exotic species, and has intact ground layer. Selective logging has not significantly disturbed the plant community.
Human Use Values	The wetland is part of a larger forest that provides recreational opportunities.
Wildlife Habitat	The wetland is part of a larger forested community that supports a diversity of wildlife.
Fish and Aquatic Life Habitat	The wetland is had standing water at the time of survey, with potential to support aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is likely fed by surface water and receives and stores stormwater from the surrounding uplands and precipitation.
Water Quality Protection	The wetland has an intact groundlayer that can intercept precipitation and filter stormwater.
Groundwater Processes	The wetland appears to exhibit recharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation	Project	City/County: <u>Iron</u>	Samp	oling Date: <u>2020-05-29</u>
Applicant/Owner: Enbridge			State: Wisconsin Sa	mpling Point: <u>wirc1021_u</u>
Investigator(s): <u>JSW/EJO</u>		Section, Township, Range: <u>Se</u>	ec 28 T046N R00	D1W
Landform (hillslope, terrace, etc.): Talf		Local relief (concave, convex, nor	ne): <u>None</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentra	al Forests Lat: <u>46.432(</u>)77Long: <u>-90</u>	.506904	Datum: <u>WGS84</u>
Soil Map Unit Name: Pence-Goge	bic complex, 6 to ²	18 percent slopes, story	<u>y</u> NWI classification:	
Are climatic / hydrologic conditions on th	e site typical for this time o	f year? Yes 🖌 No ((If no, explain in Remark	s.)
Are Vegetation, Soil, or H	Hydrology significal	ntly disturbed? Are "Normal	Circumstances" present	? Yes 🖌 No
Are Vegetation, Soil, or H	Hydrology naturally	problematic? (If needed, e	explain any answers in R	emarks.)
SUMMARY OF FINDINGS - At	tach site map showi	ing sampling point locatio	ons, transects, imp	ortant features, etc.
Hydrophytic Vegetation Present?	Yes No 🖌	Is the Sampled Area		
Hydric Soil Present?	Yes No 🖌	within a Wetland?	Yes <u>N</u>	o <u> ⁄</u>
Wetland Hydrology Present?	Yes No	If yes, optional Wetland	Site ID:	
Remarks: (Explain alternative procedu The upland sample point is	res here or in a separate res s located in a mes	eport.) ic hardwood forest dom	ninated by sugar	maple.

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: .30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 Acer saccharum	50	Y	FACU	Number of Dominant Species That Are OBL EACIVL or EAC: 2 (A)
2		I	1700	$\begin{array}{c} \text{That Ale OBL, FACW, of FAC.} \\ \underline{} \\ \underline{} \\ \underline{} \\ (A) \end{array}$
3			·	Total Number of Dominant Species Across All Strata: 6 (B)
3			·	
4			·	Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)
5			·	
o				Prevalence Index worksheet:
1			·	Total % Cover of: Multiply by:
45	_50_	= Total Co	ver	OBL species $()$ $x = 0$
Sapling/Shrub Stratum (Plot size: 15)	4.0	V		FACW species $0 \times 2 = 0$
1. <u>Abies balsamea</u>	10	<u> </u>	FAC	FACU species $95 \times 4 = .380$
2. <u>Acer saccharum</u>	10	<u> Y </u>	FACU	UPL species $0 \times 5 = 0$
3. <u>Ostrya virginiana</u>	5	<u> </u>	<u>FACU</u>	Column Totals: <u>135</u> (A) <u>500</u> (B)
4				
5				Prevalence index = $B/A = \frac{3.7037037037037037037}{2}$
6			·	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	25	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)				3 - Prevalence index is \$3.0
1. <u>Dryopteris intermedia</u>	25	Y	FAC	data in Remarks or on a separate sheet)
2. <u>Maianthemum canadense</u>	10	N	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Clavtonia caroliniana</u>	10	Y	FACU	1
4. <u>Aralia nudicaulis</u>	5	N	FACU	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Trientalis borealis	5	N	FAC	Definitions of Vagatation Strata:
6. Acer saccharum	5	N	FACU	Demitions of Vegetation Strata.
7 Orvzopsis asperifolia	5	 N	<u></u>	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8				
9			·	and greater than or equal to 3.28 ft (1 m) tall.
10				Herb - All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12			·	Woody vines – All woody vines greater than 3.28 ft in
12.	65	- Total Ca		height.
Weady Vina Stratum (Plat aiza: 30)			vei	
· · · · · · · · · · · · · · · · · · ·			·	
2				
3			·	Hydrophytic Vegetation
4			·	Present? Yes No <u>v</u>
Pamarka: (Include photo numbero hero er en a congrata	<u> </u>	= Total Co	ver	
The vegetation is consistent with that o	f a mesi	ic hardv	vood for	est.
5				

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth		Matrix			Redox	x Feature	s					
(inches)	Color (I	moist)	<u>%</u>	Color (r	noist)		Type ¹	Loc ²	Texture	Remarks		
0-3	<u>10YR</u>	2/1	100			0	·		<u>L</u>			
3-8	<u>7.5YR</u>	3/2	100			0	·		SIL			
8-20	5YR	3/4	98	5YR	4/6	2	C	M	SIL	Distinct redox		
							·					
			<u> </u>				·					
							·					
							·					
							·					
							·					
¹ Type: C=C		n D=Denl	etion RM:		Matrix MS	S=Masker	Sand Gra	ains		PI = Pore Lining M=Matrix		
Hydric Soil	Indicators:	<u>, D Depi</u>		Reduced					Indicators	for Problematic Hydric Soils ³ :		
<u> </u>	(A1)			Polyva	alue Belov	v Surface	(S8) (LRF	R,	2 cm N	2 cm Muck (A10) (LRR K, L, MLRA 149B)		
Histic El	pipedon (A2	2)		ML	RA 149B)	(00) (Coast	Coast Prairie Redox (A16) (LRR K, L, R)		
– Black Hi Hydrode	istic (A3) en Sulfide (A	4)		I nin L	vark Suna v Muckv M	ce (S9) (I lineral (F	_RR R, ML 1) (LRR K.	_RA 149B) . L)	 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 145, 149B) 			
Stratified	d Layers (A	5)		Loamy	y Gleyed I	Matrix (F2	!)	, _/				
Deplete	d Below Da	rk Surface	e (A11)	Deple	ted Matrix	(F3)						
Thick Da	ark Surface	(A12)		Redox	Dark Sur	face (F6)						
Sandy N	/lucky Miner	al (S1)		Deple	ted Dark S	Surface (F	-7)					
Sandy C	Redox (S5)	x (04)			Depress				Red Parent Material (F21)			
Stripped	Matrix (S6)							Very S	Shallow Dark Surface (TF12)		
Dark Su	rface (S7) (LRR R, M	ILRA 1498	B)					Other	(Explain in Remarks)		
³ Indicators o	f hvdrophvti	c vegetat	ion and we	etland hvdro	oloav mus	t be prese	ent. unless	disturbed	or problematio	3.		
Restrictive	Layer (if ob	served):		<u> </u>			,			-		
Туре:												
Depth (in	ches):								Hydric Soil	Present? Yes No 🗸		
Remarks:												
No indica	ators of	nyarıc	SOII WE	ere obse	erved.							



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wirc1021_u_S