Project/Site: Line 5 Relocation Project City/Cour	nty: Ashland Sampling Date: 2020-06-06
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasc1039e_w
Investigator(s): FJO/JSW Section.	Township, Range: Sec 08 T045N R003W
Landform (hillslope terrace etc.): Depression	(concave convex none): Concave Slope (%): 0-2%
Subracian (I RP or MLPA): Northcentral Forests Lat: 16 300810	Long: -90 776997 Dotum: WGS84
Sublegion (LRK of MERA) Lat. 40.590019	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed	Are "Normal Circumstances" present? Yes _ ✓ No
Are Vegetation, Soil, or Hydrology naturally problematic	? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampl	ing point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is Hydric Soil Present? Yes No w	the Sampled Area ithin a Wetland? Yes <u><</u> No
Wetland Hydrology Present? Yes No If	yes, optional Wetland Site ID:
The feature is a depression within a hay field.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B	39) 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)
Sealment Deposits (B2) Oxialzed Rnizospheres (on Living Roots (C3) Saturation Visible on Aenal Imagery (C9)
Algal Mat or Crust (B4) Recent Iron Reduction in	Dilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	ks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	✓ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No</u> Depth (inches):	
Water Table Present? Yes <u>No</u> Depth (inches):	
Saturation Present? Yes <u>No</u> Depth (inches): <u></u>	Wetland Hydrology Present? Yes <u>v</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previou	us inspections), if available:
Demotion	
The feature is a seasonally saturated depression with	hin a hav field.

Sampling Point: wasc1039e_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1	<u></u>		Otatus	Number of Dominant Species That Are OBL EACIVL or EAC: 2 (A)
2				111111111111111111111111111111111111
3.				Total Number of Dominant Species Across All Strata: 3 (B)
4				Porcent of Deminent Species
5				That Are OBL, FACW, or FAC:67 (A/B)
6				
7				Prevalence Index worksheet:
·		- Total Co		OPL appealer 25 x 1 = 25
Conting/Christian (Distring)				$\frac{\text{OBL species}}{\text{EACW} \text{ species}} = \frac{13}{13} \text{ y}_2 = \frac{26}{13}$
<u>Sapling/Shrub Stratum</u> (Plot size: 15)				FAC species $5 \times 3 = 15$
1				FACU species $6 \times 4 = 24$
2				UPL species <u>2</u> x 5 = <u>10</u>
3				Column Totals: <u>61</u> (A) <u>110</u> (B)
4	. <u> </u>			Prevalence Index = B/A = 1.8032786885245902
5				Hydrophytic Vegetation Indicators:
7	<u> </u>			1 - Rapid Test for Hydrophytic Vegetation
··		- Total Co		∠ 2 - Dominance Test is >50%
Horb Stratum (Distaire) 5				$_$ 3 - Prevalence Index is ≤3.0 ¹
<u>A Soirnus eurorinus</u>	20	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Sciipus cyperinus</u>	<u> </u>	 		Problematic Hydrophytic Vegetation ¹ (Explain)
	<u> </u>	<u> </u>		
3. <u>Juncus ettusus</u>		<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Carex cr. scoparia</u>		<u> </u>	FACW	be present, unless disturbed or problematic.
5. <u>Poa pratensis</u>	6	<u> </u>	FACU	Definitions of Vegetation Strata:
6. <u>Onoclea sensibilis</u>	5	<u> </u>	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Carex vulpinoidea</u>	3	<u> N </u>	OBL	at breast height (DBH), regardless of height.
8. <u>Ranunculus acris</u>	3	N	FAC	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Carex stipata</u>	2	<u> N </u>	OBL	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Rumex acetosa</u>	2	<u> N </u>	UPL	Herb – All herbaceous (non-woody) plants, regardless
11. <u>Equisetum arvense</u>	2	<u> N </u>	FAC	of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in beight
	76	= 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.)			1
The feature is a wet meadow dominate	d by wo	olgrass	, soft ru	sh, and crested wheatgrass. The
teature is located in a hay field.				

(inches) Color (maint) %	Color (moint) θ V Type ¹ \log^2	Toxtura
Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
Iydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149E Indicators of hydrophytic vegetation and we	 Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) (LRR K, L) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) 	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, F) Piedmont Floodplain Soils (F19) (MLRA 149) Mesic Spodic (TA6) (MLRA 144A, 145, 149) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Cother (Explain in Remarks) or problematic.
Restrictive Layer (if observed):		
Type:		Hydric Soil Present? Yes 🗸 No
Deptil (IIChes).		
Soils were not sampled due to	the proximity to a residential pror	perty and potential to encounter
ndarground utilition Howova	r bacad on the landscape position	and dominance of hydrophytic



wasc1039e_w_NW



wasc1039e_w_SE

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	EJO/JSW Č			
File #:	Date of visit(s):			
wasc1039	2020-06-06	2020-06-06		
Location:	Ecological Landsca	ipe:		
PLSS: sec 08 T045N R003W	Superior Coastal Plain			
Lat: <u>46.390908</u> Long: <u>-90.776822</u>	Watershed:			
	LS12, Marengo River			
County: <u>Ashland</u> I own/City/Village: <u>Ashland town</u>				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Portwing-Herbster complex, 0 to 6 percent slopes	Wetland Type(s):			
	PEM - Feesh (wet) meadow			
Field Verified:				
Series were not verified. Soils were not sampled due to the proximity to a residential property and potential to encounter underground utilities	Wetland Size:	Wetland Area Impacted		
However, based on the wetland's hydrology and dominance of	0.0968	0.0968		
hydrophytic vegetation, the soils are assumed to be hydric.	Vegetation:			
	Plant Community Description(s):			
Hydrology:	The feature is a	wet meadow dominated by		
The feature is a saturated depression within a	woolarass soft r	rush and cf crested		
havfield.	whootaroon The	mandow in located in a		
	wheatgrass. The meadow is located in a			
	nayfield.			

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	Ν	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Ν	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 >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
8	N	N	Part of a large habitat block that supports area sensitive species
9	N	N	Enhemeral nond 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	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	IN N	IN NI	Standing water provides babitat for amphibians and aquatic invertebrates
2	IN N	IN NI	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
3	IN N	IN NI	Vogotation is inundated in spring
4 SD	IN	IN	Shoreline Protection
	NI	NI	Along obereling of a stream lake hand or open water area (>1 aero), if no, not applicable
I	IN	IN	Along shoreline of a stream, lake, point of open water area (21 acre) - if no, not applicable
2	Ν	N	vater levels or high flows if no, not applicable
3	NI	NI	Densely rooted emergent or woody vegetation
ст С	IN	IN	Storm and Floodwater Storage
1	V	V	Basin wetland, constricted outlet, has through flow or is adjacent to a stream
2	I V	ř V	Water flow through wetland is NOT channelized
2	I V	ř V	
3	Ý NI	Y NI	Evidence of floopy hydrology
4	IN X		Doint or non-noint source inflow
5	Ý NI	Y NI	Importious surfaces cover >10% of land surface within the watershed
7	IN NI	IN NI	Within a watershed with <10% wetland
0	IN N	IN N	$\frac{10\%}{10\%}$
0	IN	IN	Water Quality Protection
1	V	v	Provides substantial storage of storm and floodwater based on providus soction
2	ř V	ř V	Resin wetland or constricted outlet
2	ř V	ř V	Water flew through wetland in NOT channelized
3	Ý NI	Y NI	Vegeteted wetland essesiated with a lake or stream
4	IN X	IN N	
5	Y	Ý	Cigne of evenes autriente, such as along blooms, begun macrophyte growth
0	N	N	Signs of excess numerics, such as algae blooms, neavy macrophyte growin
/	Y	Ý	Sionnwater of surface water from agricultural land is major hydrology source
0	N	N	Discharge to suitable water
9	Y	Y	rvaturarianu cover in 100m puner 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

ST-5: The feature is a depression within a hay field and receives stormwater from the surrounding landscape. WQ-5: Vegetation is likely dense for most of the growing season, although the field is harvested for hay at some points.

> 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

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)
Scirpus cyperinus*			PEM	Rare
cf. Agropyron cristatum*			PEM	Rare
Juncus effusus*			PEM	Rare
Carex cf. scoparia*			PEM	Rare
Onoclea sensibilis			PEM	Rare
Trifolium repens			PEM	Barren
Carex pallescens			PEM	Barren
Carex vulpinoidea			PEM	Barren
Leucanthemum vulgare			PEM	Barren
Poa pratensis			PEM	Barren
Ranunculus acris			PEM	Barren
Solidago gigantea			PEM	Barren
Carex pellita			PEM	Barren
Carex stipata			PEM	Barren
Equisetum arvense			PEM	Barren
Plantago major			PEM	Barren
Rumex acetosa			PEM	Barren
Carex conoidea			PEM	Barren
Carex gracillima			PEM	Barren

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

The has roughly equal coverage of native wetland species and non-native pasture grasses.

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

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

**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 a hayfield which is mowed/hayed occasionally. Non-native invasive species have reduced the wetland's floristic quality substantially.

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 has roughly equal coverage of native wetland species and non-native pasture grasses.
Human Use Values	No discernible uses.
Wildlife Habitat	The wetland may be used by birds, mammals, and/or herpetofauna at times.
Fish and Aquatic Life Habitat	Insufficient durations of standing water, small depression in a hayfield.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is a shallow depression which receives and stores some stormwater from the surrounding hayfield.
Water Quality Protection	The wetland has dense, persistent vegetation and can function to filter agricultural runoff.
Groundwater Processes	The wetland primarily exhibits recharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling	Date: 2020-06-06
Applicant/Owner: Enbridge		State: Wisconsin Sampli	ng Point: <u>wasc1039_u</u>
Investigator(s): <u>JSW/EJO</u>	Section, Township, Range:	sec 08 T045N R003	N
Landform (hillslope, terrace, etc.): Talf	Local relief (concave, convex,	none): <u>None</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.3908	877 Long: -	90.776897	Datum: WGS84
Soil Map Unit Name: Portwing-Herbster complex, 0	to 6 percent 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 significat	ntly disturbed? Are "Non	mal Circumstances" present?	Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If neede	d, explain any answers in Rema	arks.)

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		within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No 🖌	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced	ures here or in a	a separate report.)	
The upland sample point	is located i	n a hay field.	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3	 Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6)	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 (includes capillary fringe)	l Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if a	vailable:
-	
Remarks: No indicators of wetland bydrology were observed	
The indicators of wetland frydrology were observed.	

Sampling Point: wasc1039_u

Trop Stratum (Plot size: 30)	Absolute %	Dominan Species?	Indicator	Dominance Test worksheet:
1)		Species		Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2				Total Number of Dominant Species Across All Strata: 2 (B)
4				
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	over	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species $2 \times 2 = 4$
1				FAC species $8 \times 3 = 24$
2				FACU species $x = 204$
3				$\begin{array}{c} \text{UPL species} \underline{12} x \text{ 5} = \underline{60} \\ \text{Column Tatalay} \overline{72} (A) \underline{202} (B) \end{array}$
4.				Column Totals: $\underline{73}$ (A) $\underline{292}$ (B)
5				Prevalence Index = B/A = <u>4.0</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co)ver	2 - Dominance Test is >50%
Horb Stratum (Plat size: 5		- 10101 00		3 - Prevalence Index is $≤3.0^1$
1 Trifolium pratense	25	Y	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2 of Agropyron cristatum	<u>20</u> 25	 	17.00	Problematic Hydrophytic Vegetation ¹ (Explain)
	10	 	EACU	
3. <u>Lotus corniculatus</u>				¹ Indicators of hydric soil and wetland hydrology must
4. <u>Fragaria Virginiana</u>		<u> </u>	FACU	be present, unless disturbed or problematic.
5. <u>Leucanthemum vulgare</u>	10	<u>N</u>	UPL	Definitions of Vegetation Strata:
6. <u>Plantago lanceolata</u>	5	N	<u>FACU</u>	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Ranunculus acris</u>	5	N	FAC	at breast height (DBH), regardless of height.
8. <u>Carex conoidea</u>	2	N	FACW	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Daucus carota</u>	2	N	UPL	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Carex pallescens</u>	2	N	FAC	Herb – All herbaceous (non-woody) plants, regardless
11. Carex gracillima	1	Ν	FACU	of size, and woody plants less than 3.28 ft tall.
12. Equisetum arvense	1	Ν	FAC	Woody vines – All woody vines greater than 3.28 ft in
	98	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30)				
1				
2				
2				
				Vegetation
4				Present? Yes No 🗸
Demonitor (include abote numbers here er en e concrete	<u> </u>	= Total Co	over	
The sample plot is located in a hav field	sneet.) 1			

Dopth	Cription: (Describe	to the deptr	needed to docu	ment the	Indicator	or confirm	the absence of I	ndicators.)		
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks		
		·			·					
		·								
		·			·					
		·			·					
		·			·					
		·								
		·								
·										
		·			·					
¹ Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	S=Masked	d Sand Gra	ains.	² Location: Pl	L=Pore Lining, M=Matrix.		
Hydric Soil	Indicators:						Indicators for	Problematic Hydric Soils ³ :		
Histoso	l (A1)	_	Polyvalue Belo	w Surface	(S8) (LR	RR,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)		
Histic E	pipedon (A2)		MLRA 149B	5)			Coast Prai	rie Redox (A16) (LRR K, L, R)		
Black H	istic (A3)	_	Thin Dark Surfa	ace (S9) (I	LRR R, MI	LRA 149B)	5 cm Muck	xy Peat or Peat (S3) (LRR K, L, R)		
Hydroge	en Sulfide (A4)	-	Loamy Mucky I	Mineral (F	1) (LRR K	, L)	Dark Surfa	ice (S7) (LRR K, L)		
Stratifie	d Layers (A5)		Loamy Gleyed	Matrix (F2	2)		Polyvalue	Below Surface (S8) (LRR K, L)		
Deplete	d Below Dark Surfac	e (A11)	Depleted Matrix	x (F3)			Thin Dark	Surface (S9) (LRR K, L)		
Thick D	ark Surface (A12)	_	Redox Dark Su Depleted Dark	Inface (F6)			Iron-Manga	anese Masses (F12) (LRR K, L, R)		
Sandy (Sloved Matrix (S4)	-	_ Depieted Dark	Surface (F	-7)		Pleamont i	dic (TA6) (ML DA 144A 145 149B)		
Sandy E	Seday (S5)	—	_ Redux Depress				Nesic Spo Red Paren	old (TAO) (MERA 144A, 143, 143B)		
Stripper	Matrix (S6)						Very Shallow Dark Surface (TF12)			
Dark Su	Inface (S7) (LRR R. N	ILRA 149B)					Other (Exp	plain in Remarks)		
							<u> </u>			
³ Indicators c	of hydrophytic vegetat	tion and wetl	and hydrology mu	st be pres	ent, unless	s disturbed	or problematic.			
Restrictive	Layer (if observed):									
Type:										
Dopth (in	choc):						Hvdric Soil Pre	sent? Yes No 🗸		
	cries).		<u> </u>							
	t comple coil	dua ta th		to oool	uniad a	tructuro	o Soilo oro	assumed to be		
					ipieu s			assumed to be		
non-nya	ric based on tr	ne landso	cape position	n and c	iomina	nt vege	tation.			



wasc1039_u_E



wasc1039_u_S

Project/Site: Line 5 Relocation Project	City/County: Ashland Sampling Date: 2020-06-06
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasc1040f_w
Investigator(s): EJO/JSW	Section, Township, Range: <u>sec 08 T045N R003W</u>
Landform (hillslope, terrace, etc.): Depression	cal relief (concave, convex, none): Concave Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.39049	2 Long: -90.775615 Datum: WGS84
Soil Map Unit Name: Portwing-Herbster complex, 0 to	6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ar? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally p	blematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site man showin	sampling point locations transacts important features atc
Solimian T OF Findings – Allach sile map showing	sampling point locations, transects, important leatures, 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> Ves No</u>	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate repo	t.)
The feature is a saturated hardwood swamp c	ominated by quaking aspen and American elm. The
feature is located in a depression in the lands	ape, and appears to drain into stream sasc1011e.
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 Sulf	le Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhiz	spheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of R	duced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron R	duction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Su	ace (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain	n Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	✓ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches	r
Water Table Present? Yes <u>v</u> No Depth (inches	r. <u>17</u>
Saturation Present? Yes <u>v</u> No Depth (inches (includes capillary fringe)	∴ <u>17</u> Wetland Hydrology Present? Yes <u>v</u> No

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

Remarks:

The feature is a seasonally saturated depression within a hardwood forest. The depression appears to partially drain into the ephemeral stream sasc1011e to the east. A water table and saturation were observed at 17 inches below the surface.

Sampling Point: wasc1040f_w

Time Stratum (Plot size: 3U % Cover Species? Status 1. Ulmus americana 25 Y FACW That Are OBL, FACW, or FAC: 6 (A) 2. Populus tremuloides 25 Y FAC 5 (A) (A) 5 (A) 4.		Absolute	Dominant	Indicator	Dominance Test worksheet:
1. Ultrus americana 25. Y FACW That Are OBL, FACW, or FAC: 6 (A) 2. Populus tremuloides 25. Y FACW Total Number of Dominant Species Across All Stratu: 6 (B) 4. 10 N FAC FACW Total Number of Dominant Species Across All Stratu: 6 (B) 5. . . . Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B) 6. .	Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	Species?	Status	Number of Dominant Species
2. Populus tramuloides 25 Y FAC 3. Acer rubrum 10 N FAC 4. 10 N FAC 4. 10 N FAC 5.	1. <u>Ulmus americana</u>	25	<u> </u>	<u>FACW</u>	That Are OBL, FACW, or FAC:6_ (A)
3. Acer rubrum 10 N FAC Species Across All Strata: 6 (B) 4.	2. <u>Populus tremuloides</u>	25	<u> </u>	FAC	Total Number of Dominant
4.	3. <u>Acer rubrum</u>	10	<u> N </u>	FAC	Species Across All Strata:6(B)
5.	4	<u> </u>			Percent of Dominant Species
6.	5				That Are OBL, FACW, or FAC:(A/B)
7.	6				Prevalence Index worksheet:
60 = Total Cover 7 2 7 2 6 - 7 - 6 - 7 - 6 - 7 - 6 = Total Cover 6 = Total Cover 7 - 6 = Total Cover 6 = Total Cover 1 - 1 - 1 - 1 - 1 - 2 - 1 - 1 - 1 - 1 - 1 - 1 - 2 - 2 - 1	7.				Total % Cover of: Multiply by:
Saping/Shrub Stratum (Plot size: 15)) 1. Populus tremuloides 4. Y FAC 2. Fraxinus nigra 2. Y FACW FACW species 6. 9. x4 = 36. 3.		60	= Total Co	ver	$\frac{1}{1} \frac{1}{1} \frac{1}$
Image: Stratum (Plot size: Image: Stratum (Plot size: <thimage: (plot="" size:<="" stratum="" th=""> <thi< td=""><td>Sapling/Shrub Stratum (Plot size: 15)</td><td>~</td><td></td><td></td><td>FACW species $69 \times 2 = 138$</td></thi<></thimage:>	Sapling/Shrub Stratum (Plot size: 15)	~			FACW species $69 \times 2 = 138$
Products from anotics	1 Populus tremulaides	Л	V	FAC	FAC species x 3 =
2. Fractive	2. Fravinus nigra	<u> </u>	 		FACU species9 x 4 =36
3.			<u> </u>	<u>FACW</u>	UPL species x 5 =
4.	3		·		Column Totals: <u>139</u> (A) <u>317</u> (B)
5. Instruments 6. Image: Second Stratum 7. Image: Second Stratum 7. Image: Second Stratum 9. Image: Second Stratum 9. Image: Second Stratum 10. Image: Second Stratum 11. Image: Second Stratum 12. Image: Second Stratum 13. Image: Second Stratum 14. Image: Second Stratum 15. Image: Second Stratum 16. Image: Second Stratum 17. Image: Second Stratum 18. Carex cf. rosea Image: Second Stratum	4				Prevalence Index = $B/A = 2.2805755395683454$
6.	5				
7.	6				1 Papid Test for Hydrophytic Vagetation
6 = Total Cover Herb Stratum (Plot size:5) 5 1. Onoclea sensibilis 35 Y FACW 2. Carex crinita 20 Y OBL 3. Carex gracillima 5 N FACU 4. Carex intumescens 5 N FACU 5. Equisetum arvense 2 N FAC 6. Fraxinus nigra 2 N FACU 7. Fragaria virginiana 2 N FACU 9.	7			·	2 - 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5) 35 Y FACW 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) 2. Carex crinita 20 Y OBL - Problematic Hydrophytic Vegetation ¹ (Explain) 3. Carex gracillima 5 N FACU - Problematic Hydrophytic Vegetation ¹ (Explain) 4. Carex intumescens 5 N FACW - Problematic Hydrophytic Vegetation ¹ (Explain) 5. Equisetum arvense 2 N FAC - Problematic Hydrophytic Vegetation functions 6. Fraxinus nigra 2 N FACU - Production Strata: 7. Fragaria virginiana 2 N FACU - Production Strata: 8. Carex cf. rosea 2 N FACU - Sapling/shrub – Woody plants 1 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 10.		6	= Total Cov	ver	\sim 3 - Prevalence Index is $\leq 3.0^{1}$
1. Onoclea sensibilis 35 Y FACW 2. Carex crinita 20 Y OBL 3. Carex gracillima 5 N FACU 4. Carex intumescens 5 N FACW 5. Equisetum arvense 2 N FACW 6. Fraxinus nigra 2 N FACU 7. Fragaria virginiana 2 N FACU 8. Carex cf. rosea 2 N FACU 9.	Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
2. Carex crinita 20 Y OBL Problematic Hydrophytic Vegetation ¹ (Explain) 3. Carex gracillima 5 N FACU Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 4. Carex intumescens 5 N FACU Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 5. Equisetum arvense 2 N FAC 6. Fraxinus nigra 2 N FACU 7. Fragaria virginiana 2 N FACU 8. Carex cf. rosea 2 N FACU 9.	1. <u>Onoclea sensibilis</u>	35	<u> </u>	<u>FACW</u>	data in Remarks or on a separate sheet)
3. Carex gracillima 5 N FACU 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 4. Carex intumescens 5 N FACW be present, unless disturbed or problematic. 5. Equisetum arvense 2 N FAC Definitions of Vegetation Strata: 6. Fraxinus nigra 2 N FACU Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 8. Carex cf. rosea 2 N FACU Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. 10.	2. <u>Carex crinita</u>	20	Y	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
4. <u>Carex intumescens</u> 5 N FACW 5. <u>Equisetum arvense</u> 2 N FAC 6. <u>Fraxinus nigra</u> 2 N FACW 7. <u>Fragaria virginiana</u> 2 N FACU 8. <u>Carex cf. rosea</u> 2 N FACU 9. 2 N FACU 10. 2 N FACU 11. 2 N FACU 12. 73 = Total Cover Woody Vine Stratum (Plot size: 30)	3. <u>Carex gracillima</u>	5	N	FACU	The effective set is sufficient to set the set of the s
5. Equisetum arvense 2 N FAC 6. Fraxinus nigra 2 N FACW 7. Fragaria virginiana 2 N FACU 8. Carex cf. rosea 2 N FACU 9. 2 N FACU 10. 3.28 ft (1 m) tall. 11. 4.11 4.11 12. 73 = Total Cover	4. <u>Carex intumescens</u>	5	N	FACW	be present, unless disturbed or problematic.
6. Fraxinus nigra 2 N FACW 7. Fragaria virginiana 2 N FACU 8. Carex cf. rosea 2 N FACU 9. 2 N FACU 10. 2 N FACU 11. 2 N FACU 12. 73 = Total Cover Woody Vine Stratum (Plot size: 30)	5. Equisetum arvense	2	Ν	FAC	Definitions of Vagatation Strata
7. Fragaria virginiana 2 N FACU 8. Carex cf. rosea 2 N FACU 9. 2 N FACU 10. 3.28 ft (1 m) tall. 10. 4.10 million of size, and woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. 11. 7.3 million of size, and woody plants less than 3.28 ft tall. Woody Vine Stratum (Plot size: 30) 30	6. Fraxinus nigra	2	N	FACW	Deminions of Vegetation Strata.
8. Carex cf. rosea 2 N FACU Sapling/shrub – Woody plants less than 3 in. DBH 9.	7 Fragaria virginiana	2	N	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
9. Image: Control of the statum of the stratum of	8 Carex of rosea	2	 N	FACU	
10.	9			17100	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
11.	10.				Herb – All herbaceous (non-woody) plants, regardless
12.	11.				of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30)	12				Woody vines – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30)		73	= Total Co	ver	height.
	Woody Vine Stratum (Plot size: 30)				
1.	1.				
2.	2.				
3. Hydrophytic	3.				Hydrophytic
4. Vegetation	4.				Vegetation
Present? Yes <u>✓</u> No		0	= Total Cov	ver	Present? Yes <u> V</u> No
Remarks: (Include photo numbers here or on a separate sheet.)	Remarks: (Include photo numbers here or on a separate s	sheet.)			1
The feature is a hardwood swamp dominated by American elm and quaking aspen. Sensitive fern	The feature is a hardwood swamp dom	inated b	by Amer	ican eln	n and quaking aspen. Sensitive fern
and fringed sedge are dominant in the ground layer.	and fringed sedge are dominant in the	ground	layer.		

SOIL

Profile Dese	cription: (Describe t	o the dep	oth needed	to docur	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix			Redo	x Features	6			
(inches)	Color (moist)	%	Color (r	noist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	<u>7.5YR 2.5/2</u>	93	5YR	3/4	7	C	M	SICL	
12-20	5YR 4/3	80	5YR	5/4	20	С	Μ	SIL	
							· ·		
					<u> </u>				
							<u> </u>		
	·				·		<u> </u>		
					·		·		
							<u> </u>		
¹ Type: C=C	oncentration. D=Deple	etion. RM	=Reduced I	Matrix. M	S=Masked	Sand Gra	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) (LRF	RR,	2 cm N	/luck (A10) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)		ML	RA 149B))			Coast	Prairie Redox (A16) (LRR K, L, R)
Black H	istic (A3)		Thin D	Dark Surfa	ace (S9) (L	.RR R, MI	LRA 149B)	5 cm N	/lucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)		Loam	y Mucky N	Aineral (F1) (LRR K	, L)	Dark S	Surface (S7) (LRR K, L)
Stratifie	d Layers (A5)		Loam	y Gleyed	Matrix (F2))		Polyva	lue Below Surface (S8) (LRR K, L)
Deplete	d Below Dark Surface	(A11)	Deple	ted Matrix	(F3)			Thin D	ark Surface (S9) (LRR K, L)
	ark Surface (A12)		Redox	CDARK SU	nace (F6) Surfage (F	7)		Iron-M	anganese Masses (F12) (LRR K, L, R)
Sandy (Sleved Matrix (S4)		Depie Redox		surface (F	()		Fleum	Spodic (TA6) (MI RA 144A 145 149B)
Sandy F	Redox (S5)		11000	C Depiess				Red Pa	arent Material (F21)
Stripped	d Matrix (S6)							Verv S	hallow Dark Surface (TF12)
Dark Su	Inface (S7) (LRR R, M	LRA 149	B)					Other	(Explain in Remarks)
			,						
³ Indicators o	f hydrophytic vegetati	on and w	etland hydro	ology mus	st be prese	ent, unless	s disturbed o	or problematio	2.
Restrictive	Layer (if observed):								
Type:									
Depth (in	ches):							Hydric Soil	Present? Yes <u>< No </u>
Remarks [.]	,								
Soils we	re observed to	be silt	v clav lo	oam ov	ver siltv	loam	with rec	lox.	
			.,						



wasc1040f_w_NE



wasc1040f_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):		
wasc1040	2020-06-06		
Location:	Ecological Landsca	ape:	
PLSS: sec 08 T045N R003W	Superior Coastal Plain		
Lat: <u>46.390355</u> Long: <u>-90.775587</u>	Watershed:		
	LS12, Marengo River		
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Portwing-Herbster complex, 0 to 6 percent slopes	Wetland Type(s):		
	PFO - Hardwood swamp		
Field Verified:		-	
Series were not verified. Soils were observed to	Wetland Size:	Wetland Area Impacted	
be silty clay loam over loam with redox.	0.0332	0.0332	
	Vegetation:		
	Plant Community D	Description(s):	
Hydrology:	The feature is a	hardwood swamp dominated	
The feature is a a saturated depression within a	American elm and quaking aspen. Sensitive		
hardwood forest. The depression appears to partially	form and fringed adda are deminant in the		
drain into a swale to the northeast. A water table and	tern and tringed sedge are dominant in the		
saturation were observed at 17 inches below the surface.	ground layer.		

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 blind observed at the edge of w
2	Ν	N	Used for educational or scientific purposes
3	Ν	Ν	Visually or physically accessible to public
4	Ν	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	V	V	In or adjacent to RED FLAG areas
5	Ŷ	Ŷ	List: Trout Streams: Trout Brook
6	Ν	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	N	Y	3 or more strata present (>10% cover)
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	N	N	100 m buffer – natural land cover <a>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
5	N	N	Occurs in a Joint Venture priority township
6	N	N	Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex, etc.)
7	N	V	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
'	IN	ř	plans
8	N	Y	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present <u>> 4</u> 5 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	Ν	N	Wetland is connected or contiguous with perennial stream or lake
2	Ν	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	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 or is adjacent to a stream
2	N	Y	Water flow through wetland is NOT channelized
3	N	Y	Dense, persistent vegetation
4	N	N	Evidence of flashy hydrology
5	N	Y	Point or non-point source inflow
6	N	N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <10% wetland
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	N	Y	Provides substantial storage of storm and floodwater based on previous section
2	Y	Y	Basin wetland <u>or</u> constricted outlet
3	N	Y	Water flow through wetland is NOT channelized
4	Y	Y	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	Y	Stormwater or surface water from agricultural land is major hydrology source
8	Y	Y	Discharge to surface water
9	N	N	Natural land cover in 100m 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

HU-1: A hunting blind was observed at the edge of the wetland. HU-5: A small ephemeral stream flows from this wetland to the large wetland surrounding the Trout Brook RED FLAG area.

- ST-5: The feature is in a depression that likely receives stormwater from the surrounding landscape. WH-7: The wetland is part of a larger forest that may support SGCN species at times.
- WQ-8: When the feature fills with stormwater it discharges excess into the associated ephemeral stream.

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

Observed	Potential	Species/Habitat/Comments
	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

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)
Onoclea sensibilis*			PFO	Patchy
Populus tremuloides*			PFO	Patchy
Ulmus americana*			PFO	Patchy
Carex crinita			PFO	Rare
Acer rubrum			PFO	Rare
Carex gracillima			PFO	Rare
Carex intumescens			PFO	Rare
Dryopteris intermedia			PFO	Rare
Populus tremuloides			PFO	Barren
Carex cf. rosea			PFO	Barren
Equisetum arvense			PFO	Barren
Equisetum sylvaticum			PFO	Barren
Fragaria virginiana			PFO	Barren
Fraxinus nigra			PFO	Barren
Fraxinus nigra			PFO	Barren
Juncus effusus			PFO	Barren
Maianthemum canadense			PFO	Barren
Pyrola elliptica			PFO	Barren
Ranunculus acris			PFO	Barren
Solidago gigantea			PFO	Barren

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

The feature is dominated by native species, with low coverage of exotic species.

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

Assessment Area (AA)	Buffer	Historic	Impact	Relative Frequency**	Stressor
71100 (711)			2010.	Troquency	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
	Х		М	С	Agriculture – hay
					Agriculture – pasture
					Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
x	X		М	C	Removal of herbaceous stratum – mowing,
~	~		101	Ŭ	grading, earthworms, etc.
		x	1	С	Removal of tree or shrub strata – logging,
		~	-	Ŭ	unprescribed fire
					Human trails – unpaved
					Human trails – paved
				_	Removal of large woody debris
Χ	X		M	C	Cover of non-native and/or invasive species
	Х		L	С	Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

* 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 at the edge of a forest adjacent to a hayfield. The forest likely has earthworm presence, which may affect the wetland's herbaceous layer. The feature is near a residential property and road. The forest in which the wetland is located was logged historically, but this currently does not impact the wetland's plant community or function significantly.

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 native species, with low coverage of exotic species.
Human Use Values	A part of the wetland appears to be used for hunting. The wetland is located on private land.
Wildlife Habitat	The wetland is relatively intact and part of a larger forested area that may support a diversity of wildlife.
Fish and Aquatic Life Habitat	No standing water was observed at the time of survey.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely receives and holds stormwater from the surrounding landscape, but excess water likely travels through the associated ephemeral stream to the large wetland to the east.
Water Quality Protection	The wetland has multiple strata and dense vegetation in areas.
Groundwater Processes	The wetland primarily exhibits recharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

Project/Site: Line 5 Relocation Project	City/County: Ashlanc	3 Sampling Date: <u>2020-</u>	<u>06-06</u>
Applicant/Owner: Enbridge		State: Wisconsin Sampling Point: wasc	1040_u
Investigator(s): <u>JSW/EJO</u>	Section, Township, Rang	ge: <u>sec 08 T045N R003W</u>	
Landform (hillslope, terrace, etc.): <u>Talf</u>	Local relief (concave, conve	ex, none): <u>None</u> Slope (%): <u>(</u>)-2%
Subregion (LRR or MLRA): Northcentral Forests Lat:	46.390589 Long:	: <u>-90.775575</u> Datum: <u>WG</u>	<u>S84</u>
Soil Map Unit Name: Portwing-Herbster com	plex, 0 to 6 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 Remarks.)	
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "N	lormal Circumstances" present? Yes <u>v</u> No	
Are Vegetation, Soil, or Hydrology	naturally problematic? (If nee	ded, explain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site ma	ap showing sampling point lo	cations, transects, important features	, etc.
Hydrophytic Vegetation Present? Yes	No Is the Sampled A	Area	
Hydric Soil Present? Yes	No within a Wetland	1? Yes No∕	
Wetland Hydrology Present? Yes	No If yes, optional W	etland Site ID:	
Remarks: (Explain alternative procedures here or in a	separate report.)	dae of a bay field and ravine	
		age of a hay held and faville.	

HYDROLOGY

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

Sampling Point: wasc1040_u

	Absolute	Dominan	t Indicator	Dominance Test worksheet:
<u>Tree stratum</u> (Plot size: <u>50</u>)		<u>Species</u>		Number of Dominant Species
1. <u>Acer rubrum</u>	2	<u> </u>		That Are OBL, FACW, or FAC: 3 (A)
		. <u> </u>		Total Number of Dominant
3. <u>Fraxinus americana</u>		. <u> </u>		Species Across All Strata: <u>D</u> (B)
4. <u>Picea glauca</u>		<u> </u>	FACU	Percent of Dominant Species
5. <u>Betula papyritera</u>	5	<u> N </u>	FACU	
6		·		Prevalence Index worksheet:
7		·		Total % Cover of:Multiply by:
		= Total Co	over	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species 25 x 2 = 50
1. <u>Abies balsamea</u>	5	<u> </u>	FAC	FAC species 35 $x_3 = 105$
2		·		$\frac{1120}{1120} = \frac{1120}{1120} = \frac{1120}{1120$
3		·		Column Totals: 130 (A) 435 (B)
4				
5		. <u> </u>		Prevalence Index = $B/A = 3.3461538461538463$
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)				$_$ 3 - Prevalence Index is ≤3.0 ¹
1. Pteridium aquilinum	25	Y	FACU	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2 Carex gracillima	10	Ŷ	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Majanthemum canadense	10	N	FACU	
Ranunculus acris	<u> </u>	 N	FAC	¹ Indicators of hydric soil and wetland hydrology must
5 Hieracium of caesnitosum	<u> </u>	 N		be present, unless disturbed of problematic.
				Definitions of Vegetation Strata:
0		·		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		·		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3 28 ft tall
11		·		
12		·		height.
	55	= Total Co	over	
Woody Vine Stratum (Plot size: <u>30</u>)				
1		·		
2		·		
3				Hydrophytic
4				Present? Yes ✓ No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)	odao o	fobovfi	ald
The sample plot is located in a lotest fi	ear the	euge o	i a nay ii	eiu.

SOIL

Profile Desc	cription: (Descr	ibe to the dept	h needed to document the indicator or confirm	the absence of in	dicators.)	
Depth (inches)	Matr	ix) %	Redox Features	Texture	Pemarks	
<u>0-10</u>	7.5YR 3/	<u>/ </u>		SII	Remarks	
10-20	5YR 3/	<u> </u>				
10-20	<u> </u>	<u>+ 100</u>				
·						
. <u></u>						
. <u></u>						
		Doplation DM-	Deduced Metrix, MS=Meeked Send Craine	² Leastian: DL	-Doro Lining M-Matrix	
Hydric Soil	Indicators:			Indicators for F	Problematic Hydric Soils ³ :	
Histosol	(A1)		Polyvalue Below Surface (S8) (LRR R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)	
Histic Ep	pipedon (A2)		MLRA 149B)	Coast Prairi	e Redox (A16) (LRR K, L, R)	
– Black Hi Hvdroge	en Sulfide (A4)		Loamy Mucky Mineral (F1) (LRR K, MLRA 149B)	Dark Surfac	(S3) (LRR K, L, R)	
Stratified	d Layers (A5)		Loamy Gleyed Matrix (F2)	Polyvalue B	elow Surface (S8) (LRR K, L)	
Depleted	d Below Dark Su	rface (A11)	Depleted Matrix (F3)	Thin Dark S	urface (S9) (LRR K, L)	
Thick Da	ark Surface (A12 /ucky Mineral (S) 1)	Redox Dark Surface (F6) Depleted Dark Surface (F7)	Iron-Manga Piedmont F	nese Masses (F12) (LRR K, L, R) loodplain Soils (F19) (MI RA 149B)	
Sandy G	Gleyed Matrix (S4	l)	Redox Depressions (F8)	Mesic Spod	ic (TA6) (MLRA 144A, 145, 149B)	
Sandy F	Redox (S5)			Red Parent	Material (F21)	
Stripped	Matrix (S6)		N N	Very Shallow Dark Surface (TF12)		
Dark Su	rface (S7) (LRR	R, MLRA 1498)	Other (Expl	ain in Remarks)	
³ Indicators o	f hydrophytic veg	etation and we	tland hydrology must be present, unless disturbed	or problematic.		
Restrictive	Layer (if observ	ed):				
Туре:				Hudria Sail Drag	anto Vac Na d	
Depth (in	ches):			Hydric Soli Pres		
No indica	ators of hyd	lric soil we	re observed.			



wasc1040_u_N

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling D	ate: <u>2020-06-06</u>
Applicant/Owner: Enbridge		State: Wisconsin Sampling	Point: wasc1041f_w1
Investigator(s): EJO/JSW	Section, Township, Range: Se	<u>c 08 T045N R003W</u>	1
Landform (hillslope, terrace, etc.): Floodplain	ocal relief (concave, convex, none	e): <u>Concave</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.39092</u>	22 Long: <u>-90.</u>	<u>774951</u> נ	Datum: <u>WGS84</u>
Soil Map Unit Name: Pelkie, occasionally flooded-Dechamps, frequently	flooded complex, 0 to 4 percent slop	es NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of y	rear? Yes 🖌 No (If	no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significantl	y disturbed? Are "Normal C	Circumstances" present? Ye	:s No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, ex	plain any answers in Remark	(S.)
SUMMARY OF FINDINGS – Attach site map showin	g sampling point location	is, transects, importai	nt features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes _ ✔ _ N Yes _ ✔ _ N	lo lo	Is the Sampled Area within a Wetland? Yes <u>v</u> No
Wetland Hydrology Present?	Yes 🖌 N	lo	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedu The feature is a temporari The floodplain is associate	ires here or in a sep ly flooded floo ad with the pe	^{parate report.)} odplain fore erennial stre	st dominated by black ash and reed canary grass. am sasc1012p.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required;	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)	Crayfish Burrows (C8)			
Sediment Deposits (B2)	(C3) Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3)	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4)	6) <u> </u> Geomorphic Position (D2)			
Iron Deposits (B5)	Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)		
Field Observations:				
Surface Water Present? Yes No	✓ Depth (inches):			
Water Table Present? Yes No	✓ Depth (inches):			
Saturation Present? Yes <u>No</u> (includes capillary fringe)	tland Hydrology Present? Yes <u>v</u> No			
Describe Recorded Data (stream gauge, monito	pring well, aerial photos, previous inspections)	, if available:		

Remarks:

The feature is a temporarily flooded floodplain associated with stream sasc1012p. Drift deposits were observed in areas of the floodplain outside of the sample plot, closer to the stream. There are multiple oxbows in the floodplain without evidence of water flow; however, they are likely inundated during the flood stage. These oxbows function as wetlands and not waterbodies.

Sampling Point: <u>wasc1041f_w1</u>

	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>	40	<u> </u>	FACW	That Are OBL, FACW, or FAC: 4 (A)		
2. <u>Populus grandidentata</u>	20	<u> Y </u>	FACU	Total Number of Dominant		
3. <u>Ulmus americana</u>	10_	N	FACW	Species Across All Strata:(B)		
4				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC: <u>80</u> (A/B)		
6				Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
	70	= Total Co	over	OBL species x 1 =		
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>139</u> x 2 = <u>278</u>		
1. <u>Fraxinus nigra</u>	20	Y	FACW	FAC species <u>18</u> x 3 = <u>54</u>		
2	<u> </u>		<u> </u>	FACU species $24 \times 4 = 96$		
3				UPL species (0) x 5 = (0)		
4.				Column Totals: <u>182</u> (A) <u>429</u> (B)		
5				Prevalence Index = $B/A = 2.36$		
6				Hydrophytic Vegetation Indicators:		
7				1 - Rapid Test for Hydrophytic Vegetation		
/·				\sim 2 - Dominance Test is >50%		
	20	= Total Co	over	✓ 3 - Prevalence Index is ≤3.0 ¹		
Herb Stratum (Plot size:)	40	Ň		4 - Morphological Adaptations ¹ (Provide supporting		
1. <u>Phalaris arundinacea</u>	40	<u> </u>	FACW	data in Remarks or on a separate sheet)		
2. Impatiens capensis	15	<u> </u>	FACW	Problematic Hydrophytic Vegetation (Explain)		
3. <u>Solidago gigantea</u>	12	N	FACW	¹ Indicators of hydric soil and wetland hydrology must		
4. <u>Equisetum arvense</u>	7	N	FAC	be present, unless disturbed or problematic.		
5. Matteuccia struthiopteris	6	N	FAC	Definitions of Vegetation Strata:		
6. <u>Rubus idaeus</u>	5	N	FAC	Tree Maadu plante 2 in (7.0 am) as more in diameter		
7. <u>Circaea canadensis</u>	4	N	FACU	at breast height (DBH), regardless of height.		
8. Thalictrum dasycarpum	2	N	FACW	Sanling/shrub Woody plants loss than 3 in DPH		
9. Hypericum cf. ellipticum	1	N	OBL	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		
	92	- Total Co	wor	height.		
Woody Vine Stratum (Plot size: 30)						
(Flot size. <u>50</u>)						
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.)	0.0000	yoy of bla	ack ash. The ground lover is		
dominated by road capary grace and jowely and The comple plat is not considered representative of						
the entire feature as the fleed blain is fo	sweiwee		sample	pior is not considered representative of		
	any exte	112146.				

SOIL

Profile Desc	ription: (D)escribe t	o the dep	th needed	to docun	nent the i	ndicator	or confirm	the absence of	of indicators.)
Depth		Matrix			Redo	x Features	;			
(inches)	Color (I	moist)	%	Color (r	moist)	%	Type'	Loc	Texture	Remarks
0-20	5YR	3/3	90	5YR	4/6	10	С	M/PL	SIL	
						·		·		
						·			<u> </u>	
						·		·	<u> </u>	
·						·		·		
						·		·	·	
						·		·		
¹ Type: C=Co	oncentration	n, D=Depl	etion, RM	=Reduced I	Matrix, MS	S=Masked	Sand G	ains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil I	Indicators:								Indicators f	or Problematic Hydric Soils ³ :
Histosol	(A1)			Polyva	alue Belov	v Surface	(S8) (LR	R R,	2 cm M	uck (A10) (LRR K, L, MLRA 149B)
Histic Ep	pipedon (A2	2)		ML	RA 149B)				Coast F	Prairie Redox (A16) (LRR K, L, R)
Black Hi	stic (A3)			Thin D	Dark Surfa	ce (S9) (L	RR R, M	LRA 149B)	5 cm M	ucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	n Sulfide (A	\ 4)		Loam	y Mucky N	lineral (F1) (LRR 🖡	K, L)	Dark Su	ırface (S7) (LRR K, L)
Stratified	Layers (A	5)		Loam	y Gleyed I	Matrix (F2))		Polyvalı	ue Below Surface (S8) (LRR K, L)
Depleted	d Below Da	rk Surface	e (A11)	Deple	ted Matrix	: (F3)			Thin Da	rk Surface (S9) (LRR K, L)
Thick Da	ark Surface	(A12)		Redox	Cark Su	face (F6)			Iron-Ma	nganese Masses (F12) (LRR K, L, R)
Sandy M	lucky Miner	ral (S1)		Deple	ted Dark S	Surface (F	7)		Piedmo	nt Floodplain Soils (F19) (MLRA 149B)
Sandy G	leyed Matri	ix (S4)		Redox	Depress	ions (F8)			Mesic S	podic (TA6) (MLRA 144A, 145, 149B)
Sandy R	edox (S5)								Red Pa	rent Material (F21)
Stripped	Matrix (S6			•					Very Sh	iallow Dark Surface (TF12)
Dark Sui	nace (S7) (LRR R, M	ILRA 149	3)					Other (E	Explain in Remarks)
³ Indicators of	f hydronhyti	ic vegetati	ion and w	etland hydro	aloav mus	t he nrese	nt unles	s disturbed	or problematic	
Restrictive I	aver (if oh	served)			Jogy mus	t be prese	int, unico	3 distarbed		
Typo:	-ujoi (ii oi									
туре									Ubudaia Cail I	
Depth (inc	ches):								Hydric Soll F	Present? res <u>v</u> No
Remarks:		_				_				
The soils	were o	bserve	ed to be	e silt loa	am with	n redox				



wasc1041f_w1_NW



wasc1041f_w1_SE

Project/Site: LINE 3 REIOCATION Project City/County: A	shland Sampling Date: 2020-06-0					
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasc1041f w2					
Investigator(s): FIO/ISW Section Towns	Section Township Bange: Sec 08 T0/5NI B003W					
Landform (hillslope torrace ate): Eloodolain	_ section, rownship, Range. <u>sec 08 104511 R00517</u>					
Contraction (Initiation, terrace, etc.). <u>Troouprain</u>	$\frac{1}{2} = \frac{1}{2} = \frac{1}$					
Subregion (LRR of MLRA): Lat: 40.390417	Long: Datum:					
Soil Map Unit Name: VIIas IOamy sand, U to 6 percent slopes	NWI classification:					
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	_ No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes 🖌 No					
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling p	oint locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes v No Is the Sa within a Hydric Soil Present? Yes v No If yes, op Wetland Hydrology Present? Yes v No If yes, op Remarks: (Explain alternative procedures here or in a separate report.) If yes, op	ampled Area Wetland? Yes <u>✓</u> No otional Wetland Site ID:					
The feature is a temporarily flooded floodplain dominated floodplain is associated with the perennial stream sasc10	by black ash and red maple. The 12p.					
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)	de Odor (C1) Crayfish Burrows (C8)					
Sediment Deposits (B2) Oxidized Rhizospheres on Livir	Spheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)					
Drift Deposits (B3) Presence of Reduced Iron (C4) Algel Met er Cruet (P4) Posent Iron Reduction in Tilled	Scile (C6) Coomerphic Resition (D2)					
Iron Deposits (B5)	Solis (Co) Geomorphic Position (D2)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)					
Sparsely Vegetated Concave Surface (B8)	✓ FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No 🗸 Depth (inches):						
Water Table Present? Yes No V Depth (inches):	-					
Saturation Present? Yes No V Depth (inches):	Wetland Hydrology Present? Yes <u>v</u> No					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp Remarks: The feature is a temporarily flooded floodplain associated	ections), if available:					

Sampling Point: wasc1041f_w2

	Absolute	Dominant	Indicator	Dominance Test worksheet:				
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	Species?	Status	Number of Dominant Species				
1. <u>Fraxinus nigra</u>	55	<u> </u>	FACW	That Are OBL, FACW, or FAC: (A)				
2. <u>Acer rubrum</u>	25	<u> Y </u>	FAC	Total Number of Dominant				
3. <u>Tilia americana</u>	12	N	<u>FACU</u>	Species Across All Strata: (B)				
4. <u>Ulmus americana</u>	10	N	FACW	Percent of Dominant Species				
5				That Are OBL, FACW, or FAC:(5(A/B)				
6				Prevalence Index worksheet:				
7				Total % Cover of: Multiply by:				
	102	= Total Cov	ver	OBL species x 1 =				
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>73</u> x 2 = <u>146</u>				
1. Acer saccharum	20	Y	FACU	FAC species x 3 =10				
2				FACU species <u>35</u> x 4 = <u>140</u>				
3				UPL species x 5 =0				
0				Column Totals: <u>178</u> (A) <u>496</u> (B)				
5.				Prevalence Index = B/A = 2.7865168539325844				
6.				Hydrophytic Vegetation Indicators:				
7				1 - Rapid Test for Hydrophytic Vegetation				
	20	- Total Co		∠ 2 - Dominance Test is >50%				
Had Obstance (Distributed E	_20_		ver	3 - Prevalence Index is ≤3.0 ¹				
<u>Herb Stratum</u> (Plot size: <u>5</u>)	40	V	EAC	4 - Morphological Adaptations ¹ (Provide supporting				
1. <u>Inalleuccia strutinoptens</u>		 		Problematic Hydrophytic Vegetation ¹ (Explain)				
2. <u>Calex biolitoides</u>	4	<u> </u>						
3. <u>Solidago gigantea</u>	4	<u>IN</u>		¹ Indicators of hydric soil and wetland hydrology must				
4. <u>Arisaema triphyllum</u>		<u> </u>	FAC	be present, unless disturbed or problematic.				
5. <u>Ribes cf. cynosbati</u>	3	<u> N </u>	<u>FACU</u>	Definitions of Vegetation Strata:				
6. <u>Equisetum arvense</u>	2	<u> N </u>	FAC	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			. <u> </u>	of size, and woody plants less than 5.20 it tall.				
12				Woody vines – All woody vines greater than 3.28 ft in height				
	56	= Total Cov	ver	noight.				
Woody Vine Stratum (Plot size: <u>30</u>)								
1								
2								
3				Hydrophytic				
4.				Vegetation				
	0	= Total Cov	ver	Present? Yes <u>v</u> No				
Remarks: (Include photo numbers here or on a separate	sheet.)		-	<u> </u>				
The feature is a floodplain forest domin	nated by	black a	sh and	red maple in the canopy, and ostrich				
fern in the ground layer.								
Depth	Matrix		Redo	x Feature	s			
--	---	-----------------------------------	--	--	--	---------------------------	---	--
(inches)		·	Color (moist)		<u></u>			Remarks
¹ Type: C=Co Hydric Soil Ir	ncentration, D=Depl	letion, RM=	Reduced Matrix, M	S=Masked	d Sand Gr	 ains.	² Location: PL: Indicators for F	=Pore Lining, M=Matrix. Problematic Hydric Soils ³ :
Histosol (Histic Epi Black His Hydroger Stratified Depleted Thick Dar Sandy Mi Sandy Gi Sandy Re Stripped Dark Surl	A1) ipedon (A2) itic (A3) n Sulfide (A4) Layers (A5) Below Dark Surface rk Surface (A12) ucky Mineral (S1) leyed Matrix (S4) edox (S5) Matrix (S6) face (S7) (LRR R, N	e (A11) ILRA 149B	Polyvalue Belor MLRA 149B Thin Dark Surfa Loamy Mucky N Loamy Gleyed Depleted Matrix Redox Dark Su Depleted Dark Redox Depress)	w Surface) ace (S9) (I Mineral (F Matrix (F2 < (F3) Irface (F6) Surface (F6) Surface (F8)	(S8) (LRF LRR R, Mi 1) (LRR K 2) 57)	R R, LRA 149B) , L)	2 cm Muck Coast Prairi 5 cm Mucky Dark Surface Polyvalue B Thin Dark S Iron-Manga Piedmont F Mesic Spod Red Parent Very Shallo Other (Expl	(A10) (LRR K, L, MLRA 149B) ie Redox (A16) (LRR K, L, R) / Peat or Peat (S3) (LRR K, L, R) be (S7) (LRR K, L) Below Surface (S8) (LRR K, L) Surface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R) loodplain Soils (F19) (MLRA 149E lic (TA6) (MLRA 144A, 145, 149B Material (F21) w Dark Surface (TF12) ain in Remarks)
"Indicators of Restrictive L	hydrophytic vegetat ayer (if observed):	ion and we	land hydrology mus	st be pres	ent, unless	s disturbed	or problematic.	
Type: Depth (inc	hes):						Hydric Soil Pres	sent? Yes∽_No
Remarks: Soils were undergrou dominanc	e not sampled und utilities. T ce of hydrophy	d due to The soils ytic veg	the proximity are assume etation.	y to a r d to be	esiden e hydric	tial proj based	perty and pot on the lands	ential to encounter cape position and



wasc1041f_w2_NW



wasc1041f_w2_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):			
wasc1041	2020-06-06			
Location:	Ecological Landsca	ape:		
PLSS: sec 08 T045N R003W	Superior Coastal Diain			
	Superior Coastar Flain			
Lat: 46.391018 Long: -90.774823	Watershed:			
	LS12, Marengo River			
County: Ashland Town/City/Village: Ashland town				
, , , , , , , , , , , , , , , , ,				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Pelkie, occasionally flooded-Dechamps, frequently flooded complex, 0 to 4	Wetland Type(s):			
percent slopes	PEO - Eloodolain forest			
Field Verified:				
Series were not verified. The soils were observed	Wetland Size	Wetland Area Impacted		
to be silt loam with redox	3.5370	3,5370		
	Vegetation:			
	Plant Community F)escription(s):		
Hydrology:	The feature is a fleedalain forest dominated by a capaby			
The feature is an intermittently flooded floodplain	of black ash. The ground lover is dominated by read			
associated with stream sasc1012p (Trout Brook) Drift	or black ash. The ground layer is dominated by feed			
dependent with stream sascrorzp (Trout Drock). Drift	canary grass and jewerweed. The floodplain is extensive,			
at the example rist	and as such vegetat	ion is somewhat valled.		
or the sample plot.				

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, ATV riding
2	N	Ν	Used for educational or scientific purposes
3	N	N	Visually or physically accessible to public
4	N	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
F			In or adjacent to RED FLAG areas
5	Y	Y	List: Trout Streams: Trout Brook
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	Ν	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	Y	Y	3 or more strata present (>10% cover)
3	Ν	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	Y	Y	100 m buffer – natural land cover <a>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
5	Ν	Ν	Occurs in a Joint Venture priority township
6	Ν	Y	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	Ň	Ň	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
	Y	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	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	Y	Y	Wetland is connected or contiguous with perennial stream or lake
2	Ν	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	Y	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	N	Vegetation is inundated in spring
SP			Shoreline Protection
1	Y	Y	Along shoreline of a stream, lake, pond or open water area (<a>2 1 acre) - if no, not applicable
2	V	V	Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
2	T	Ť	water levels or high flows – if no, not applicable
3	Y	Y	Densely rooted emergent or woody vegetation
ST			Storm and Floodwater Storage
1	Y	Y	Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	N	N	Water flow through wetland is NOT channelized
3	Y	Y	Dense, persistent vegetation
4	Y	Y	Evidence of flashy hydrology
5	N	Y	Point or non-point source inflow
6	N	N	Impervious surfaces cover >10% of land surface within the watershed
7	Ν	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	N	N	Basin wetland <u>or</u> constricted outlet
3	N	N	Water flow through wetland is NOT channelized
4	Y	Y	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	N	Y	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	N	Stormwater or surface water from agricultural land is major hydrology source
8	N	Y	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	N	N	Springs, seeps or indicators of groundwater present
2	N	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	N	Wetland soils are organic
5	N	Ν	Wetland is within a wellhead protection area

WQ-4, ST-8, WQ-1: The feature is a floodplain forest associated with stream sasc1012p (Trout Brook). WQ-5, WQ-6: The wetland has areas of dense reed canary grass, which may suggest input of excess nutrients. WH-7, WH-8: The feature is fairly extensive and surrounded by hardwood forest; this habitat block may support SGCN species. WH-6: The wetland has a range of microtopography which supports hydrophytic and more upland-associated species. ST-4: Drift deposits were observed in the wetland, and it experiences typical floodplain 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	Y	Veery, hermit thrush, white throated sparrow heard near wetland			
Y	Y	Rabbit observed in wetland; potential for other mammals			
	Y	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	ng water was observed directly in the wetland; however, the associated stream likely hosts a

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	species	native species	represented
NHI plant community ranking	S4	S3 V	S2	S1-S2 (S2 high quality)
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
Phalaris arundinacea*			PFO	Patchy
Fraxinus nigra*			PFO	Rare
Populus grandidentata*			PFO	Rare
Impatiens capensis			PFO	Rare
Solidago gigantea			PFO	Rare
Ulmus americana			PFO	Rare
Equisetum arvense			PFO	Rare
Matteuccia struthiopteris			PFO	Rare
Equisetum hyemale			PFO	Rare
Rubus idaeus			PFO	Rare
Tilia americana			PFO	Rare
Circaea lutetiana			PFO	Barren
Fraxinus pennsylvanica			PFO	Barren
Ranunculus acris			PFO	Barren
Acer saccharum			PFO	Barren
Carex bromoides			PFO	Barren
Vitis riparia			PFO	Barren
Amphicarpaea bracteata			PFO	Barren
Eupatorium perfoliatum			PFO	Barren
Populus balsamifera			PFO	Barren
Solidago flexicaulis			PFO	Barren
Thalictrum dasycarpum			PFO	Barren
Barbarea vulgaris			PFO	Barren
Cerastium fontanum			PFO	Barren
Hypericum cf. ellipticum			PFO	Barren
Laportea canadensis			PFO	Barren
Pteridium aquilinum			PFO	Barren

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

The wetland is a relatively extensive floodplain and has a diversity of species as a whole; however, invasive species such as reed canary grass threaten the floristic integrity of the wetland in areas.

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

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

Invasive species are present in the wetland and reduce its floristic integrity. The wetland and surrounding forest have likely been logged historically. The wetland and surrounding forest have evidence of earthworms, which threaten the wetland's herbaceous layer. A road is near the wetland. An ATV trail runs through part of the wetland.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The wetland has a diversity of species and strata, however invasive species have reduced its floristic quality in parts.
Human Use Values	The wetland is on private land but appears to be used by ATVs; there is potential for hunting in the wetland.
Wildlife Habitat	The wetland has well-developed strata and part of a larger, relatively intact forest.
Fish and Aquatic Life Habitat	The wetland may support herpetofauna and other species associated with the adjacent steam.
Shoreline Protection	The wetland has mostly intact, dense vegetation along the edge of the stream.
Flood and Stormwater Storage	The wetland is relatively intact and likely receives and stores flood and stormwater.
Water Quality Protection	The wetland has multiple strata; dense, persistent vegetation; and is intact. The feature filters water that may pass through it and into Trout Brook.
Groundwater Processes	The wetland primarily exhibits recharge hydrology after flood events, but may discharge some water into Trout Brook.

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: Ashland	Sampling Date: <u>2020-06-06</u>
Applicant/Owner: Enbridge		State: Wisconsin Sampling Point: wasc1041_u1
Investigator(s): EJO/JSW	Section, Township, Range	e: sec 08 T045N R003W
Landform (hillslope, terrace, etc.): Side Slope	Local relief (concave, convex	none): Convex Slope (%): 8-15%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.39(-90.775020 Datum: WGS84
Soil Map Unit Name: Udorthents, ravines and escarph	nents, 25 to 60 percent	Slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes 🖌 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology signific	cantly disturbed? Are "No	rmal Circumstances" present? Yes 🗸 No
Are Vegetation . Soil . or Hydrology natura	Ilv problematic? (If need	ed. explain any answers in Remarks.)
SUMMARY OF FINDINGS Attach site man sho	wing compling point loc	ations transacts important features at
SUMMART OF FINDINGS – Attach site map show		ations, transects, important reatures, etc.
Hydrophytic Vegetation Present? Yes No	✓ Is the Sampled Ar	
Hydric Soil Present? Yes No		Yes No
Wetland Hydrology Present? Yes No	✓ If yes, optional We	tland Site ID:
Remarks: (Explain alternative procedures here or in a separate	report.) I hardwood forest dor	minated by big-tooth aspen and
northern white cedar		ninated by big tooth aspen and
HYDROLOGY		• • • • • • • • • • • • • • • • • • •
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that a	pply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Sta	ained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fi	auna (B13)	Moss Trim Lines (B16)
Saturation (A3) Mari Depo	DSITS (B15)	Dry-Season Water Table (C2)
Water Marks (BT) Hydrogen	Suinde Odor (CT)	Crayiish Burrows (C8)
Sediment Deposits (B2) Oxidized	Rnizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence	of Reduced Iron (C4)	Stunted of Stressed Plants (D1)
Algai Mat of Crust (B4) Recent Inc	on Reduction in Tilled Solis (C6)	Geomorphic Position (D2)
Iron Deposits (B5) I nin Much		Shallow Aquitard (D3)
Inundation Visible on Aenai Imagery (B7) Other (Ex	plain in Remarks)	Microtopographic Relief (D4)
Sparsely vegetated Concave Surface (B6)		
Ficiu Opsei valionis.	abaa):	
Weter Table Present? Yes No V Depth (IF		
vvater rable Present? Yes No _ V Depth (in	icnes):	

Saturation Present?

(includes capillary fringe)

No indicators of wetland hydrology were observed.

Yes ____ No ___ Depth (inches): _____

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

Wetland Hydrology Present? Yes _____ No ____

Sampling Point: wasc1041_u1

Trop Stratum (Plot size: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1 Populus grandidentata	<u></u>	V		Number of Dominant Species
	20			That Are OBL, FACW, or FAC: (A)
			TACI	Total Number of Dominant
5				$\frac{1}{2}$
4				Percent of Dominant Species That Are OBL_EACW_or_EAC: 3.3 (A/B)
5			·	
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co	ver	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15)				FACW species 33 $x^2 = 6$
1. <u>Ostrya virginiana</u>	20	<u> </u>	FACU	FACU species $77 \times 4 = 308$
2. <u>Tilia americana</u>	10	<u> Y </u>	<u>FACU</u>	UPL species $0 \times 5 = 0$
3				Column Totals: 112 (A) 380 (B)
4				
5				Prevalence Index = $B/A = 3.392857142857143$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	30	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size:5)				3 - Prevalence Index is $\leq 3.0^{\circ}$
1. <u>Tilia americana</u>	5	Y	FACU	data in Remarks or on a separate sheet)
2. Fraxinus nigra	3	Y	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Taraxacum officinale	2	N	FACU	
4. Athvrium angustum	2	N	FAC	Indicators of hydric soil and wetland hydrology must
5				Definitions of Verseterion Strates
6				Definitions of Vegetation Strata:
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8				at breast height (DDF), 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.
3			·	
10				of size, and woody plants less than 3.28 ft tall.
				Woody vines – All woody vines greater than 3.28 ft in
12	10			height.
	12	= Total Co	ver	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4				Present? Yes No <u>/</u>
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.) dwood f	orost da	minator	d by big-tooth aspen and porthern
white coder			minale	by big-tooth aspen and northern

Profile Desc	ription: (Describe	to the depth	needed to document the indicator or confirm	the absence of	of indicators.)
Depth (inches)	Matrix Color (moist)	0/2	$\frac{\text{Redox Features}}{\text{Color (moist)}} \qquad \% \qquad \text{Type}^1 \qquad \text{Loc}^2$	Toyturo	Pemarks
<u>0-12</u>	5VR 3/3	100		SICI	I Centains
12 20	25VP 2/2	100			
12-20	2.311 3/3			SICL	
				<u> </u>	
<u> </u>					
<u> </u>					
¹ Type: C=C	oncentration, D=Dep	letion, RM=R	Reduced Matrix, MS=Masked Sand Grains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:			Indicators f	or Problematic Hydric Soils ³ :
<u> </u>	(A1)	_	Polyvalue Below Surface (S8) (LRR R,	2 cm Mi	uck (A10) (LRR K, L, MLRA 149B)
Black Hi	stic (A3)		MLRA 149B) Thin Dark Surface (S9) (LRR R. MLRA 149B)	5 cm Mi	rairie Redox (A16) (LRR K, L, R) ucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)	_	Loamy Mucky Mineral (F1) (LRR K, L)	Dark Su	Irface (S7) (LRR K, L)
Stratified	d Layers (A5)		_ Loamy Gleyed Matrix (F2)	Polyvalu	ue Below Surface (S8) (LRR K, L)
Depleted	d Below Dark Surface	e (A11)	_ Depleted Matrix (F3) Redox Dark Surface (F6)	Thin Da	rk Surface (S9) (LRR K, L)
Sandy N	lucky Mineral (S1)		Depleted Dark Surface (F7)	Piedmo	nt Floodplain Soils (F19) (MLRA 149B)
Sandy G	Bleyed Matrix (S4)	_	Redox Depressions (F8)	Mesic S	podic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)			Red Pa	rent Material (F21)
Stripped	Matrix (S6)			Very Sh	allow Dark Surface (TF12)
Daik Su		ILKA 149D)			
³ Indicators o	f hydrophytic vegetat	ion and wetla	and hydrology must be present, unless disturbed	or problematic.	
Restrictive	Layer (if observed):				
Type:				Hudria Sail E	Procent? Voc No /
Depth (in	ches):				
Soils we	re observed to	be siltv	clav loam. No hydric soil indicato	ors were of	oserved
		, so only			



wasc1041_u1_NW



wasc1041_u1_SE

Project/Site: Line 5 Relocation Project	_ City/County: <u>Ashland</u>	Sampling	Date: <u>2</u>	<u>020-06-08</u>
Applicant/Owner: Enbridge		State: Wisconsin Samplir	ng Point:	wasc1041_u2
Investigator(s): <u>JSW/EJO</u>	_ Section, Township, Range: <u>Se</u>	ec 08 T045N R003V	V	
Landform (hillslope, terrace, etc.): Side Slope	_ocal relief (concave, convex, non	e): <u>None</u>	_ Slope	(%): <u>8-15%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.3903</u>	36 Long: <u>-90</u>	.772290	Datum:	WGS84
Soil Map Unit Name: Vilas loamy sand, 0 to 6 percen	t 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 significan	tly disturbed? Are "Normal	Circumstances" present? Y	′es 🖌	No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, e	xplain any answers in Rema	rks.)	
SUMMARY OF FINDINGS – Attach site map showin	ng sampling point locatio	ns, transects, importa	ant feat	tures, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No No	Is the Sampled Area within a Wetland? Yes No V
Wetland Hydrology Present?	Yes	No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proce The upland sample point	dures here or in is located of	a separate report.) on a well-drain	ned west-facing slope.

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 V 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 inspect	Wetland Hydrology Present? Yes No _
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 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 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
Saturation Present? Yes No _ ✓ _ Depth (inches): (includes capillary fringe) Depth (inches): 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) Depth (inches): 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) Depth (inches): 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) Depth (inches): 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) Depth (inches): 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)	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 <u>No</u> ions), if available:

Sampling Point: wasc1041_u2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 Acer saccharum	25	Y	FACU	Number of Dominant Species That Are OBL EACIW or EAC: 3 (A)
2 Tilia americana	20	Y	FACU	
3. Populus tremuloides	15	Y	FAC	Total Number of Dominant Species Across All Strata: 6 (B)
4. Acer rubrum	10	 N	FAC	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>50</u> (A/B)
6.				
7				Prevalence Index worksheet:
	70	= Total Cov		$\begin{array}{c c} \hline 10tal \% Cover ol. \\ \hline 00tal \% Cov$
Sapling/Shrub Stratum (Plot size: 15)				FACW species $5 \times 2 = 10$
1 Ostrva virginiana	15	V	EACU	FAC species $90 \times 3 = 270$
1. <u>Ostrya virginiana</u>	10	<u> </u>		FACU species x 4 =300
		<u> </u>		UPL species <u>10</u> x 5 = <u>50</u>
3. <u>Fraxinus nigra</u>	5	<u> N </u>	<u>FACW</u>	Column Totals: <u>180</u> (A) <u>630</u> (B)
4			·	Provalence Index = P/A = -3.5
5			. <u> </u>	
6			<u> </u>	Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
	30	= Total Cov	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Carex pedunculata</u>	50	Y	FAC	data in Remarks or on a separate sheet)
2. <u>Viburnum acerifolium</u>	10	N	UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Arisaema triphyllum</u>	5	N	FAC	1
4. <u>Mitchella repens</u>	5	N	FACU	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Ribes cynosbati	5	Ν	FACU	Definitions of Vegetation Strata:
6. <u>Maianthemum racemosum</u>	5	N	FACU	
7. Amelanchier sp.	5	N		Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height
8.				Conting (charthe Maadu 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
14.	85	- Total Cov		height.
Weady Vine Stratum (Plat size: 30)				
1				
2				
3			<u> </u>	Hydrophytic Vegetation
4			<u> </u>	Present? Yes No v
		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate	sheet.) side slor			

Profile Description: (Des	cribe to the dep	th needed to docu	ment the i	ndicator	or confirm	the absence of inc	dicators.)
(inches) Color (mo	atrix ist) %	Color (moist)	<u>x Features</u> %	Tvpe ¹	loc^2	Texture	Remarks
Deptn Ma (inches) Color (mo)	anx ist) %	Color (moist)					Remarks
						<u> </u>	
¹ Type: C=Concentration, E Hydric Soil Indicators:	D=Depletion, RM=	-Reduced Matrix, M	S=Masked	Sand Gra	ains.	² Location: PL= Indicators for P	Pore Lining, M=Matrix. roblematic Hydric Soils ³ :
 Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark S Thick Dark Surface (A² Sandy Mucky Mineral (A²) Sandy Gleyed Matrix (A²) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LR ³Indicators of hydrophytic v 	Surface (A11) 12) (S1) S4) R R, MLRA 149E egetation and we	Polyvalue Belo MLRA 149B Thin Dark Surfa Loamy Mucky I Loamy Gleyed Depleted Matri Redox Dark Su Depleted Dark Redox Depress	w Surface) ace (S9) (L Mineral (F ⁷ Matrix (F2 x (F3) urface (F6) Surface (F6) Surface (F8) sions (F8)	(S8) (LRF , RR R, MI) (LRR K) 7) 7)	RA 149B , L) s disturbed	 2 cm Muck (Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark St Iron-Mangar Piedmont Fle Mesic Spodi Red Parent I Very Shallov Other (Explaged) 	A10) (LRR K, L, MLRA 149B) e Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L) elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R) oodplain Soils (F19) (MLRA 149B) ic (TA6) (MLRA 144A, 145, 149B) Material (F21) w Dark Surface (TF12) ain in Remarks)
Restrictive Layer (if obse Type:	rved):						
Depth (inches):						Hydric Soil Prese	ent? Yes No 🖌
Remarks: Could not sample non-hydric based o	soil due to t on the lands	he proximity scape position	to occu n and d	pied st omina	tructure nt vege	es. Soils are a	ssumed to be



wasc1041_u2_E



wasc1041_u2_N

Project/Site: Line 5 Relocation Project	ity/County: Ashland Sampling Date: 2020-06-08
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasc1046f_w
Investigator(s): EJO/JSW	ection, Township, Range: Sec 08 T045N R003W
Landform (hillslope, terrace, etc.): Depression	I relief (concave, convex, none): Concave Slope (%): 3-7%
Subregion (LBR or MLRA). Northcentral Forests Lat: 46 390002	Long: -90 770876 Datum: WGS84
Soli Man Unit Name: I Idorthonte, ravinos and oscarpmonte	25 to 60 percent clopes NWL description:
son Map onit Name. <u>Ouonments, ravines and escarpments</u>	
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 d	sturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally prob	lematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing s	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🗸 No	Is the Sampled Area
Hydric Soil Present? Yes <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 feature is a hardwood swamp dominated by	/ red maple and white ash, with black ash also
present in the canopy. The feature is a depressi	on/swale that slopes downward to the northeast.
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 Le	aves (B9) Drainage Patterns (B10)
High Water Lable (A2) Aquatic Fauna (E	(13) Moss Trim Lines (B16)
Saturation (A3) Mari Deposits (B	15) Dry-Season Water Table (C2)
Water Marks (BT) Hydrogen Sunder	Crayiish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosp	sheres on Living Roots (C3) Saturation Visible on Aena Imagery (C9)
Drift Deposits (B3) Presence of Red	uction in Tilled Soils (C6) Commercial Desition (D2)
Algal Mat of Clust (B4) Recent IIon Redu	$\frac{1}{2} = \frac{1}{2} = \frac{1}$
ITOH Deposits (B5) Thirt Muck Surface	Pomor(a) Silailow Aquitaru (D3)
Inundation Visible on Aeriai Inagery (B7) Other (Explain In	EAC Neutral Test (D5)
Sparsely vegetated Concave Sunace (B8)	
Field Observations.	0.5
Surface Water Present? Yes <u>v</u> No Depth (incres):	0.5
Water Table Present? Yes No Deptn (Inches):	
Saturation Present? Yes No Ves Deptn (inches):	Wetland Hydrology Present? Yes <u>v</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos	, previous inspections), if available:
Demodul	
Remarks:	t slopes downward to the northeast. Standing water
was observed at the time of the survey. The was	tland is downslong from wotland wass1046g
was observed at the time of the survey. The we	liand is downsiope from welland wascro46e.

Sampling Point: wasc1046f_w

	Absolute	Dominant	Indicator	Deminence Test worksheet
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Dominance Test worksneet:
1. <u>Fraxinus americana</u>	50	Y	<u>FACU</u>	That Are OBL, FACW, or FAC: (A)
2. <u>Acer rubrum</u>	30	Y	FAC	Total Number of Dominant
3. <u>Fraxinus nigra</u>	20	N	FACW	Species Across All Strata:5_ (B)
4. <u>Rhamnus cathartica</u>	7	N	FAC	Percent of Dominant Species
5.				That Are OBL, FACW, or FAC: <u>60</u> (A/B)
6.				Dravelance in dev workels est
7				Total % Cover of:
··	107	= Total Co	vor	$\begin{array}{c} \hline 10tal \% Cover 01. \\ \hline 00tal \% Cover$
Copling/Chrub Stratum (Distaire) 15	_107_	- 10(a) 00	VEI	EACW species $20 \times 2 = 40$
<u>Saping/Shrub Stratum</u> (Piot size: 13)	4 5	V		FAC species $60 \times 3 = 180$
1. <u>I IIIa americana</u>		<u> </u>	FACU	FACU species $69 \times 4 = 276$
2			·	UPL species $0 \times 5 = 0$
3			·	Column Totals: 196 (A) 543 (B)
4				() ()
5			·	Prevalence Index = $B/A = 2.770408163265306$
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)				\sim 3 - Prevalence Index is $\leq 3.0^1$
1 Carox scabrata	40	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Calex Scapiala</u>	20	 		Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Aurynum angustum</u>	20			
3. <u>Ribes triste</u>		<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>I ilia americana</u>	4	<u> N </u>	FACU	be present, unless disturbed or problematic.
5. <u>Arisaema triphyllum</u>	3	<u> N</u>	FAC	Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in (7.6 cm) or more in diameter
7			·	at breast height (DBH), regardless of height.
8				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.	74	- Total Co	vor	height.
Weader Vian Charter (Plat size: 20	_/_	- 10(a) C0	VEI	
Woody vine Stratum (Plot size: <u>50</u>)				
1			·	
2			·	
3			·	Hydrophytic
4				Vegetation Present? Yes ✔ No
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			d red mende in the concern. American
I ne reature is a nardwood swamp dom	inated b	by white	asn an	a rea maple in the canopy, American
passwood in the shrub layer, and easte	ern roug	n sedae	e and lac	av tern in the around laver. The around

layer vegetation becomes denser as the wetland slopes downward to the northeast.

Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Model) Image: Product (Product (Pro	
'ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 'ype: C=Concentration, D=Depletion, RM=Reduced Matrix, (F3) 'ype: C=Concentration, D=Depletion, RM=Reduced Matrix, (F3)	
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators:	
image:	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
image:	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
Ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators:	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
Ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators:	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
Ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators:	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
'ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators:	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
Ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators:	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
`ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators: _ Histosol (A1) _ Polyvalue Below Surface (S8) (LRR R, _ Histic Epipedon (A2) MLRA 149B) _ Black Histic (A3) _ Thin Dark Surface (S9) (LRR R, MLRA 149B) _ Hydrogen Sulfide (A4) _ Loamy Mucky Mineral (F1) (LRR K, L) _ Stratified Layers (A5) _ Loamy Gleyed Matrix (F2) _ Depleted Below Dark Surface (A11) _ Depleted Matrix (F3)	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators:	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators:	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators:	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
Ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Hydrogen Sulfide (A4)	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators: Polyvalue Below Surface (S8) (LRR R,	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators: Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3)	<u> Location: PL=Pore Lining, M=Matrix.</u> Indicators for Problematic Hydric Soils ³ : <u> 2 cm Muck (A10) (LRR K, L, MLRA 149B)</u> Coast Prairie Redox (A16) (LRR K, L, R)
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3)	2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
	Coast Prairie Redox (A16) (LRR K, L, R)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3)	5 cm Mucky Peat or Peat (S3) (LRR K. L. R)
_ Stratified Layers (A5) Loamy Gleyed Matrix (F2) _ Depleted Below Dark Surface (A11) Depleted Matrix (F3)	Dark Surface (S7) (LRR K, L)
_ Depleted Below Dark Surface (A11) Depleted Matrix (F3)	Polyvalue Below Surface (S8) (LRR K, L)
	Thin Dark Surface (S9) (LRR K, L)
_ Thick Dark Surface (A12) Redox Dark Surface (F6)	Iron-Manganese Masses (F12) (LRR K, L, R)
_ Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	Piedmont Floodplain Soils (F19) (MLRA 1498
_ Sandy Gleyed Matrix (S4) Redox Depressions (F8)	Mesic Spoalc (TA6) (MLRA 144A, 145, 149B) Red Parent Material (E21)
_ Salidy Redox (SS) Strinned Matrix (S6)	Very Shallow Dark Surface (TE12)
Dark Surface (S7) (LRR R. MLRA 149B)	 Other (Explain in Remarks)
ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed	or problematic.
estrictive Layer (if observed):	
Туре:	
Depth (inches):	Hydric Soil Present? Yes 🔽 No
emarks:	
oils were not sampled due to the proximity to a residential pror	perty and potential to encounter
nderground utilities. The soils are assumed to be hydric based	on the landscape position and
aminance of hydrophytic vogetation	on the landscape position and
Similance of hydrophylic vegetation.	



wasc1046f_w_NE



wasc1046f_w_SW

Project/Site: Line 5 Relocation Project City/Co Applicant/Owner: Enbridge Investigator(s): EJO/JSW Section Landform (hillslope, terrace, etc.): Depression Local relie Subregion (LRR or MLRA): Northcentral Forests Lat: 46.389858 Soil Map Unit Name: Udorthents, ravines and escarpments, 25 Are climatic / hydrologic conditions on the site typical for this time of year? Ye Are Vegetation , Soil , or Hydrology naturally problemat SUMMARY OF FINDINGS – Attach site map showing same Summary of the site state is the site map showing same State state is the site map showing same	bunty: Ashland Sampling Date: 2020-06-08 State: Wisconsin Sampling Point: wasc1046e_w h, Township, Range: Sec 08 T045N R003W of (concave, convex, none): Concave Slope (%): 3-7% Long: -90.770980 Datum: WGS84 to 60 percent slopes NVI classification: es No (If no, explain in Remarks.) ed? ed? Are "Normal Circumstances" present? Yes No ic? (If needed, explain any answers in Remarks.) pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>v</u> No <u>Hydric Soil Present?</u> Yes <u>v</u> No <u>Ves v</u> No <u>Vetland Hydrology Present?</u> Yes <u>v</u> No <u>Vetland Hydrology Present?</u> Yes <u>v</u> No <u>Ves v</u> No <u>No Ves v</u> No <u>Ves v</u> No <u>Nes v</u> No <u>Ves </u>	Is the Sampled Area within a Wetland? Yes <u>v</u> No If yes, optional Wetland Site ID: In due to mowing. The dominant species are ure is located in a cleared utility corridor that is , likely similar to the adjacent forested
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
Field Observations: Surface Water Present? Yes No _ Depth (inches): Water Table Present? Yes No _ Depth (inches): Saturation Present? Yes No _ Depth (inches): Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) No _ Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, prev Remarks: The feature is a seasonally saturated, sloped depree hardwood swamp community. Some standing water	Wetland Hydrology Present? Yes _ No ious inspections), if available: No ession that is connected to and drains into a r was observed in the wetland at the time of

Sampling Point: wasc1046e_w

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Iree Stratum</u> (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1		·	·	That Are OBL, FACW, or FAC: (A)
2	·	·	·	Total Number of Dominant
3		·	·	Species Across All Strata: (B)
4		·	·	Percent of Dominant Species
5		·	·	That Ale OBL, FACW, of FAC (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species6 x 2 =12
1			·	FAC species <u>12</u> x 3 = <u>36</u>
2				FACU species <u>8</u> x 4 = <u>32</u>
3.				UPL species 0 x 5 = 0
4.				Column Totals: 28 (A) 82 (B)
5.				Prevalence Index = B/A = <u>2.93</u>
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co	ver	2 - Dominance Test is >50%
Horb Stratum (Plot size: 5)		- 10(0100	VCI	$\underline{}$ 3 - Prevalence Index is $\leq 3.0^1$
1. Osmunda elaytoniana	7	V	EAC	4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Osmunua ciaytomana</u>	- <u> </u>	 		Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Barbarea vuigans</u>	<u> </u>			
3. <u>Equisetum sylvaticum</u>		<u> </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Circaea canadensis</u>		<u> </u>	FACU	be present, unless disturbed or problematic.
5. <u>Solidago flexicaulis</u>	2	<u> N </u>	<u>FACU</u>	Definitions of Vegetation Strata:
6. <u>Epilobium cf. ciliatum</u>	2	N	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Carex gracillima</u>	2	<u> N </u>	<u>FACU</u>	at breast height (DBH), regardless of height.
8. <u>Glyceria striata</u>	2	N	OBL	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Taraxacum officinale</u>	1	N	FACU	and greater than or equal to 3.28 ft (1 m) tall.
10. <i>Fraxinus nigra</i>	1	N	FACW	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
	28	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1.				
2.				
3				Hydrophytic
4			·	Vegetation
		= Total Ca	vor	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate			V CI	

The feature is a wet meadow with interrupted fern and garden yellow rocket among the dominant vegetation. The vegetation was observed to be sparse at the time of survey. The meadow is located in a cleared utility corridor and appears to be occasionally mowed as indicated by woody mulch and shredded stumps. The area was previously forested, likely similar to wasc1046f, with remnant stumps present.

Dopth	cription: (Describe	to the dept	n needed to docur	nent the	ndicator	or confirm	the absence of	indicators.)
(inches)	Color (moist)	%	Color (moist)	<u>x reature</u> %	S Type ¹	Loc ²	Texture	Remarks
· · · · · /	, <u> </u>							
		·			·	<u> </u>	······································	
					·		·	
		. <u> </u>						
					·		·	
		·					·	
		·					·	
		·						
		·					·	
		·					· ·	
¹ Type: C=C	oncentration, D=Dep	letion, RM=I	Reduced Matrix, M	S=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators for	Problematic Hydric Soils ³ :
Histoso	l (A1)	-	Polyvalue Belov	w Surface	(S8) (LRI	RR,	2 cm Muc	k (A10) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)		MLRA 149B)			Coast Pra	iirie Redox (A16) (LRR K, L, R)
Black H	istic (A3)	-	Thin Dark Surfa	ace (S9) (I	LRR R, M	LRA 149B)	5 cm Muc	ky Peat or Peat (S3) (LRR K, L, R
Hydroge	en Sulfide (A4)	-	Loamy Mucky N	Aineral (F	1) (LRR K	(, L)	Dark Surfa	ace (S7) (LRR K, L)
<u> </u> Stratifie	d Layers (A5)	-	Loamy Gleyed	Matrix (F2	2)		Polyvalue	Below Surface (S8) (LRR K, L)
Deplete	d Below Dark Surface	e (A11)	Depleted Matrix	(F3)			Thin Dark	Surface (S9) (LRR K, L)
Thick D	ark Surface (A12)	-	Redox Dark Su	rface (F6)			Iron-Mang	janese Masses (F12) (LRR K, L, F
Sandy I	Mucky Mineral (S1)	-	Depleted Dark	Surface (F	-7)		Piedmont	Floodplain Soils (F19) (MLRA 149
Sandy (Gleyed Matrix (S4)	-	Redox Depress	ions (F8)			Mesic Spo	odic (TA6) (MLRA 144A, 145, 149
Sandy F	Redox (S5)						Red Parer	nt Material (F21)
Stripped	d Matrix (S6)						Very Shal	low Dark Surface (TF12)
Dark Su	urface (S7) (LRR R, N	ILRA 149B))				_∠ Other (Ex	plain in Remarks)
³ Indiaatora d	of hydrophytic ycaptot	ion and wat	land hydrology mus	the prop	ont unlog	diaturbod	or problematic	
Restrictive	aver (if observed):		ianu nyurology mus	st be pres	ent, unies:	suistuibeu	or problematic.	
Typo	Luyer (il observeu).							
Type							Hydric Soil Dr	acont? Vac // No
Depth (in	iches):							
Remarks:								
Soils we	re not sample	d due to	the proximity	y to a r	esiden	tial prop	perty and po	otential to encounter
undergro	ound utilities. 7	The soils	are assume	d to be	e hydrio	c based	on the land	Iscape position and
dominar	ce of hydroph	vtic vea	etation		,			
aonnan		<i>J</i>						



wasc1046e_w_NE



wasc1046e_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 Č		
File #:	Date of visit(s):		
wasc1046	2020-06-08		
Location:	Ecological Landsca	ape:	
PLSS: sec 08 T045N R003W	Superior Coastal Plain		
Lat: <u>46.389990</u> Long: <u>-90.770891</u>	Watershed:		
	LS12, Marengo River		
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Udorthents, ravines and escarpments, 25 to 60 percent slopes.	Wetland Type(s):		
Portwing-Herbster complex, 0 to 6 percent slopes.	PFO/PEM - Hardwood swamp/Fresh (wet) meadow		
Field Verified:	complex		
Series were not verified. Soils were not sampled due to the	Wetland Size:	Wetland Area Impacted	
underground utilities. The soils are assumed to be hydric based on	0.0593	0.0593	
the wetland's hydrology and dominance of hydrophytic vegetation.	Vegetation:		
	Plant Community Description(s):		
Hydrology:	Interrupted fern and garden yellow rocket are among the dominant vegetation in the wet meadow. The vegetation was observed to be sparse at the time of survey. The meadow is located in a		
The feature is a saturated, sloped depression.	cleared utility corridor and appears shredded stumps. The areas was r	to be occasionally mowed as indicated by woody mulch and previously forested, with remnant stumps present. The hardwood	
Some standing water was observed in the	smeaper is dominated by white ash and red maple in the canopy. American basswood in the shrub layer, and eastern rough sedge and lady fern in the ground layer. The ground layer vegetation becomes denser as the wetland slopes down a gradient to the northeast.		
wetland at the time of 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	N	Used for educational or scientific purposes
3	Ν	N	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	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	Y	Y	3 or more strata present (>10% cover)
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	N	N	100 m buffer – natural land cover >50%(south) 75% (north) intact
5	N	N	Occurs in a Joint Venture priority township
6	N	N	Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex, etc.)
7	Ν	Y	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	Ν	N	Ephemeral pond with water present <u>> 45</u> days
10	N	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudflats present
12	Ν	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	N	N	Wetland is connected or contiguous with perennial stream or lake
2	N	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	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	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	V	V	Basin wetland constricted outlet has through-flow or is adjacent to a stream
2	N	N	Water flow through wetland is NOT channelized
3	V	Y	Dense persistent vegetation
4	N	N	Evidence of flashy hydrology
5	N	Y	Point or non-point source inflow
6	N	N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <10% wetland
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	N	N	Provides substantial storage of storm and floodwater based on previous section
2	Ν	N	Basin wetland or constricted outlet
3	Ν	N	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	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	N	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

ST-5: The wetland is located in a depression and receives stormwater from the surrounding landscape. WH-7: Part of the wetland is part of a larger forest which may support SGCN species at times. WQ-7: Agricultural land is nearby and likely provides some stormwater runoff input.

> 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 americana*			PFO	Patchy
Acer rubrum*			PFO	Patchy
Carex scabrata*			PFO	Patchy
Athyrium filix-femina			PFO	Rare
Fraxinus nigra			PFO	Rare
Tilia americana			PFO	Rare
Athyrium filix-femina			PEM/PFO	Rare
Osmunda claytoniana			PEM	Rare
Ribes triste			PFO	Rare
Barbarea vulgaris			PEM	Rare
Equisetum sylvaticum			PEM	Rare
Rhamnus cathartica			PFO	Rare
Tilia americana			PFO	Barren
Arisaema triphyllum			PFO	Barren
Carex gracillima			PEM	Barren
Circaea lutetiana			PEM	Barren
Cornus sericea			PEM	Barren
Populus tremuloides			PEM	Barren
Ribes cf. cynosbati			PEM	Barren
Epilobium cf. ciliatum			PEM	Barren
Glyceria striata			PEM	Barren
Prunus virginiana			PEM	Barren
Solidago flexicaulis			PEM	Barren
Taraxacum officinale			PEM	Barren
Fraxinus nigra			PEM	Barren

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

In the hardwood swamp, the wetland is fairly intact and largely dominated by native species, with some invasives present. In the wet meadow, the vegetation is sparse due to mowing; the meadow has some 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
	Х		L	С	Polluted runoff
					Pond construction
					Agriculture – row crops
	Х		L	С	Agriculture – hay
					Agriculture – pasture
					Roads or railroad
Х	Х		Н	С	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
x	x		M	C	Removal of herbaceous stratum – mowing,
~	~		101	C	grading, earthworms, etc.
		x	м	С	Removal of tree or shrub strata – logging,
		~		Ű	unprescribed fire
	Х		L	С	Human trails – unpaved
				_	Human trails – paved
X	Х		M	С	Removal of large woody debris
X	Х		M	С	Cover of non-native and/or invasive species
	Х		M	С	Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golt 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 wet meadow is located in a cleared utility corridor that is occasionally mowed and was once forested. The wetland is near a residential property, hayfield, and driveway. Exotic and invasive species degrade the floristic quality. Earthworms appear to be present in the hardwood swamp, which has impacted the herbaceous layer; some areas are missing vegetation.

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 hardwood swamp is largely intact; the wet meadow is significantly disturbed.
Human Use Values	The wetland is located on private land.
Wildlife Habitat	The forested wetland provides habitat structure for various birds and likely supports other wildlife.
Fish and Aquatic Life Habitat	Some standing water was present at the time of survey, which may support aquatic life at times.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is a linear depression that receives stormwater from the surrounding landscape.
Water Quality Protection	The forested wetland is well-vegetated and likely intercepts and filters precipitation and stormwater runoff. The wet meadow is sparsely vegetated, but the mulch present from mowing likely helps slow erosion to some extent.
Groundwater Processes	The wetland primarily exhibits recharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling D	ate: <u>2020-06-08</u>				
Applicant/Owner: Enbridge		State: Wisconsin Sampling	Point: wasc1046_u				
Investigator(s): <u>JSW/EJO</u>	Section, Township, Range: <u>S</u>	<u>ec 08 T045N R003W</u>					
Landform (hillslope, terrace, etc.): <u>Rise</u>	Local relief (concave, convex, non	ie): <u>Convex</u>	Slope (%): 0-2%				
Subregion (LRR or MLRA): Northcentral Forests Lat	t: <u>46.389942</u> Long: <u>-90</u>	. 770824 r	Datum: <u>WGS84</u>				
Soil Map Unit Name: Udorthents, ravines and	escarpments, 25 to 60 percent slop	es NWI classification:					
Are climatic / hydrologic conditions on the site typical f	for this time of year? Yes \checkmark No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Normal	Circumstances" present? Ye	s 🖌 No				
Are Vegetation, Soil, or Hydrology	naturally problematic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? Yes	No <u>v</u> Is the Sampled Area within a Wetland?	Yes No •	/				
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No <u>v</u> If yes, optional Wetland	Site ID:					
Remarks: (Explain alternative procedures here or in	a separate report.)						

(Explain alternative proceduree nere er in a coparate report.)	
The upland sample point is located on a rise in a you	ung forest dominated by quaking aspen and
basswood.	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living 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	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 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 tions), if available:
Saturation Present? Yes No Concern Depth (inches): Concern Con	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 tions), if available:
Saturation Present? Yes No Pepth (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 Pepth (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 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 Pepph (inches): Saturation Present? Yes Depth (inches): Depth (inches): 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 Pepth (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 <u>v</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:
Saturation Present? Yes No <u>v</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:
Saturation Present? Yes No <u>v</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

Sampling Point: wasc1046_u

Trac Stratum (Distaire) 20	Absolute	Dominar	nt 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>		That Are OBL, FACW, or FAC: 2 (A)
2. <u>Tilla americana</u>		<u> </u>		Total Number of Dominant
3. <u>Betula papyrifera</u>	10	N	FACU	Species Across All Strata: <u>8</u> (B)
4		·		Percent of Dominant Species
5		·		$\begin{array}{c} \text{That Ale OBL, FACW, OF FAC.} \\ \underline{23} \\ \end{array} $
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 species <u>10</u> x 2 = <u>20</u>
1. <i>Fraxinus americana</i>	10	Y	FACU	FAC species $60 \times 3 = 180$
2. <u>Tilia americana</u>	10	Y	FACU	FACU species $81 \times 4 = 324$
3. <u>Rhamnus cathartica</u>	5	Y	FAC	$\begin{array}{c} \text{UPL species} 10 \text{x} \text{ 5} = \underline{50} \\ \text{Column Totals} 161 (A) 574 (B) \end{array}$
4				$\begin{array}{c} \text{Column rotals.} \\ \hline 101 \\ \hline \end{array} (A) \\ \hline 574 \\ \hline 0 \\ \hline \end{array} (B)$
5.				Prevalence Index = B/A = <u>3.5652173913043477</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
<u></u>	25	- Total C		2 - Dominance Test is >50%
			Jver	$_$ 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: <u>5</u>)	20	V	EACU	4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Ptendium aquilinum</u>		<u> </u>	<u>FACU</u>	Data In Remarks of on a separate sneet)
2. <u>Sympnyotricnum cr. ciliolatum</u>	15	<u> </u>		
3. <u>Viburnum acerifolium</u>	10	<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Diervilla Ionicera</u>	10	<u> </u>		be present, unless disturbed or problematic.
5. <u>Uvularia sessilifolia</u>	5	<u> N</u>	<u>FACU</u>	Definitions of Vegetation Strata:
6. <u>Tilia americana</u>	5	N	<u>FACU</u>	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Fraxinus pennsylvanica</u>	5	N	<u>FACW</u>	at breast height (DBH), regardless of height.
8. <u>Solidago gigantea</u>	5	N	FACW	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Abies balsamea</u>	5	N	FAC	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Carex deweyana</u>	1	N	FACU	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
	81	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30)				
1				
··		·		
2		·		
S		·		Hydrophytic Vegetation
4				Present? Yes <u>No v</u>
Pomarka: (Include photo numbero hero er en e concreto		= Total Co	over	
The sample plot is located in a vound	orest do	minate	d by qua	aking aspen.
				3

Denth	Motrix	to the depth		Inent the	niaicator s	or confirm	the absence of i	indicators.)
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc ²	Texture	Remarks
		·			·			
		·						
		·			·			
		·			·		<u> </u>	
		·			·			
		·						
		·						
·		·						
		· · _						
		·			·			
¹ Type: C=C	oncentration, D=Dep	letion, RM=R	Reduced Matrix, M	S=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators for	Problematic Hydric Soils ³ :
Histoso	(A1)	_	Polyvalue Belo	w Surface	(S8) (LR	R,	2 cm Mucl	k (A10) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)		MLRA 149B	5)			Coast Pra	irie Redox (A16) (LRR K, L, R)
Black H	istic (A3)	_	Thin Dark Surfa	ace (S9) (I	LRR R, M	LRA 149B)	5 cm Mucl	ky Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)	_	Loamy Mucky I	Mineral (F	1) (LRR K	, L)	Dark Surfa	ace (S7) (LRR K, L)
Stratifie	d Layers (A5)		_ Loamy Gleyed	Matrix (F2	2)		Polyvalue	Below Surface (S8) (LRR K, L)
Deplete	d Below Dark Surface	e (A11)	_ Depleted Matrix	х (⊢3) ш1ааа (ГС)			Thin Dark	Surface (S9) (LRR K, L)
Thick D	Ark Surface (ATZ)	-	_ Redux Dark St	Surface (FO)	=7)		ITON-Many Diedmont	Eloodolain Soils (F12) (LRR R, L, R)
Sandy (Sleved Matrix (S4)	_	Depieted Dark Redox Depress	sions (F8)	')		Mesic Snc	odic (TA6) (MI RA 144A 145 149B)
Sandy F	Redox (S5)	—					Red Parer	nt Material (F21)
Stripped	Matrix (S6)						Very Shall	ow Dark Surface (TF12)
Dark Su	Inface (S7) (LRR R, N	ILRA 149B)					Other (Exp	plain in Remarks)
		,						,
³ Indicators c	f hydrophytic vegetat	ion and wetla	and hydrology mu	st be pres	ent, unless	s disturbed	or problematic.	
Restrictive	Layer (if observed):							
Type:								
Depth (in	ches).						Hydric Soil Pre	esent? Yes No
Pemarks:								
Could no	t sample soil	due to th	e proximity	to occi	inied s	tructure	s Soils are	assumed to be
bon byd	ria based on th				lomino	nt vogo	totion	
non-nyu			Jape position	n anu c	uunna	ni vege	lation.	



wasc1046_u_E



wasc1046_u_N
Project/Site: Line 5 Relocation Project	ity/County: Ashland Sampling Date: 2020-06-06				
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasc1045f_w				
Investigator(s): EJO/JSW	Section, Township, Range: Sec 08 T045N R003W				
Landform (hillslope, terrace, etc.); Floodplain	al relief (concave, convex, none): Concave Slope (%): 0-2%				
Subregion (LRB or MLRA). Northcentral Forests Lat: 46 389849	Long: -90 770299 Datum: WGS84				
Sail Man Unit Name: Liderthante, ravines and eccerements	25 to 60 percent clopes NWU closeification:				
sol Map Onit Name: <u>Odorthents, ravines and escarpments</u>					
Are climatic / hydrologic conditions on the site typical for this time of yea	r? Yes <u>v</u> No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly of	isturbed? Are "Normal Circumstances" present? Yes <u>v</u> No				
Are Vegetation, Soil, or Hydrology naturally prot	lematic? (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 <u>Ves</u> No	Is the Sampled Area				
Hydric Soil Present? Yes 🖌 No	within a Wetland? Yes <u><</u> No				
Wetland Hydrology Present? Yes 🖌 No	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report)				
The feature is a floodplain forest dominated by	plack ash, American basswood, and red maple. The				
floodplain is associated with the perennial strea	m sasc1014p. The feature may also exhibit some				
discharge hydrology based on the presence of	prome-like sedge.				
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	Oundee Con Oracis (50)				
High Water Table (A2) Aquatic Fauna (I	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B	15) Drv-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide	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 Rec	uced Iron (C4) Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Red	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 in	in 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 <u>v</u> No				
(includes capillary fringe)	nravious inspections), if available:				
Describe Recorded Data (stream gauge, monitoring weil, aenai photos					
Remarks:					
The feature is a floodplain associated with strea	Im sasc1014p. The presence of brome-like sedge				
suggests the feature may also exhibit some dis	charge hydrology. Drift deposits were observed				
outside of the sample plot.					

Sampling Point: wasc1045f_w

Trop Stratum (Plot size: 30)	Absolute	Dominant	t Indicator	Dominance Test worksheet:			
1 Acer rubrum	<u></u> 15	V		Number of Dominant Species			
2 Tilia amoricana	<u>45</u>			That Are OBL, FACW, or FAC: 5 (A)			
3 Fraxinus nigra	<u> </u>	 	FACW	Total Number of Dominant Species Across All Strata: 7 (B)			
4			<u> </u>	Demonstration Constant Constant			
5.			·	That Are OBL, FACW, or FAC: (A/B)			
6.			- <u> </u>				
7			- <u> </u>	Prevalence Index worksheet:			
··	110	= Total Co	ver	$\begin{array}{c c} \hline 10tai \% Cover 01. \\ \hline 00t \text{ species} \\ \hline 00t specie$			
Sapling/Shrub Stratum (Plot size: 15)		- 10(a) 00	VCI	EACW species $55 \times 2 = 110$			
1 Fravinus nigra	10	V		FAC species $77 \times 3 = 231$			
		<u> </u>	<u>FACW</u>	FACU species x 4 = 180			
2			·	UPL species x 5 =			
3				Column Totals: <u>177</u> (A) <u>521</u> (B)			
4			·	Prevalence Index = $B/\Delta = 2.943502824858757$			
5			·	Hydrophytic Vegetation Indicatory			
6				1 Papid Test for Hydrophytic Vegetation			
7			·	2 - Dominance Test is >50%			
	10	= Total Co	ver	\sim 3 - Prevalence Index is $\leq 30^{1}$			
Herb Stratum (Plot size: 5_)				4 - Morphological Adaptations ¹ (Provide supporting			
1. <u>Matteuccia struthiopteris</u>	20	<u> </u>	FAC	data in Remarks or on a separate sheet)			
2. <u>Onoclea sensibilis</u>	7	<u> </u>	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)			
3. <u>Pteridium aquilinum</u>	7	Y	FACU	¹ Indicators of hydric coil and watland hydrology must			
4. <u>Equisetum arvense</u>	5	N	FAC	be present, unless disturbed or problematic.			
5. <u>Carex bromoides</u>	5	N	FACW	Definitions of Vegetation Strata:			
6. <u>Arisaema triphyllum</u>	4	N	FAC				
7. Fraxinus nigra	3	Ν	FACW	at breast height (DBH), regardless of height.			
8. Maianthemum racemosum	3	Ν	FACU	Sanling/abruh Weady plants loss than 2 in DPH			
9. Abies balsamea	2	N	FAC	and greater than or equal to 3.28 ft (1 m) tall.			
10. <u>Populus tremuloides</u>	1	N	FAC	Herb – All herbaceous (non-woody) plants, regardless			
11			<u> </u>	of size, and woody plants less than 3.28 ft tall.			
12			<u> </u>	Woody vines – All woody vines greater than 3.28 ft in			
	57	= Total Co	ver	height.			
Woody Vine Stratum (Plot size: <u>30</u>)							
1.							
2							
3			·	Hydrophytic			
۵ ۸			·	Vegetation			
		= Total Co	ver	Present? Yes <u>v</u> No			
Remarks: (Include photo numbers here or on a separate sheet.)							
The feature is a floodplain forest domin	ated by	black a	ash, Ame	erican basswood, and red maple in the			
canopy. Ferns are dominant in the ground layer.							

Depth	 Matrix	•	Redo	x Feature	5				,
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
		·		·					
		·							
		·					<u> </u>		
		·					<u> </u>		
				·					
¹ Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gr	ains.	² Location: F	PL=Pore L	_ining, M=Matrix.
Hydric Soil	Indicators:						Indicators for	r Problen	natic Hydric Soils ³ :
<u>Histosol</u>	(A1)		Polyvalue Belov	w Surface	(S8) (LRF	RR,	2 cm Muc	ck (A10) (LRR K, L, MLRA 149B)
Histic Ep	oipedon (A2)		MLRA 149B)			Coast Pra	airie Redo	ox (A16) (LRR K, L, R)
Black Hi	stic (A3)		Thin Dark Surfa	ace (S9) (L	.RR R, M	LRA 149B)	5 cm Muc	ky Peat c	or Peat (S3) (LRR K, L, R
Hydroge	n Sulfide (A4)		Loamy Mucky N	Aineral (F	I) (LRR K	(, L)	Dark Surf	face (S7)	(LRR K, L)
Stratified	Layers (A5)		Loamy Gleyed	Matrix (F2)		Polyvalue	Below S	urface (S8) (LRR K, L)
Depleted	Below Dark Surface	e (A11)	Depleted Matrix	(F3)			Thin Dark	Surface	(S9) (LRR K, L)
Thick Da	ark Surface (A12)		Redox Dark Su	rface (F6) Ourfage (F			Iron-Man	ganese M	lasses (F12) (LRR K, L, F
Sandy IV	lucky Mineral (S1)	•	Depleted Dark	Surrace (F	7)		Pleamont	Floodpla	IIN SOIIS (F19) (NILRA 149
Sandy B			Redux Depress	1011S (FO)			Iviesic Sp	ouic (TAb) (IVILKA 144A, 143, 149) al (E21)
Saliuy R	Matrix (S6)							llow Dark	di (FZT) Surface (TE12)
Dark Su	rface (S7) (I RR R M	II RA 149B)				Other (Ex	now Dark Index Dark	Sunace (11 12)
)						(cindit(3)
³ Indicators of	f hydrophytic vegetati	ion and we	land hydrology mus	st be prese	ent, unless	s disturbed	or problematic.		
Restrictive I	_ayer (if observed):		, ,				•		
Type:									
Donth (in	abaa);						Hydric Soil Pr	esent?	Yes 🗸 No
	mes).								
Remarks:		به مربام ا	4 h a . a . a					- t t -	
Solis wei	e not sampled	a due to	the proximity	y to res	adentia	a prope	nies and po	otentia	i to encounter
undergro	und utilities. H	loweve	r, based on th	ne land	scape	positior	n and domin	nance	of hydrophytic
vegetatic	on, the soils ar	e assur	ned to be hyd	dric.					
			-						



wasc1045f_w_NE



wasc1045f_w_SW

Project/Site: Line 5 Relocation Project	City/County: <u>As</u>	hland	Sam	pling Date: <u>2020-06-06</u>		
Applicant/Owner: Enbridge		mpling Point: wasc1045e_w				
Investigator(s): EJO/JSW	Section, Townshi	o, Range: <u>Se</u>	ec 08 T045N R0	03W		
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave	, convex, non	e): Concave	Slope (%): 0-2%		
Subregion (I RR or MI RA). Northcentral Forests	46 389599	Long -90	770430	Datum [·] WGS84		
Soil Map Unit Name: Udorthents, ravines and	escarpments, 25 to 60 pe	ercent slop	es NWI classification:			
Are climatic / hydrologic conditions on the site typical fo	r this time of year? Yes 🖌	No (If no, explain in Remark	rs)		
Are Vegetation Soil or Hydrology	significantly disturbed?	Are "Normal	Circumstances" presen	t? Ves 🖌 No		
Are Vegetation, Soil, or Hydrology		(If peeded o		l: Tes <u> </u>		
SUMMART OF FINDINGS – Attach site in	ap snowing sampling po	int locatio	ns, transects, imp	fortant leatures, etc.		
Hydrophytic Vegetation Present? Yes <u>·</u>	_ No Is the San	npled Area				
Hydric Soil Present? Yes 🖌	No within a v	/etland?	Yes <u>v</u> N	lo		
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.) Iow dominated by ostri	ch fern f	ield horsetail a	nd stalk-grain		
sedge. The feature is associated wit	h the perennial stream	sasc101	4n The feature	was likely		
previously forested as it occurs in a	cleared utility corridor	hotwoon	two forests			
		Jeiween	101010101018.			
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indicators (r	minimum of two required)		
Primary Indicators (minimum of one is required; check	(all that apply)		Surface Soil Crack	s (B6)		
Surface Water (A1)	Water-Stained Leaves (B9)		Drainage Patterns (B10)			
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lines (E	316)		
Saturation (A3)	Marl Deposits (B15)		Dry-Season Water	Table (C2)		
Water Marks (B1)	Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)		
Sediment Deposits (B2)	Oxidized Rhizospheres on Living	Roots (C3)	Saturation Visible of	on Aerial Imagery (C9)		
Drift Deposits (B3)	Presence of Reduced Iron (C4)		Stunted or Stresse	d Plants (D1)		
Algai Mat of Crust (B4)	This Muck Surface (C7)		_ Geomorphic Position (D2)			
Inundation Visible on Aerial Imageny (B7)	Other (Evolution in Remarks)		Shallow Aquitaro (D3) Microtonographic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)			Microtopographic Reliet (D4)			
Field Observations:						
Surface Water Present? Yes No	Denth (inches):					
Water Table Present? Yes No 🖌	Depth (inches):					
Saturation Present? Yes No ¥	Depth (inches):	Wetland H	vdrology Present? Y	′es v∕No		
(includes capillary fringe)		Trottana 11	Jarology Procenting			
Describe Recorded Data (stream gauge, monitoring w	ell, aerial photos, previous inspec	ctions), if avai	lable:			
Remarks:						
The feature is located in a floodplain	associated with the p	erennial s	stream sasc101	4p.		
	-			-		

Sampling Point: wasc1045e_w

	Absolute	Dominan	t Indicator	Dominance Test worksheet:
<u>Tree stratum</u> (Plot size: <u>50</u>)	% Cover	<u>Species</u> ?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 3 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	over	OBL species x 1 =2
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>20</u> x 2 = <u>40</u>
1				FAC species x 3 =171
2.				FACU species x 4 =
3.				UPL species <u>0</u> x 5 = <u>0</u>
4.				Column Totals: <u>99</u> (A) <u>233</u> (B)
5				Prevalence Index = $B/A = 2.35$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
··	0	- Total Co		_∠ 2 - Dominance Test is >50%
Harb Stratum (Plat aiza) 5		- 10(a) 00		\checkmark 3 - Prevalence Index is ≤3.0 ¹
(Plot stratum (Plot size: <u>5</u>)	25	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Equisetum arvense</u>		<u> </u>		data in Remarks or on a separate sneet)
2. <u>Matteuccia strutniopteris</u>		<u> </u>		
3. <u>Carex stipata</u>	15	<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Barbarea vulgaris</u>	7	<u> N </u>	FAC	be present, unless disturbed or problematic.
5. <u>Onoclea sensibilis</u>	7	<u> N</u>	FACW	Definitions of Vegetation Strata:
6. <u>Phalaris arundinacea</u>	6	<u> N </u>	FACW	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Ranunculus acris</u>	5	N	FAC	at breast height (DBH), regardless of height.
8. <u>Carex cf. scoparia</u>	5	N	FACW	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Juncus effusus</u>	4	N	OBL	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Rumex britannica</u>	3	N	OBL	Herb – All herbaceous (non-woody) plants, regardless
11. <u>Solidago gigantea</u>	2	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
	99	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30)			-	
1				
2				
3				Deduce both
0				Ryarophytic Vegetation
4				Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate of	U		over	
Tremana. (mendue prioto numbers nere or on a separate s				

The feature is a wet meadow dominated by ostrich fern, field horsetail, and stalk-grain sedge. The feature is in a cleared utility corridor but was likely once forested, similar to the adjacent community, wasc1045f.

Depth	Matrix		Redo	x Features	3			······,
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
							· ·	
				·				
					. <u> </u>			
¹ Tvpe: C=C	oncentration. D=Depl	etion. RM:	Reduced Matrix. M	S=Masked	Sand Gra	ains.	² Location: PL=F	ore Lining, M=Matrix.
Hydric Soil	Indicators:	,	,				Indicators for Pro	oblematic Hydric Soils ³ :
Histoso	l (A1)		Polyvalue Belov	w Surface	(S8) (LRF	R,	2 cm Muck (A	10) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)		MLRA 149B)			Coast Prairie	Redox (A16) (LRR K, L, R)
Black H	istic (A3)		Thin Dark Surfa	ace (S9) (L	RR R, MI	LRA 149B)	5 cm Mucky F	Peat or Peat (S3) (LRR K, L, R)
Hyuroge Stratifie	d Lavers (A5)		Loamy Gleved	Mineral (F Matrix (F2) (LRR K)	, L)	Dark Surface	(S7) (LKK K, L) ow Surface (S8) (LRR K L)
Deplete	d Below Dark Surface	e (A11)	Depleted Matrix	(F3))		Thin Dark Su	face (S9) (LRR K. L)
Thick D	ark Surface (A12)	()	Redox Dark Su	rface (F6)			Iron-Mangane	ese Masses (F12) (LRR K, L, R)
Sandy M	Mucky Mineral (S1)		Depleted Dark	Surface (F	7)		Piedmont Flo	odplain Soils (F19) (MLRA 149B
Sandy C	Gleyed Matrix (S4)		Redox Depress	ions (F8)			Mesic Spodic	(TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)						Red Parent M	aterial (F21)
Stripped	Matrix (S6)		2)				Very Shallow	Dark Surface (TF12)
Dark St		LKA 1490))					Till Relians)
³ Indicators c	f hydrophytic vegetati	on and we	tland hydrology mus	st be prese	nt, unless	s disturbed	or problematic.	
Restrictive	Layer (if observed):							
Туре:								
Depth (in	ches):						Hydric Soil Preser	nt? Yes <u><</u> No
Remarks:								
The soils	s were not sam	npled d	ue to the prox	imity to	o resid	ential p	roperties and p	potential to encounter
undergro	ound utilities. T	he soil	s are assume	d to be	hydric	based	on the landsc	ape position and
dominan	ce of hydrophy	tic veo	etation.					
			-					



wasc1045e_w_NW



wasc1045e_w_SE

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

WETLAND IDENTIFICATION					
Project name:	Evaluator(s):				
Line 5 Relocation Project	EJO/JSW				
File #:	Date of visit(s):				
wasc1045	2020-06-06				
Location:	Ecological Landsca	ape:			
PLSS: sec 08 T045N R003W	Superior Coastal Plain				
Lat: <u>46.389218</u> Long: <u>-90.769878</u>	Watershed:				
	LS12, Marengo River				
County: <u>Ashland</u> Town/City/Village: Ashland town					
SITE DESCRIPTION					
Soils:	WWI Class:				
Mapped Type(s):	N/A				
Odanah silt loam, 6 to 15 percent slopes	Wetland Type(s):				
	PFO/PEM - Floodplain forest/Fresh (wet) meadow				
Field Verified:	complex				
Series were not verified. The soils were not sampled due to the	Wetland Size:	Wetland Area Impacted			
underground utilities. The soils are assumed to be hydric based on	0.2965	0.2965			
the wetland's hydrology and dominance of hydrophytic vegetation.	Vegetation:				
	Plant Community Description(s):				
Hydrology:	The wet meadow is dominated	ated by ostrich fern, field horsetail, and awl-fruited			
The feature is located in a floodplain associated	sedge, and is a wet meado	w community due to its location in a cleared utility oce forested similar to wetland wasc1045f) The			
with the perennial stream sasc1014p (UNT of	floodplain forest is dominat	ed by a canopy of black ash, American basswood,			
Rilly Creek)	and red maple. Ferns are o	dominant in the ground layer, with prominent			
	USUICITIEITI AS LYPICALLY SEE				

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	N	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	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	Ν	N	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
0		· ·	pians
0	N	Y	Fail of a large nabilal block that supports area sensitive species
9	N	N	Ephemeral pond with water present <u>>45 days</u>
10	N	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudilats present
	N	N	Provides nabitat scarce in the area (urban, agricultural, etc.)
FA			FISH and Aquatic Life Habitat
1	Y	Y	Wetland is connected or contiguous with perennial stream or lake
2	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	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 or high flows – if no, not applicable
3	Y	Y	Densely rooted emergent or woody vegetation
SI			Storm and Floodwater Storage
1	Y	Y	Basin wetland, constructed outlet, has through-flow or is adjacent to a stream
2	N	N	Water flow through wetland is NOT channelized
3	Y	Y	Dense, persistent vegetation
4	N	N	Evidence of flashy hydrology
5	N	Y	Point or non-point source inflow
6	N	N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <10% wetland
8	Y	Y	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			water Quality Protection
1	N	Y	Provides substantial storage of storm and floodwater based on previous section
2	N	N	Basin wetland or constricted outlet
3	N	N	Water flow through wetland is NOT channelized
4	Y	Y	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	N	Stormwater or surface water from agricultural land is major hydrology source
8	N	Y	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	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	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

GW-1: The presence of Carex bromoides suggests there may be some groundwater influence. WQ-4, ST-8: The feature is a vegetated wetland associated with the perennial stream sasc1014p. ST-5: The feature is located in a depression and likely receives stormwater from the surrounding landscape, with several nearby pasture fields and residential properties.

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	Y	Water striders; 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)
Acer rubrum*			PFO	Patchy
Fraxinus nigra*			PFO	Patchy
Matteuccia struthiopteris*			PEM/PFO	Patchy
Tilia americana*			PFO	Patchy
Carex stipata			PEM	Rare
Phalaris arundinacea			PEM	Rare
Solidago gigantea			PEM/PFO	Rare
Barbarea vulgaris			PEM	Rare
Onoclea sensibilis			PEM/PFO	Rare
Pteridium aquilinum			PFO	Rare
Carex cf. scoparia			PEM	Rare
Juncus effusus			PEM	Rare
Arisaema triphyllum			PFO	Rare
Carex bromoides			PFO	Rare
Equisetum arvense			PEM/PFO	Rare
Ranunculus acris			PEM	Rare
Rubus idaeus			PEM	Barren
Carex gracillima			PEM	Barren
Maianthemum racemosum			PFO	Barren
Rumex orbiculatus			PEM	Barren
Abies balsamea			PFO	Barren
Carex radiata			PFO	Barren
Carex scabrata			PFO	Barren
Rumex crispus			PEM	Barren
Populus tremuloides			PFO	Barren

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

The wetland as a whole has a moderate to high species richness and is dominated by native species; invasive species, such as reed canary grass, however, threaten the wetland's floristic integrity, especially in the wet meadow component.

SECTION 3: Condition Assessment of Wetland Assessment A	rea (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
					Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
					Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
	Х		L	С	Agriculture – pasture
	Х		L	С	Roads or railroad
Х	Х		Н	UC	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
x	x		н	С	Removal of herbaceous stratum – mowing,
					grading, earthworms, etc.
		Х	Н	С	Removal of tree of shrub strata – logging,
					Human trails – unpaved
					Ruman trais – paveu
	V		N.4	0	
X	X		IVI	C C	Cover of non-native and/or invasive species
	X		L	U U	
					Dipari, commercial or industrial use
					Becreational use (heating ATV/a ata)
					Every etion or opil 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 wet meadow occurs in a utility corridor, which was previously logged and cleared. Earthworms in the forest may impact the wetland's herbaceous layer. The wetland is near a road, old pasture, and residential properties. Invasive species (namely reed canary grass) threaten the floristic integrity of the wetland, especially the wet meadow component.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The wetland as a whole has a moderate to high species richness and is dominated by native species; but invasive species, such as reed canary grass, threaten the wetland's floristic integrity, especially in the wet meadow component.
Human Use Values	Potential for hunting, the wetland is associated with a stream and near residential properties.
Wildlife Habitat	The wetland has well-developed strata, is relatively intact, and connects to forested habitat outside the survey corridor, as well as being associated with a small perennial stream.
Fish and Aquatic Life Habitat	The stream associated with the wetland supports aquatic life; the wetland provides overhanging vegetation and course woody debris.
Shoreline Protection	The wetland is intact and densely vegetated along the the stream.
Flood and Stormwater Storage	The wetland is relatively large and extends outside the survey corridor. It is associated with a perennial stream.
Water Quality Protection	The wetland has dense, persistent vegetation.
Groundwater Processes	The wetland primarily exhibits recharge hydrology, but also has some discharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

Project/Site: Line 5 Relocation Project	City/County: Ashland Sampling Date: 2020-06-06
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasc1045_u
Investigator(s): <u>JSW/EJO</u>	Section, Township, Range: <u>Sec 08 T045N R003W</u>
Landform (hillslope, terrace, etc.): Side Slope	Local relief (concave, convex, none): <u>None</u> Slope (%): <u>8-15%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.389</u>	694 Long: <u>-90.770284</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Udorthents, ravines and escarpm	ents, 25 to 60 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes 🖌 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signification	antly 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	ving 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 The upland sample point is located on a ste peduncled sedge.	report.) ep west-facing slope dominated by big-tooth aspen and

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 No 🗸 Depth (inches):	
······································	
Saturation Present? Yes <u>No</u> Depth (inches): <u>(includes capillary fringe)</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 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 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: The sample point is located on a well-drained slope. No income	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: The sample point is located on a well-drained slope. No inco	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: The sample point is located on a well-drained slope. No incoobserved.	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: The sample point is located on a well-drained slope. No incoobserved.	Wetland Hydrology Present? Yes No tions), if available: licators of wetland hydrology were
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: Remarks: The sample point is located on a well-drained slope. No incoobserved.	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: The sample point is located on a well-drained slope. No incoords observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No V Depth (inches): Unchecked Staturation Present? Yes Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: The sample point is located on a well-drained slope. No incoobserved.	Wetland Hydrology Present? Yes No
Saturation Present? Yes <u>Ves</u> Depth (inches): <u>Ves</u> (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: The sample point is located on a well-drained slope. No inco 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: The sample point is located on a well-drained slope. No incoobserved.	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 inspec Remarks: The sample point is located on a well-drained slope. No inco observed.	Wetland Hydrology Present? Yes No

Sampling Point: wasc1045_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominar	t Indicator	Dominance Test worksheet:
1 Populus grandidentata	<u>50</u>	V		Number of Dominant Species
	10	 N		That Are OBL, FACW, or FAC: (A)
	<u></u>	. <u> </u>		Total Number of Dominant
S. Acer rubrum	 	N		$\frac{4}{1000}$
4. <u>Ables palsamea</u>		IN		Percent of Dominant Species That Are OBL_EACW_or_EAC: 25 (A/B)
5		·		
6		·		Prevalence Index worksheet:
7		·		Total % Cover of:Multiply by:
	70	= Total Co	over	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species $0 \times 2 = 0$
1. <u>Fraxinus americana</u>	10	<u> </u>	FACU	FAC species $65 \times 3 = 195$
2. <u>Viburnum acerifolium</u>	5	<u> </u>	UPL	FACU species $\underline{90}$ $x 4 = \underline{300}$
3		·		Column Totals: 160 (A) 580 (B)
4		. <u> </u>		
5		·		Prevalence Index = $B/A = 3.625$
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
	15	= Total Co	over	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is $\leq 3.0^1$
1. Carex pedunculata	50	Y	FAC	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2 Pteridium aquilinum	<u> </u>	<u> </u>	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Majanthomum racomosum	<u> </u>	<u> </u>		
A Arissoma triphyllum	 	N		¹ Indicators of hydric soil and wetland hydrology must
	 	N		be present, unless disturbed or problematic.
			<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				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 beight
		= Total Co	over	noight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2		·		
3				Hydrophytic
4				Vegetation Prospet2 Vos No ví
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)			
The sample plot is located on a slope of	lominate	ed by b	ig-tooth a	aspen.

Dopth	Cription: (Describe	to the deptr	needed to docu	ment the	Indicator	or confirm	the absence of I	ndicators.)
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
		·			·			
		·						
		·			·			
		·			·			
		·			·			
		·						
		·						
·								
		·			·			
¹ Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	S=Masked	d Sand Gra	ains.	² Location: Pl	L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators for	Problematic Hydric Soils ³ :
Histoso	l (A1)	_	Polyvalue Belo	w Surface	(S8) (LR	RR,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)		MLRA 149B	5)			Coast Prai	rie Redox (A16) (LRR K, L, R)
Black H	istic (A3)	_	Thin Dark Surfa	ace (S9) (I	LRR R, MI	LRA 149B)	5 cm Muck	xy Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)	-	Loamy Mucky I	Mineral (F	1) (LRR K	, L)	Dark Surfa	ice (S7) (LRR K, L)
Stratifie	d Layers (A5)		Loamy Gleyed	Matrix (F2	2)		Polyvalue	Below Surface (S8) (LRR K, L)
Deplete	d Below Dark Surfac	e (A11)	Depleted Matrix	x (F3)			Thin Dark	Surface (S9) (LRR K, L)
Thick D	ark Surface (A12)	_	Redox Dark Su Depleted Dark	Inface (F6)			Iron-Manga	anese Masses (F12) (LRR K, L, R)
Sandy (Sloved Matrix (S4)	-	_ Depieted Dark	Surface (F	-7)		Pleamont i	dic (TA6) (ML DA 144A 145 149B)
Sandy E	Seday (S5)	—	_ Redux Depress				Nesic Spo Red Paren	ot Material (E21)
Oundy r	Matrix (S6)						Verv Shall	ow Dark Surface (TE12)
Dark Su	Inface (S7) (LRR R. N	ILRA 149B)					Other (Exp	plain in Remarks)
							<u> </u>	
³ Indicators c	of hydrophytic vegetat	tion and wetl	and hydrology mu	st be pres	ent, unless	s disturbed	or problematic.	
Restrictive	Layer (if observed):							
Type:								
Dopth (in	choc):						Hvdric Soil Pre	sent? Yes No 🗸
	cries).		<u> </u>					
	t comple coil	dua ta th		to oool	uniad a	tructuro	o Soilo oro	assumed to be
					ipieu s			assumed to be
non-nya	ric based on tr	ne landso	cape position	n and c	iomina	nt vege	tation.	



wasc1045_u_N



Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling Date: 2020-06-06
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Sampling Point: <u>wasc1044s_w</u>
Investigator(s): EJO/JSW	Section, Township, Range: <u>{</u>	sec 08 T045N R003W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, no	one): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat:	46.389687 Long: -9	0.769580 Datum: WGS84
Soil Map Unit Name: Odanah silt loam, 6 to	15 percent slopes	NWI classification:
Are climatic / hydrologic conditions on the site typical for	or this time of year? Yes <u><</u> 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 needed,	explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site m	ap showing sampling point locati	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🗸 🗸	No Is the Sampled Area	
Hydric Soil Present? Yes 🗸	No within a Wetland?	Yes <u>/</u> No
Wetland Hydrology Present? Yes <u>v</u>	No If yes, optional Wetlar	d Site ID:
Remarks: (Explain alternative procedures here or in a The feature is a saturated shrub-car	a separate report.) r dominated by red-osier dogw	vood.

HYDROLOGY

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

Sampling Point: wasc1044s_w

Trop Stratum (Plat aiza: 20)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1 Populus grandidantata	<u>% Cover</u>	<u>Species</u> ?		Number of Dominant Species
	/	<u> </u>	<u>FACU</u>	That Are OBL, FACW, or FAC: 2 (A)
2		·		Total Number of Dominant
3				
4		·	·	Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)
5		·	·	
6		·		Prevalence Index worksheet:
7		·	·	Total % Cover of: Multiply by:
		= Total Cov	ver	OBL species 0 x1 = 0
Sapling/Shrub Stratum (Plot size: 15)				FACW species $122 \times 2 = 244$
1. <u>Cornus alba</u>	60	<u> </u>	<u>FACW</u>	FAC species 25 $x_3 = 75$
2. <u>Viburnum lentago</u>	5	<u> N </u>	FAC	$\frac{1}{100} = \frac{1}{100} = \frac{1}$
3. <u>Ribes americanum</u>	5	N	FACW	Column Totals: 154 (A) 347 (B)
4				
5				Prevalence Index = B/A = <u>2.2532467532467533</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	70	= Total Cov	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹
1 Corpus alba	50	Y	FACW	4 - Morphological Adaptations ¹ (Provide supporting
2 Rubus idaeus	<u> </u>	<u> </u>		Problematic Hydrophytic Vegetation ¹ (Explain)
2. Pibes amoricanum				
4		N		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in (7.6 cm) or more in diameter
7		·	·	at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
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
	77	= Total Cov	ver	
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)		VEI	
The feature is a shrub-carr dominated the wetland.	by red-o	sier dog	gwood. ⁻	The sample is fairly representative of

Depth Matrix	Redox	Features				
inches) Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
<u> </u>						
Type: C=Concentration D=Depletion R		=Masked	Sand Gr	ains	² Location: PL=E	Pore Lining M=Matrix
lydric Soil Indicators:		Mubiled			Indicators for Pr	oblematic Hydric Soils ³ :
 Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 14 	Polyvalue Below MLRA 149B) Thin Dark Surfar Loamy Mucky M Depleted Matrix Redox Dark Sur Depleted Dark S Redox Depressi 9B)	v Surface (ce (S9) (L lineral (F1 Matrix (F2) (F3) face (F6) Surface (F6) ons (F8)	(S8) (LRF RR R, MI) (LRR K 7)	R R, LRA 149B) , L)	2 cm Muck (A Coast Prairie 5 cm Mucky F Dark Surface Polyvalue Be Thin Dark Su Iron-Mangane Piedmont Flo Mesic Spodic Red Parent M Very Shallow ✓ Other (Explai	A10) (LRR K, L, MLRA 149B) Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) (S7) (LRR K, L) low Surface (S8) (LRR K, L) rface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R) odplain Soils (F19) (MLRA 149E (TA6) (MLRA 144A, 145, 149E Material (F21) Dark Surface (TF12) n in Remarks)
ndicators of hydrophytic vegetation and v	wetland hydrology must	t be prese	nt, unless	s disturbed	or problematic.	
Type:						
Depth (inches):					Hydric Soil Prese	nt? Yes∕_No
lemarks:				that we we	antes au las st	utial condension of t
folls were not sampled due	to the proximity	to a re	esiden	tial prop	perty and pote	ntial underground
	une lanusuave l	າບຈາແບເ	i allu (uuniindi		



wasc1044s_w_NE



wasc1044s_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):		
wasc1044	2020-06-06		
Location:	Ecological Landsca	ape:	
PLSS: sec 08 T045N R003W	Superior Coastal Plain		
Lat: <u>46.389328</u> Long: <u>-90.769658</u>	Watershed:		
Country Achland Town (City) (ille and Achland town			
County: Ashiand Town/City/Village: Ashiand town			
Soile:	WW/I Class		
Manned Type(s):	N/A		
Odeneh eilt leem 6 te 15 nereent elenee			
Odanan sin ioani, 6 to 15 percent siopes	Wetland Type(s):		
Field Verified	PSS - Shiub-can		
Series were not verified. Soils were not sampled due to the proximity to a	Matland Cine	Watland Area Impacted	
residential property and potential underground utilities. However, based			
on the wetland's hydrology and dominance of hydrophytic vegetation, the	Vegetation	0.1551	
sons are assumed to be flydric.	Vegetation:		
Hydrology:		abrub corr dominated	
The feature is a saturated depression within the	The leature is a	shrub-can dominated	
Increating is a saturated depression within the	red-osier dogwo	ood.	
anuscape, and is associated with a very short			
epnemeral stream.			

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	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	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	Ν	N	3 or more strata present (>10% cover)
3	Ν	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	Ν	Y	100 m buffer – natural land cover <a>>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	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 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	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	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	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	Y	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	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

ST-5: The wetland is a depression and receives stormwater from the surrounding landscape. WH-7: The feature is adjacent to a hardwood forest which together have potential to provide habitat for SGCN species. ST-5: A small drainage pipe from the nearby residential property drains into the feature. WQ-4: The feature is associated with a small ephemeral stream.

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

Observed	Potential	Species/Habitat/Comments		
Y	Y	Chestnut-sided warbler heard in wetland		
	Y	Mammals, herpetofauna, other avian species		

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

Observed	Potential	Species/Habitat

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)
Cornus alba			PSS	Interrupted
Ribes americanum*			PSS	Rare
Rubus idaeus*			PSS	Rare
Fraxinus nigra			PSS	Rare
Circaea lutetiana			PSS	Rare
Cornus alba			PSS	Rare
Populus grandidentata			PSS	Rare
Parthenocissus quinquefolia			PSS	Rare
Phalaris arundinacea			PSS	Rare
Ribes americanum			PSS	Rare
Viburnum lentago			PSS	Rare
Carex stipata			PSS	Barren
Fragaria virginiana			PSS	Barren
Solidago gigantea			PSS	Barren
Geum cf. laciniatum			PSS	Barren
Populus tremuloides			PSS	Barren
Micranthes pensylvanica			PSS	Barren

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

The feature is largely dominated by native vegetation, with some invasive species present on the edges. The species richness is relatively 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)
	Х		L	С	Drainage – tiles, ditches
					Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
	Х		L	C	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
	Х		L	C	Agriculture – pasture
	Х		L	C	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	Y			C	Removal of herbaceous stratum – mowing,
	~			Ŭ	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		M	C	Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):
-					
-					

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is near a retired pasture and residential property. A drainage pipe associated with the property feeds into the wetland. The wetland is near a road. Invasive species may threaten the wetland's floristic integrity; however, much of it is currently a dense shrub layer of red-osier dogwood.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The wetland is dominated by native vegetation, but it has a lower species richness and invasive species present.
Human Use Values	The wetland is on private land.
Wildlife Habitat	The shrubs provide nesting habitat and food sources for birds and pollinators.
Fish and Aquatic Life Habitat	No standing water was observed in the wetland at the time of survey.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland receives and stores stormwater from the surrounding landscape and the residential drainage pipe.
Water Quality Protection	The wetland has dense, persistent vegetation.
Groundwater Processes	The wetland primarily exhibits recharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

Project/0% Line E Delegation Project	offerente Achland
Project/Site: LINE 5 REIOCALION Project	
Applicant/Owner: Endfidge	State: Wisconsin Sampling Point: Wasc1044_0
Investigator(s): <u>JSW/EJO</u>	_ Section, Township, Range: <u>Sec 08 1045N R003W</u>
Landform (hillslope, terrace, etc.): <u>Side Slope</u> L	ocal relief (concave, convex, none): <u>None</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.38968	<u>}6</u> Long: <u>-90.769777</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Odanah silt loam, 6 to 15 percer	<u>t slopes</u> NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	rear? Yes 🔽 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantl	y disturbed? Are "Normal Circumstances" present? Yes 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 _	Is the Sampled Area
Hydric Soil Present? Yes No 🗸	
Wetland Hydrology Present? Yes <u>No /</u>	If yes, optional Wetland Site ID:
The upland sample point is located on a gent	e slope in a disturbed woodland dominated by
big-tooth aspen	
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 or Crust (B4) Recent Iron R	eduction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Su	rrace (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain	Microtopographic Relief (D4)
Sparsely vegetated Concave Surface (B8)	
Field Observations.	o);
Weter Table Present? Yes No V Depth (inche	s):
Saturation Present? Yes No / Depth (inche	s):
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial pho	tos, previous inspections), if available:
Remarks:	
No indicators of wetland hydrology were obse	erved.
,	

Sampling Point: wasc1044_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Populus grandidentata	50	Y	FACU	Number of Dominant Species That Are OBL EACW or EAC: \mathbf{O} (A)
2. Fraxinus americana	5	N	FACU	
3.			<u> </u>	Total Number of Dominant Species Across All Strata: 4 (B)
4				Demonstrat Consists
5				That Are OBL, FACW, or FAC: (A/B)
6				
7				Prevalence Index worksheet:
/			·	Total % Cover of:Multiply by:
		= Total Cov	/er	OBL species $()$ $x_1 = 0$
Sapling/Shrub Stratum (Plot size: 15)	~-			FACW species $0 \times 2 = 0$
1. <u>Fraxinus americana</u>	25	<u> Y </u>	<u>FACU</u>	FACU species $145 \times 4 = 580$
2			<u> </u>	$\frac{1}{1} \frac{1}{1} \frac{1}$
3				Column Totals: 145 (A) 580 (B)
4				
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	25	= Total Cov	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				$_$ 3 - Prevalence Index is ≤3.0 ¹
1 Carex gracillima	25	Y	FACU	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2 Fragaria virginiana	20	Ý	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Poe pretensis	10	<u> </u>	FACU	
4 Fravinus amoricana	10	 		¹ Indicators of hydric soil and wetland hydrology must
			<u>LACO</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 $3.28 \text{ ft} (1 \text{ m})$ tail.
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 beight
	65	= Total Cov	/er	noight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4.				Vegetation
	0	= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate	sheet.)			
The sample plot is located on a gentle	slope ne	ear the v	voodlan	nd edge.

Dopth	Cription: (Describe	to the depth	needed to docu	ment the	Indicator	or confirm	the absence of I	ndicators.)	
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks	
		·			·				
		·							
		·			·				
					·				
		·			·				
·							·		
		·							
		·			·				
¹ Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	S=Masked	d Sand Gr	ains.	² Location: Pl	L=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:						Indicators for	Problematic Hydric Soils ³ :	
Histoso	(A1)	_	Polyvalue Belo	w Surface	(S8) (LR	R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)	
Histic E	pipedon (A2)		MLRA 149B	5)			Coast Prai	rie Redox (A16) (LRR K, L, R)	
Black H	istic (A3)	_	Thin Dark Surf	ace (S9) (I	LRR R, M	LRA 149B)	5 cm Muck	(y Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A4)	—	Loamy Mucky	Mineral (F	1) (LRR K	, L)	Dark Surfa	ace (S7) (LRR K, L)	
Stratifie	d Layers (A5)		_ Loamy Gleyed	Matrix (F2	2)		Polyvalue	Below Surface (S8) (LRR K, L)	
Deplete	d Below Dark Surface	e (A11)	_ Depleted Matri	х (⊢З) шбаза (ГО)			Thin Dark	Surface (S9) (LRR K, L)	
I NICK D	ark Surface (A12)	—	Redox Dark St Depleted Dark	Inace (F6) Surface (F	-7)		Iron-Manganese Masses (F12) (LRR K, L, R)		
Sandy (Sleved Matrix (S4)	_	_ Depieted Dark	sions (F8)	-7)		Pledmont Floodplain Solis (F19) (MLRA 149B) Mosic Spedic (TA6) (MLBA 144A 145 149B)		
Sandy F	Redox (S5)	_		50115 (1 0)			Mesic Spould (TA6) (MLRA 144A, 145, 149B) Red Parent Material (E21)		
Stripped	_ Sanuy Redux (S5) Stripped Matrix (S6)					Very Shallow Dark Surface (TE12)			
Dark Su	Inface (S7) (LRR R, N	ILRA 149B)					Other (Explain in Remarks)		
		,					、 ·	,	
³ Indicators c	f hydrophytic vegetat	tion and wetla	and hydrology mu	st be pres	ent, unless	s disturbed	or problematic.		
Restrictive	Layer (if observed):								
Type:									
Denth (in	ches):						Hydric Soil Pre	sent? Yes No 🗸	
Deptil (ill	ches).								
Could no	t complo coil	dua ta th		to occi	uniod e	tructuro	s Soils aro	assumed to be	
	ria based on the				ipieu s	ntuciuie	totion	assumed to be	
non-nya	nc based on tr	ie landso	cape position	n and c	iomina	ni vege	lation.		



wasc1044_u_S



wasc1044_u_W

Project/Site: Line 5 Relocation Pro	piect	City/County: Ash	land	Sampling Date: 2020-06-06		
Applicant/Owner: Enbridge	,	· · ·	State: Wiscor	nsin Sampling Point: wasc1042e_w		
Investigator(s): EJO/JSW		Section. Township	Range: sec 08 T045	N R003W		
Landform (hillslope terrace etc.): Depres	ssion	ocal relief (concave	convex none). Concave	Slope (%): 0-2%		
Subregion (I RP or MI RA). Northcentral Fo	Drests Lat. 16 38081	8	Long: -90 767737	Datum: WGS84		
Sall Man Unit Name: Bortwing Horbo	Lat. <u>40.00901</u>	6 paraant ala	2019. <u>-30.707757</u>			
	ster complex, 0 to		pes NWI classif			
Are climatic / hydrologic conditions on the sit	te typical for this time of y	rear?Yes 🖌 N	lo (If no, explain in	Remarks.)		
Are Vegetation, Soil, or Hydr	ology significantly	y disturbed?	Are "Normal Circumstances"	present? Yes <u>v</u> No		
Are Vegetation, Soil, or Hydr	ology naturally pr	roblematic? (If needed, explain any answ	ers in Remarks.)		
SUMMARY OF FINDINGS – Attac	h site map showing	g sampling poir	nt locations, transect	s, important features, etc.		
Hydrophytic Vegetation Present?	′es ✔ No	Is the Sam	pled Area			
Hydric Soil Present?	′es ✔ No	within a We	etland? Yes 🗸	No		
Wetland Hydrology Present?	′es <u>ィ</u> No	If yes, optio	nal Wetland Site ID:			
Remarks: (Explain alternative procedures	here or in a separate repo	ort.)				
Wetland Hydrology Indicators:			Secondary India	ators (minimum of two required)		
Brimany Indicators (minimum of one is requ	ired: aback all that apply)	N N N N N N N N N N N N N N N N N N N	Secondary India			
Philling Indicators (Infinition of one is requ	Weter Steined			ottorna (B10)		
High Water Table (A2)		a (B13)		ines (B16)		
Saturation (A3)	Marl Deposits	(B15)	Drv-Seasor	Dry-Season Water Table (C2)		
Water Marks (B1)	Hydrogen Sulf	fide Odor (C1)	Crayfish Bu	rrows (C8)		
Sediment Deposits (B2)	Oxidized Rhiz	ospheres on Living F	Roots (C3) Saturation	/isible on Aerial Imagery (C9)		
Drift Deposits (B3)	Presence of R	Reduced Iron (C4)	4) Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4)	eduction in Tilled Soils (C6) Geomorphic Position (D2)					
Iron Deposits (B5)	Inface (C7) Shallow Aquitard (D3)					
Inundation Visible on Aerial Imagery (E	37) Other (Explain	n in Remarks)	Microtopog	raphic Relief (D4)		
Sparsely Vegetated Concave Surface	(B8)		FAC-Neutra	al Test (D5)		
Field Observations:	No. 4 Douth (inches	-)-				
Water Table Present? Yes	No <u>v</u> Depth (inches	s)				
Saturation Propert2	No <u>v</u> Depth (inches	s)	Wotland Hydrology Pros	nt? Yos // No		
(includes capillary fringe)		s)	wedana nyarology riese			
Describe Recorded Data (stream gauge, m	ionitoring well, aerial phot	tos, previous inspect	ions), if available:			
Remarks:						
The feature is a seasonally s	aturated depress	ion within a ro	badside ditch.			

Sampling Point: wasc1042e_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan Species?	t Indicator	Dominance Test worksheet:
<u>nee stratum</u> (not size. <u>50</u>)	<u>_/0 COVEI</u>			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:O/ (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
	0	= Total Co	over	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>19</u> x 2 = <u>38</u>
1				FAC species x 3 =5
2.				FACU species x 4 =80
3	_			UPL species x 5 =
۵				Column Totals: <u>73</u> (A) <u>162</u> (B)
4				Prevalence Index = $B/A = 2.219178082191781$
5				Hadrenbedie Mandetien Indianten
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co	over	\sim 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Schedonorus arundinaceus</u>	15	Y	FACU	data in Remarks or on a separate sheet)
2. <u>Scirpus cyperinus</u>	15	Y	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Carex stipata	8	Y	OBL	
4 Cornus alba	7	N	FACW	Indicators of hydric soil and wetland hydrology must
5 Fraxinus pigra	7	 N	FACW	
6 Juppus offusus	6	 		Definitions of Vegetation Strata:
5. <u>Juncus enusus</u>	 	<u> </u>		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Equiseium arvense</u>	<u> </u>			at breast height (DBH), regardless of height.
8. <u>Poa pratensis</u>	<u> </u>	<u> </u>	FACU	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Geum cf. laciniatum</u>	5	<u> N</u>	FACW	and greater than or equal to $3.28 \text{ ft} (1 \text{ m})$ 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
	73	= Total Co	over	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1.				
2.				
3	_			Hydrophytic
A				Vegetation
· ·		- Total Ca		Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a senarate	<u> </u>		Dvei	
The feature is a wet meadow dominate	d by wo	olgrass	s, stalk-g	rain sedge, and pasture grasses.
	,	0	, U	
Depth <u>Matrix</u>	Redox Features	. 2 -		
--	---	--------------------------------------	--	
(inches) Color (moist) %	Color (moist)%ype '	Loc ² Te	xture Remarks	
	·			
Type: C=Concentration, D=Depletion, RM:	Reduced Matrix, MS=Masked Sand Gra	ins. ²	Location: PL=Pore Lining, M=Matrix.	
 Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149E) 	 Polyvalue Below Surface (S8) (LRR MLRA 149B) Thin Dark Surface (S9) (LRR R, MLI Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) 	R, RA 149B) L) 	 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149I Mesic Spodic (TA6) (MLRA 144A, 145, 149E Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 	
Indicators of hydrophytic vegetation and we	tland hydrology must be present, unless	disturbed or pro	blematic.	
Restrictive Layer (if observed):				
Type:		Hvd	lric Soil Present? Yes ✔ No	

Soils were not sampled due to the location in a roadside ditch and likely proximity to underground utilities. However, based on the landscape position and dominance of hydrophytic vegetation, the soils are assumed to be hydric.



wasc1042e_w_N



wasc1042e_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):		
wasc1042	2020-06-06		
Location:	Ecological Landsca	ape:	
PLSS: <u>sec 08 T045N R003W</u>	Superior Coastal Plain		
Lat: 46 389972 Long: -90 767672	Watershed:		
Long	LS12, Marengo River		
County: Ashland Town/City/Village: Ashland town			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Portwing-Herbster complex, 0 to 6 percent slopes	Wetland Type(s):		
	PEM - Fresh (wet) meadow		
Field Verified:			
in a roadside ditch and likely proximity to underground utilities	Wetland Size:	Wetland Area Impacted	
However, based on the wetland's hydrology and dominance of	0.0199	0.0199	
hydrophytic vegetation, the soils are assumed to be hydric.	Vegetation:		
	Plant Community Description(s):		
Hydrology:	The feature is a disturbed wet meadow		
The feature is a saturated depression within a	dominated by woolgrass, awl-fruited sedge		
roadside ditch.	and nasture grasses		

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	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	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	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	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	Ν	N	Water flow through wetland is NOT channelized
3	Y	Y	Dense, persistent vegetation
4	Ν	N	Evidence of flashy hydrology
5	Y	Y	Point or non-point source inflow
6	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	Ν	N	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	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	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: Roadside ditch feature along a public road. ST-5: The feature receives stormwater from the adjacent road.

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

Observed	Potential	Species/Habitat/Comments
	Y	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

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)
Schedonorus arundinaceus*			PEM	Rare
Scirpus cyperinus*			PEM	Rare
Carex stipata*			PEM	Rare
Cornus sericea*			PEM	Rare
Fraxinus nigra			PEM	Rare
Juncus effusus*			PEM	Rare
Equisetum arvense			PEM	Rare
Fragaria virginiana			PEM	Rare
Geum cf. laciniatum			PEM	Rare
Poa pratensis			PEM	Rare
Carex gracillima			PEM	Barren
Dactylis glomerata			PEM	Barren
Ranunculus acris			PEM	Barren
Solidago gigantea			PEM	Barren
Pastinaca sativa			PEM	Barren
Rhamnus cathartica			PEM	Barren
Rumex acetosa			PEM	Barren
Rumex crispus			PEM	Barren

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

The feature is dominated by both native graminoids and non-native pasture grasses.

SECTION 3: Condition Assessment of Wetland Assessment	: Area (AA) and Bu	Iffer (100 m)
--	--------------------	---------------

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is located in a roadside ditch; fill may have been used during road construction. The wetland may be mowed at times. The wetland is near a retired pasture and vacant residential property. Non-native/invasive species have degraded the wetland's floristic integrity.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The wetland is dominated by both native and non-native species.
Human Use Values	The wetland is unlikely to be used for recreational purposes.
Wildlife Habitat	The wetland may be used by pollinators, birds, or small mammals at times.
Fish and Aquatic Life Habitat	No standing water was observed at the time of survey.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland receives and absorbs stormwater from the surrounding landscape and road.
Water Quality Protection	The wetland has dense, persistent vegetation, and roadside ditch hydrology.
Groundwater Processes	The wetland primarily exhibits recharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation P	roject	City/County: <u>A</u>	City/County: Ashland Sampling Date: 2020-(
Applicant/Owner: Enbridge				State: <u>Wisconsin</u>	Sampling Point: wasc1042_u	
Investigator(s): <u>JSW/EJO</u>		Section, Towns	hip, Range: <u>SEC</u>	08 T045N F	(003W	
Landform (hillslope, terrace, etc.): Talf		_ Local relief (concav	ve, convex, none)	None	Slope (%): 0-2%	
Subregion (LRR or MLRA): Northcentral	^{-orests} Lat: <u>46.389</u>	9750	Long: <u>-90.7</u>	67822	Datum: <u>WGS84</u>	
Soil Map Unit Name: Portwing-Herk	ster complex, 0	to 6 percent s	lopes	NWI classification	on:	
Are climatic / hydrologic conditions on the	site typical for this time	of year? Yes <u></u>	_ No (If r	no, explain in Rem	arks.)	
Are Vegetation, Soil, or Hy	drology signific	antly disturbed?	Are "Normal Ci	rcumstances" pres	ent? Yes 🖌 No	
Are Vegetation, Soil, or Hy	drology natural	lly problematic?	(If needed, exp	lain any answers i	n Remarks.)	
SUMMARY OF FINDINGS – Atta	ch site map shov	ving sampling p	oint locations	s, transects, ir	nportant 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	✓ If yes, op	otional Wetland Si	te ID:		
Remarks: (Explain alternative procedure	s here or in a separate	report.)	nd odgo por	ar a field and	l o rood	
	located in a dist		nu euge nea		i a 10au.	

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 (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? Ves No 🖌 Depth (inches):	
Saturation Present? Yes No _v Depth (inches):	Wetland Hydrology Present? Yes No
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 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): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: No Includes capillary fringe of weathered building to provide the second of t	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 inspective Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No _ ✓ tions), if available:
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 inspective Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No tions), if available:
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 inspective 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 inspec 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 inspec 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 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) 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 _v 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 inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No _

VEGETATION – Use scientific names of plants.

Sampling Point: wasc1042_u

	Absolute	Dominar	nt Indicator	Dominance Test worksheet:
<u>Tree stratum</u> (Plot size: <u>50</u>)	<u>% Cover</u>	<u>Species</u>		Number of Dominant Species
1. <u>Populus tremuloides</u>		<u> </u>		That Are OBL, FACW, or FAC: (A)
2. <u>Betula papyrifera</u>				Total Number of Dominant
	_ <u>5</u>			Species Across All Strata: (B)
4. <u>Fraxinus americana</u>	5	N	FACU	Percent of Dominant Species
5				
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
	70	= Total Co	over	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species 25 x 2 = 50
1. <u>Tilia americana</u>	10	<u> </u>	<u>FACU</u>	FAC species $85 \times 3 = 255$
2. <u>Salix discolor</u>	5	N	FACW	$\frac{11}{100} \text{ species} = \frac{100}{100} sp$
3. <u>Ulmus americana</u>	5	Y	FACW	Column Totals: 195 (A) 645 (B)
4. <u>Salix bebbiana</u>	5	<u> </u>	<u>FACW</u>	
5. <u>Cornus alba</u>	5	N	FACW	Prevalence Index = B/A = <u>3.31</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	30	= Total Co	over	\sim 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)				3 - Prevalence Index is ≤3.0'
1. <u>Ranunculus acris</u>	25	Y	FAC	data in Remarks or on a separate sheet)
2. <u>Carex gracillima</u>	20	Y	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Poa pratensis	20	Y	FACU	
4. Fragaria virginiana	10	N	FACU	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Equisetum arvense	10	N	FAC	Definitions of Vegetation Strata:
6. Dactvlis glomerata	5	N	FACU	Demitions of Vegetation Strata.
7. Solidago gigantea	5	N	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height
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
	95	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30)				
1				
2				
S				Hydrophytic Vegetation
4		Tatal O		Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	<u>U</u>		over	
The sample plot is located in a wooded	area be	etween	a field a	ind a road.

Depth	Matrix		Redo	x Feature	S _			
inches) (Color (moist)	<u>% (</u>	Color (moist)	<u>%</u>			Texture	Remarks
<u> </u>						·		
						·		
						·		
vpe: C=Conce	ntration. D=Depletio	n. RM=Rec	luced Matrix. MS	S=Masker			² Location: PL	=Pore Lining. M=Matrix.
ydric Soil Indic Histosol (A1) Histic Epiped Black Histic (Hydrogen Su Stratified Lay Depleted Bel Thick Dark S Sandy Mucky Sandy Gleye Sandy Redoo Stripped Mat Dark Surface	initiation, D-Depletion isators: on (A2) A3) Iffide (A4) rers (A5) ow Dark Surface (A urface (A12) / Mineral (S1) d Matrix (S4) c (S5) rix (S6) (S7) (LRR R, MLR.	11) A 149B)	Polyvalue Belov MLRA 149B) Thin Dark Surfa Loamy Mucky N Loamy Gleyed I Depleted Matrix Redox Dark Sur Depleted Dark S Redox Depress	w Surface Ince (S9) (I Aineral (F ⁻ Matrix (F2 (F3) Inface (F6) Surface (F6) Surface (F8)	(S8) (LRF .RR R, MI I) (LRR K) 77)	R R, _RA 149B) , L)	Indicators for 2 cm Muck Coast Prain 5 cm Muck Dark Surfa Polyvalue I Thin Dark S Iron-Manga Piedmont F Mesic Spoo Red Paren Very Shallo Other (Exp	Problematic Hydric Soils ³ : (A10) (LRR K, L, MLRA 149B) rie Redox (A16) (LRR K, L, R) ry Peat or Peat (S3) (LRR K, L, R) ry Peat or Peat (S3) (LRR K, L, R) ry Peat or Peat (S3) (LRR K, L, R) Below Surface (S8) (LRR K, L) Below Surface (S8) (LRR K, L) Surface (S9) (LRR K, L) anese Masses (F12) (LRR K, L, F Floodplain Soils (F19) (MLRA 149 dic (TA6) (MLRA 144A, 145, 149) t Material (F21) bw Dark Surface (TF12) diain in Remarks)
ndicators of hyd estrictive Laye Type:	rophytic vegetation a	and wetland	d hydrology mus	t be prese	ent, unless	s disturbed o	br problematic.	sent? Yes No v
Could not sa ased on th	ample soil due e landscape p	e to the position	location in and domir	the ro nant ve	adside getatic	area. S on.	oils are ass	umed to be non-hydric



wasc1042_u_N



wasc1042_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relo	City/C	City/County: Ashland Sampling Date: 2020-06-0				
Applicant/Owner: Enbridge Sta						State: Wisconsin Sampling Point: wasc1043e_w
Investigator(s): EJO/JSW	/		Sectio	on, Township, Ra	ange: Se	c 08 T045N R003W
Landform (hillslope, terrace, e	tc.): Depress	ion	Local rel	lief (concave. cor	nvex. none	e): Concave Slope (%): 0-2%
Subregion (I RR or MI RA).	orthcentral Fore	sts Lat.	46 389355		0.0 · -90	767739 Datum: WGS84
Soil Man Unit Nama: Portw	ing Horbete		<u>40.000000</u>		ng. <u>-00.</u>	NW/L classification:
Are climatic / hydrologic condi	tions on the site ty	ypical fo	or this time of year? Y	res <u>v</u> No	(I	f no, explain in Remarks.)
Are Vegetation, Soil	, or Hydrolo	ду	significantly distur	rbed? Are	e "Normal (Circumstances" present? Yes <u>r</u> No
Are Vegetation, Soil	, or Hydrolo	ду	naturally problema	atic? (If n	needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDING	GS – Attach	site m	ap showing sam	npling point	locatio	ns, transects, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes	~	No	Is the Sample	ed Area	
Hydric Soil Present?	Yes	~	No	within a Wetla	and?	Yes No
Wetland Hydrology Present?	Yes	~	No	If yes, optional	Wetland	Site ID:
Remarks: (Explain alternativ	e procedures her	re or in a	a separate report.)	by coft rue	sh dwa	urf rasphorny, and gracoful
codao. The feature	ic a doproc	neau	within a roadei	do ditob	sii, uwa	in raspberry, and graceful
seuge. The leature	is a depres	51011	within a roausic	ue alton.		
HYDROLOGY						
Wetland Hydrology Indicat	ors:					Secondary Indicators (minimum of two required)
Primary Indicators (minimum	of one is require	d: checł	< 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	lor (C1)	_	Crayfish Burrows (C8)
Sediment Deposits (B2)			Oxidized Rhizosphere	es on Living Roc	ots (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)	 Geomorphic Position (D2)
Iron Deposits (B5)			Thin Muck Surface (C	C7)	_	Shallow Aquitard (D3)
Inundation Visible on Ae	rial Imagery (B7)		Other (Explain in Rer	marks)	-	Microtopographic Relief (D4)
Sparsely Vegetated Con	cave Surface (B8	3)			-	 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):	w	etland Hy	/drology Present? Yes <u>v</u> No
Describe Recorded Data (str	eam gauge, mon	itorina v	vell, aerial photos, pre	evious inspection	ns), if avail	able:
	gg-,		····, ····· [······, [·····		,	
Remarks:					مام امام	ditab
The feature is a sea	asonally sat	urate	a depression v	within a road	iasiae (ditch.

VEGETATION – Use scientific names of plants.

Sampling Point: wasc1043e_w

	Absolute	Dominar	nt Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u>)	<u>% Cover</u>	<u>Species</u>	<u>? Status</u>	Number of Dominant Species
1		·		That Are OBL, FACW, or FAC: <u>2</u> (A)
2		·		Total Number of Dominant
3				Species Across All Strata: (B)
4.				Percent of Dominant Species
5.				That Are OBL, FACW, or FAC: 67 (A/B)
6	-			
7				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
	0	= Total C	over	OBL species <u>15</u> x 1 = <u>15</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species 26 x 2 = 52
1				FAC species $5 \times 3 = 15$
2				FACU species 35 x 4 = 140
3.				UPL species x 5 =
1				Column Totals: <u>81</u> (A) <u>222</u> (B)
4				Prevalence index = $B/A = 2.740740740740740741$
5		·		
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total C	over	✓ 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				\sim 3 - Prevalence Index is $\leq 3.0^{\circ}$
1 Carex gracillima	20	Y	FACU	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2 Pubuo puboocono	20	 		Problematic Hydronbytic Vegetation ¹ (Explain)
2. <u>Rubus pubesceris</u>				
^{3.} Juncus ettusus	15	<u> </u>	OBL	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Dactylis glomerata</u>	12	N	<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Ranunculus acris</u>	5	N	FAC	Definitions of Vegetation Strata:
6. Cornus alba	4	Ν	FACW	
7 Tilia americana	3	N	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8 Fravinus nigra	2	 N		at breast height (BBH), regulateds of height.
		N	<u>1 AOW</u>	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 3.26 it tail.
12				Woody vines – All woody vines greater than 3.28 ft in
	81	= Total C	over	neight.
Woody Vine Stratum (Plot size: 30)				
1				
··		·		
2				
3		·		Hydrophytic
4		·		Present? Yes <u>~</u> No
	0	= Total C	over	
Remarks: (Include photo numbers here or on a separate	sheet.)			
I he feature is a wet meadow dominate	d by dw	art ras	pberry, s	soft rush, and graceful sedge.

(inches) Color (moist) % Type: Loc" Texture Remarks Image: Second Secon	Depth <u>Matrix</u>	Redo	<u>x Feature</u>	<u>s</u> 1	. 2		
'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 ² : Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A1) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Dark Surface (F6) Stratified Cayers (A5) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Stripped Matrix (S6) Very Shallow Dark Surface (F7) Dark Surface (S7) (LRR R, MLRA 149B) Very Shallow Dark Surface (F12) Dark Surface (S7) Piedmont Floodplain Soils (F19) (MLRA 1435, 149 Stripped Matrix (S6) Means Spring (S7) (LRR K, L) Dark Surface (S7) (LRR R, MLRA 149B) Very Shallow Dark Surface (F71) Dark Surface (S7) Piedmont Floodplain Soils (F19) (MLRA 1442, 145, 149	(inches) Color (moist) %	Color (moist)	%	<u>lype</u>			Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. tydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) 2 cm Muck (A10) (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) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Thick Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Matrix (F3) Thin Dark Surface (S1) (LRR K, L, L) Sandy Mucky Mineral (S1) Depleted Matrix (F3) Thin Dark Surface (S1) (LRR K, L, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144A, 145, 149 Sandy Redox (S5) Stripped Matrix (S4) Redox Depressions (F8) Mesic Spocidi (TA6) (MLRA 144A, 145, 149 Stripped Matrix (S6) Very Shallow Dark Surface (TF12) 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. testrictive Layer (if ob							
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. tydric Soil Indicators i: Indicators for Problematic Hydric Soils ³ : Indicators for Problematic Hydric Soils ³ : Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (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) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, S) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Solis (F19) (MLRA 144, 145, 149) Sandy Gleyed Matrix (S6) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149) Stripped Matrix (S6) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. testrictive Layer (If observed): Type: Type: Layer (If observed):			- <u></u>				
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. tydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR K, L) Dark Surface (S7) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, F) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144A, 145, 149 Sandy Redox (S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149 Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) ✓ Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Yes (Massi Carl Carl Carl Carl Carl Carl Carl Carl							
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 : Indicators for Problematic Hydric Soils ³ : 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 (S9) (LRR K, L) Thick Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (F6) Thick Dark Surface (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 145, 149 Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 145, 149 Sandy Redox (S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149 Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Yery Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Tripped Matrix (S6) Yery Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. *Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) Indicators for Problematic Hydric Soils ³ : Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Thick Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (F6) Thick Dark Surface (A12) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 145, 149 Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 145, 149 Sandy Redox (S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149 Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Other (Explain in Remarks)			- <u></u>				
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histosol (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 (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, F) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 1448, 145, 149) Sandy Redox (S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Type:	Type: C=Concentration, D=Depletion, RM= Hydric Soil Indicators:	Reduced Matrix, M	S=Masked	I Sand Gra	ains.	Location: PL=P	ore Lining, M=Matrix.
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type:	 Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B 	Polyvalue Belo MLRA 149B Thin Dark Surfa Loamy Mucky I Loamy Gleyed Depleted Matrix Redox Dark Su Depleted Dark Redox Depress	w Surface) ace (S9) (I Mineral (F Matrix (F2 < (F3) rface (F6) Surface (F6) Surface (F8)	(S8) (LRF _RR R, MI 1) (LRR K 2) 77)	R R, LRA 149B) , L)	2 cm Muck (A Coast Prairie I 5 cm Mucky P Dark Surface (Polyvalue Beld Thin Dark Surf Iron-Mangane Piedmont Floc Mesic Spodic Red Parent M Very Shallow I ✓ Other (Explain	10) (LRR K, L, MLRA 149B) Redox (A16) (LRR K, L, R) eat or Peat (S3) (LRR K, L, R) (S7) (LRR K, L) bw Surface (S8) (LRR K, L) face (S9) (LRR K, L) se Masses (F12) (LRR K, L, R) odplain Soils (F19) (MLRA 149E (TA6) (MLRA 144A, 145, 149B aterial (F21) Dark Surface (TF12) in Remarks)
Type:	³ Indicators of hydrophytic vegetation and we	land hydrology mus	st be prese	ent, unless	s disturbed	or problematic.	
Type	Restrictive Layer (if observed):						
Depth (inches): Hydric Soil Present? Yes <u>v</u> No	Depth (inches):					Hydric Soil Presen	it? Yes∕_ No

utilities. However, based on the landscape position and dominance of hydrophytic vegetation, the soils are assumed to be hydric.



wasc1043e_w_N



wasc1043e_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):		
wasc1043	2020-06-06		
Location:	Ecological Landsca	ape:	
PLSS: <u>sec 08 T045N R003W</u>	Superior Coastal Plain		
Lat: 16 280 167 Lang: 00 767752	Matarahad:		
Lat. <u>40.369407</u> Long. <u>-90.707755</u>	LS12, Marengo River		
County: Ashland Town/City/Village: Ashland town	-		
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Portwing-Herbster complex, 0 to 6 percent slopes. Odanah silt loam, 6 to	Wetland Type(s):		
Field Vorified:	PEM - Fresh (wet) meadow		
Series were not verified. Soils were not sampled due to the location			
in a roadside ditch and likely proximity to underground utilities.	Wetland Size:	Wetland Area Impacted	
However, based on the wetland's hydrology and dominance of	Vegetation:	0.0149	
hydrophytic vegetation, the soils are assumed to be hydric.	Plant Community Description(s):		
Hydrology:	The feature is a disturbed wet meadow		
The feature is a saturated depression within a	dominated by dwarf raspherry soft rush and		
roadside ditch.	aracoful codao	van raspoerry, son rush, and	
	gracerul seuge.		

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	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	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	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	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	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	Ν	N	Water flow through wetland is NOT channelized
3	Y	Y	Dense, persistent vegetation
4	Ν	N	Evidence of flashy hydrology
5	Y	Y	Point or non-point source inflow
6	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	Y	Provides substantial storage of storm and floodwater based on previous section
2	Y	Y	Basin wetland or constricted outlet
3	Ν	N	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	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			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	

ST-5: The feature is a depression within a roadside ditch and receives stormwater from the adjacent road.

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

Observed	Potential	Species/Habitat/Comments
	Y	Birds, insects, small mammals, herpetofauna

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

Observed	Potential	Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 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 gracillima*			PEM	Rare
Rubus pubescens*			PEM	Rare
Juncus effusus*			PEM	Rare
Dactylis glomerata			PEM	Rare
Fragaria virginiana			PEM	Rare
Ranunculus acris			PEM	Rare
Cornus sericea			PEM	Barren
Poa pratensis			PEM	Barren
Tilia americana			PEM	Barren
Trifolium repens			PEM	Barren
Fraxinus nigra			PEM	Barren
Lotus corniculatus			PEM	Barren
Populus tremuloides			PEM	Barren
Solidago gigantea			PEM	Barren
Taraxacum officinale			PEM	Barren

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

The feature is dominated by native graminoids, with some non-native pasture grasses and weedy species also present.

SECTION 3: Condition Assessment of Wetland Assessment	: Area (AA) and Bu	Iffer (100 m)
--	--------------------	---------------

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is located in a roadside ditch; fill may have been used during road construction. The wetland may be mowed at times. The wetland is near a retired pasture and vacant residential property. Non-native/invasive species have degraded the wetland's floristic integrity.

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	v							

FUNCTION	RATIONALE
Floristic Integrity	The feature is dominated by both native graminoids and non-native pasture grasses/weedy species.
Human Use Values	The wetland is unlikely to be used for recreational purposes.
Wildlife Habitat	The wetland may be used by pollinators/insects, birds, or small mammals at times.
Fish and Aquatic Life Habitat	No standing water was observed at the time of survey.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland receives and absorbs stormwater from the adjacent road.
Water Quality Protection	The wetland has dense, persistent vegetation and roadside ditch hydrology.
Groundwater Processes	The wetland primarily exhibits recharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: <u>A</u>	shland	Sampling Date: <u>2020-06-06</u>
Applicant/Owner: Enbridge		State: Wisco	onsin Sampling Point: wasc1043_u
Investigator(s): JSW/EJO	Section, Towns	hip, Range: <u>sec 08 T04</u>	5N R003W
Landform (hillslope, terrace, etc.): <u>Talf</u>	Local relief (conca	ve, convex, none): <u>None</u>	Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Morthcentral Forests Lat: 46	6.389232	Long: <u>-90.767854</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Odanah silt loam, 6 to 15	percent slopes	NWI class	sification:
Are climatic / hydrologic conditions on the site typical for th	is time of year? Yes <u></u>	_ No (If no, explain i	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	wers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling p	oint locations, transed	ets, important features, etc.
Hydrophytic Vegetation Present? Yes M Hydric Soil Present? Yes M Wetland Hydrology Present? Yes M Remarks: (Explain alternative procedures here or in a see The upland sample point is located in a layer and graceful sedge in the herbace	No <u>v</u> No <u>v</u> No <u>v</u> Is the Sa within a If yes, op a disturbed woodla eous layer.	ampled Area Wetland? Yes otional Wetland Site ID: nd dominated by wh	№
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Inc	licators (minimum of two required)
Primary Indicators (minimum of one is required; check all	that apply)	Surface S	oil Cracks (B6)
Surface Water (A1) Wa	ter-Stained Leaves (B9)	Drainage	Patterns (B10)
High Water Table (A2) Aqu	uatic Fauna (B13)	Moss Trin	n Lines (B16)
Saturation (A3) Ma	rl Deposits (B15)	Dry-Sease	on Water Table (C2)
Water Marks (B1) Hyd	drogen Sulfide Odor (C1)	Crayfish E	Burrows (C8)

Sediment Deposits (B2)		Oxidized Rhizospheres on Living R	coots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soil	ls (C6) Geomorphic Position (D2)
Iron Deposits (B5)		Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aer	ial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Cond	cave Surface (B8)	3)	FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present?	Yes <u>No</u>	Depth (inches):	
Water Table Present?	Yes <u>No</u>	o Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes No	o_ ✔_ Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stre	am gauge, monito	toring well, aerial photos, previous inspection	ons), if available:
Remarks: No indicators of wet	land hydrolo	ogy were observed.	
	-		

VEGETATION – Use scientific names of plants.

Sampling Point: wasc1043_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 Tilia americana	25	Y	FACU	Number of Dominant Species That Are ORL EACIVL or EAC: 0 (A)
2			17100	$\begin{array}{c} \text{That Ale OBL, FACW, OF FAC.} \\ \underline{\textbf{U}} \\ \end{array} $
2			·	Total Number of Dominant
S				$\frac{-4}{(0)}$
4			·	Percent of Dominant Species That Are OBL_EACW_ or EAC: 0 (A/B)
5				
6		·		Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
	25	= Total Cov	/er	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species $15 \times 2 = 30$
1. <u>Fraxinus americana</u>	50	<u> </u>	<u>FACU</u>	FAC species 10 $x_3 = 30$
2. <u>Tilia americana</u>	20	Y	<u>FACU</u>	FACU species 182 x 4 = 128
3. <u>Salix bebbiana</u>	10	N	FACW	Column Totals: 207 (A) 788 (B)
4. <u>Abies balsamea</u>	5	N	FAC	
5. <u>Fraxinus nigra</u>	5	N	FACW	Prevalence Index = $B/A = \frac{3.8067632850241546}{2}$
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
	90	= Total Cov	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is $≤3.0^1$
1. Carex gracillima	75	V	FACU	4 - Morphological Adaptations ¹ (Provide supporting
2 Equisotum anyonso	<u> </u>	 N		Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Equisetum al vense</u>	 	<u> </u>		
3. <u>Tilla americana</u>	<u> </u>		FACU	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Fragaria Virginiana</u>		<u> </u>	FACU	be present, unless disturbed or problematic.
5. <u>Poa pratensis</u>	2	<u> </u>	FACU	Definitions of Vegetation Strata:
6				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			. <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
	92	= Total Cov	/er	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2.				
3.				Hydrophytic
4				Vegetation
	0	= Total Cov	/er	Present? Yes No
Remarks: (Include photo numbers here or on a separate s	sheet.)			
The disturbed woodland has been color	nized by	/ white a	ash and	graceful sedge.

Depth	Matrix		Redo	ox Feature	s				,	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
					·					
					·					
					·					
					·		·			
					·					
		lotion DM-I	Doducod Matrix M	S-Maaka	d Sand Cr	aina	² L contion	DI -Doro I	ining M-Motri	v
Hydric Soil	Indicators:			S-IVIASKE	J Sanu Gr	aii 15.	Indicators	for Problem	natic Hydric S	oils ³ .
Histoso			Polyvaluo Polo		(S8) (I DI		2 cm M			013.
Histic E	ninedon (A2)	-			(30) (L KI	х κ,		Drairia Rodo	LKK K, L, WILF	KA 149D) KI D)
Flack H	istic (A3)		Thin Dark Surf) ace (S9) (I		I RA 149R)	<u> </u>	lucky Peat o	or Peat (S3) (L	RRKIR)
Hvdroge	en Sulfide (A4)	-	Loamy Mucky I	Mineral (F	1) (LRR K	L)	Dark S	urface (S7)	(LRR K. L)	(((K , L , K)
Stratifie	d Lavers (A5)	-	Loamy Gleved	Matrix (F2	?)	, _/	Polvva	ue Below S	urface (S8) (LF	RR K. L)
Deplete	d Below Dark Surface	e (A11)	Depleted Matrix	x (F3)	,		Thin Da	ark Surface	(S9) (LRR K, L	_)
Thick D	ark Surface (A12)		Redox Dark Su	Inface (F6)			Iron-Ma	anganese M	lasses (F12) (L	.RR K, L, R)
Sandy M	Mucky Mineral (S1)	-	Depleted Dark	Surface (F	-7)		Piedmo	ont Floodpla	in Soils (F19) (MLRA 149B
Sandy (Gleyed Matrix (S4)	_	Redox Depress	sions (F8)	,		Mesic	Spodic (TA6	6) (MLRA 144A	, 145, 149B)
Sandy F	Redox (S5)						Red Pa	arent Materia	al (F21)	
Stripped	d Matrix (S6)						Very S	hallow Dark	Surface (TF12	2)
Dark Su	urface (S7) (LRR R, N	ILRA 149B))				Other (Explain in R	Remarks)	
³ Indicators of	of hydrophytic vegetat	ion and wet	land hydrology mus	st be pres	ent, unless	s disturbed	or problematic	•		
Restrictive	Layer (if observed):									
Туре:										
Denth (in	iches).						Hydric Soil	Present?	Yes	No 🖌
Bomarka:							-			
Could no	nt sample soil (dua ta th	no roadsido l	ocation	n band n	rovimity	to occup	iod etru	ctures So	ile ara
						ion ond			tion	
assume	a to be non-ny	aric bas	ed on the lar	nascap	e posit	ion and	dominan	i vegeta	tion.	



wasc1043_u_N



wasc1043_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: LINE 5 Relocation Project	City/County: Ashland Sampling Date: 2020-05-27
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasc034e_xw
Investigator(s): <u>KDF/SAM</u>	Section, Township, Range: <u>Sec 08 T045N R003W</u>
Landform (hillslope, terrace, etc.): Depression	ocal relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Morthcentral Forests Lat: 46.38931	5 Long: <u>-90.766971</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Cornucopia silt loam, 15 to 45 pt	ercent slopes NWI classification: R4SBC
Are climatic / hydrologic conditions on the site typical for this time of y	vear? Yes 🖌 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantl	y disturbed? Are "Normal Circumstances" present? Yes 🖌 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.
	In the Ormalia d Ana
Hydrophytic Vegetation Present? Yes No	is the Sampled Area
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No	within a Wetland? Yes <u><</u> No
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:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
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)	
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)	Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6)		
Iron Deposits (B5)	Iron Deposits (B5) Thin Muck Surface (C7)		
Inundation Visible on Aerial Imagery (I	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): 1		
Water Table Present? Yes <u>v</u>	No Depth (inches): 0		
Saturation Present? Yes 🗸	No Depth (inches): 0 Wetlanc	l Hydrology Present? Yes _ ✔ No	
(includes capillary fringe)			
Describe Recorded Data (stream gauge, m	nonitoring well, aerial photos, previous inspections), if a	vailable:	

Remarks:

The hydrologic regime is seasonally saturated with recharge hydrology. Fringe wetland along and at the terminus of an ephemeral stream. Surface water is present within the wetland at the time of survey. Though surface water is likely present for an extended period, heavy rains from the previous night have significantly increased the amount of water flowing within the stream, flooding into the wetland.

VEGETATION – Use scientific names of plants.

Sampling Point: wasc034e_xw

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan Species?	t Indicator	Dominance Test worksheet:
1)		Species		Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4.				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	over	OBL species 5 $x 1 = 5$
Sapling/Shrub Stratum (Plot size: 15)				FACW species $55 \times 2 = 110$
1				FAC species 2 x 3 = 6
··				FACU species x 4 =0
2				UPL species x 5 =0
3				Column Totals: <u>62</u> (A) <u>121</u> (B)
4				
5				Prevalence index = $B/A = \frac{1.9516129032258065}{1.9516129032258065}$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co	over	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				_ 3 - Prevalence Index is ≤3.0 ¹
1. Phalaris arundinacoa	50	V		4 - Morphological Adaptations ¹ (Provide supporting
		 		Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Typna sp.</u>	5	<u> </u>		
3. <u>Impatiens capensis</u>	5	N	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Equisetum arvense</u>	2	N	FAC	be present, unless disturbed or problematic.
5				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.				Serling/abruh Weady plants loss than 2 in DBU
9				and greater than or equal to 3.28 ft (1 m) tall.
10				
				of size, and woody plants less than 3.28 ft tall.
11				Weady vince All weady vince greater than 2.29 ft in
12				height.
	62	= Total Co	over	
Woody Vine Stratum (Plot size: 30)				
1				
2				
3				Hydrophytic
4				Vegetation
	0	= Total Co	over	Present? fes_v_No
Remarks: (Include photo numbers here or on a separate	sheet.)			
Fresh (wet) meadow dominated by ree	d canary	y grass	with cat	tails and jewelweed scattered
throughout.				

Profile Des	cription: (Describe	e to the dep	oth needed	to docur	nent the	indicator	or confirm	the absence of	of indicators.)
Depth	Depth Matrix Redox Features		. 2	- /					
(inches)	Color (moist)	%	Color (moist)		Type	Loc	lexture	Remarks
0-6	<u>10YR 3/2</u>	100			0				
6-20	<u>7.5YR 4/2</u>	95	5YR	4/6	5	C	M	C	
	·						<u> </u>		
								<u> </u>	
¹ Type: C=C	Concentration, D=De	epletion, RM	=Reduced	Matrix, M	S=Maske	d Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:		. .		. <i>.</i>	(0 a) /		Indicators f	or Problematic Hydric Soils":
Histoso	l (A1)		Polyv	alue Belov	w Surface	e (S8) (LRI	RR,	2 cm Mu	uck (A10) (LRR K, L, MLRA 149B)
Black H	listic (A3)		Thin [Dark Surfa) ace (S9) (LRR R. MI	LRA 149B)	5 cm Mi	ucky Peat or Peat (S3) (LRR K. L. R)
Hydrog	en Sulfide (A4)		Loam	y Mucky N	Mineral (F	1) (LRR K	Ξ, L)	Dark Su	Inface (S7) (LRR K, L)
Stratifie	d Layers (A5)		Loam	y Gleyed	Matrix (F2	2)		Polyvalu	ue Below Surface (S8) (LRR K, L)
Deplete	ed Below Dark Surfa	ice (A11)	Deple	ted Matrix	(F3)			Thin Da	rk Surface (S9) (LRR K, L)
Thick D	ark Surface (A12)		Redo	x Dark Su	rface (F6)) EZ)		Iron-Mai	nganese Masses (F12) (LRR K, L, R)
Sandy (Gleved Matrix (S4)		Depie Redo	x Depress	sions (F8)			Fleamor	podic (TA6) (MI RA 144A, 145, 149B)
Sandy I	Redox (S5)							Red Par	rent Material (F21)
Stripped	d Matrix (S6)							Very Sh	allow Dark Surface (TF12)
Dark Su	urface (S7) (LRR R,	MLRA 149	B)					Other (E	Explain in Remarks)
³ Indiactora	f hydrophytic ycact	ation and w	otland bydr		the prop	ont unlog	a diaturbad	or problematic	
Restrictive	l aver (if observed			ology mus	st be pies	ent, unies:	Sustuibeu		
Type:		.,.							
Dopth (in	vehee).							Hydric Soil F	Present? Yes 🗸 No
Deptil (il	[[[]]]								
Soils are	e clav loam al	nove cla	v with r	edov n	recent	t from 6	S-20 incl	hes helow	the soil surface. Soils
moot the	$\sim \Delta 11$ and E3	indicato	re for h	vdric e	oile		20 110		
meet me		mulcale	13 101 11	yune s	0113.				



wasc034e_xw_E



wasc034e_xw_S

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):				
wasc034_x	2020-05-27				
Location:	Ecological Landscape:				
PLSS: sec 08 T045N R003W	Lake Superior Clay Plair	2			
Lat: <u>46.389315</u> Long: <u>-90.766971</u>	Watershed:				
	LS12, Marengo River				
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u>					
SITE DESCRIPTION	1				
Soils:	WWI Class:				
Mapped Type(s):	N/A				
Cornucopia silt loam, 15 to 45 percent slopes	Wetland Type(s):				
	PEM - Fresh (wet) meadow				
Field Verified:					
Series not verified. Soils were clay loam above a	Wetland Size:	Wetland Area Impacted			
reduced reddish clay.	0.2145	0.2145			
	Vegetation:				
	Plant Community Description(s):				
Hydrology:	Fresh (wet) meadow dominated by reed				
The hydrologic regime is seasonally saturated, with recharge hydrology. The feature is a fringe wetland along and at the terminus of an ephemeral stream. Surface water is present	canary grass with cattails, horsetail species				
within the wetland at the time of survey. Though surface water is likely present for an	and iowolwood coattored throughout				
of water flowing within the stream, flooding into the wetland.	and jewelweed scallered infoughoul.				

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	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	Ν	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Ν	N	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	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	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	Ν	N	Ephemeral pond with water present <u>> 4</u> 5 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	Y	Y	Vegetation is inundated in spring
SP			Shoreline Protection
1	Y	Y	Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable
2	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	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	Y	Y	Dense, persistent vegetation
4	N	Ň	Evidence of flashy hydrology
5	Ν	Y	Point or non-point source inflow
6	Ν	N	Impervious surfaces cover >10% of land surface within the watershed
7	Ν	Ν	Within a watershed with <a href="mailto: 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	Y	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	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	N	N	Discharge to surface water
9	N	Y	Natural land cover in 100m butter 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	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

WH-10, FA-2, 4: Standing water is present within the wetland, especially after heavy precipitation events, and is inundated in the spring. The associated ephemeral stream flowing through the feature also provides aquatic habitat for amphibians and aquatic invertebrates. ST-3: The feature is densely vegetated with reed canary grass and cattails.

WQ-2: Several culverts are present just north of the feature, and are associated with the stream running through the feature.

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

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

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

Observed	Potential	Species/Habitat
	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,
Dhalania amurdina a a *			DEM	Abundance)
Phalaris arundinacea"			PEM	Interrupted
I ypha sp.^			PEM	Patchy
Impatiens capensis			PEM	Rare
Alnus incana			PEM	Rare
Onoclea sensibilis			PEM	Rare
Carex cf. lacustris			PEM	Barren
Equisetum arvense			PEM	Barren
Equisetum pratense			PEM	Barren
<u> </u>				
			1	

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

There is low diversity of species occurring within the wetland. The vegetation is predominately comprised of non-native, disturbance-favoring species.
Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
Х	Х		М	С	Drainage – tiles, ditches
Х	х		М	С	Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
Х	Х		L	С	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		M	С	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
	Х		L	С	Sediment input
	v			C	Removal of herbaceous stratum – mowing,
	^		L	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	С	Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is predominately impacted by a dense cover of reed canary grass, limiting the overall diversity of the feature. The wetland is located near a major county road and a gravel road and likely receives inputs from both, though the stream carries water towards the paved road, so runoff likely flows away from the majority of the feature. There is a culvert to the north through which the associated ephemeral stream flows.

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 a continuous cover of reed canary grass and cattails, resulting in low overall diversity.
Human Use Values	Though the feature is visible to the public from a county road, it is located on private land and is unlikely to be used for recreation purposes.
Wildlife Habitat	Standing water within the feature and the associated stream provide potential habitat for amphibians. The surrounding area includes tree and shrub cover, providing habitat for observed avian species.
Fish and Aquatic Life Habitat	Standing water within the feature and associated stream provide potential habitat for amphibians and aquatic invertebrates. There is no potential habitat for fish.
Shoreline Protection	The feature is located along the fringe of an ephemeral stream. No deeply rooted woody vegetation is present along the banks.
Flood and Stormwater Storage	The feature is densely vegetated and has the potential to store flood an stormwater from the surrounding area and the associated stream. Water flows north through a culvert.
Water Quality Protection	See above.
Groundwater Processes	The feature is seasonally saturated with recharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	//County: Ashland Sampling Date: 2020-05			
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasc034			
Investigator(s): SAM/KDE	State. Wisconsin Sampling Point. wascourto_xa			
Landfarm (hilleland tamage ate): Side Slope	relief (concerns convex name); Nono			
Landform (nillslope, terrace, etc.): <u>Side Sidpe</u>	ellel (concave, convex, none): <u>INULE</u> Slope (%): <u>3-</u>			
Subregion (LRR or MLRA): Lat: Lat:	Long: <u>-90.767110</u> Datum: <u>VVGS8</u>			
Soil Map Unit Name: Cornucopia silt loam, 15 to 45 perce	ant 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 Remarks.)			
Are Vegetation, Soil, or Hydrology significantly dist	urbed? Are "Normal Circumstances" present? Yes <u>v</u> No			
Are Vegetation, Soil, or Hydrology naturally problem	matic? (If needed, explain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sa	impling point locations, transects, important features, e			
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wedlasd Ubstale and Present? Yes No	Is the Sampled Area within a Wetland? Yes No 🗸			
Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID:			
Waterbody and wetland feature to the east.				
HYDROLOGY				
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two require			
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)			
Surface Water (A1) Water-Stained Lea	ves (B9) Drainage Patterns (B10)			
High Water Table (A2) Aquatic Fauna (B1	3) Moss Trim Lines (B16)			
Saturation (A3) Marl Deposits (B15	b) Dry-Season Water Table (C2)			
Water Marks (B1) Hydrogen Sulfide C	Odor (C1) Crayfish Burrows (C8)			
Sediment Deposits (B2) Oxidized Rhizosph	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3) Presence of Reduc	ied Iron (C4) Stunted or Stressed Plants (D1)			
Iron Doposite (B5)	(C7) Shallow Aquitard (D2)			
Inundation Visible on Aerial Imagery (B7) Other (Explain in R	(C7) Shallow Aquitatu (D3)			
Sparsely Vegetated Concave Surface (B8)	EAC-Neutral Test (D5)			
Field Observations:				
Surface Water Present? Yes No ✔ Depth (inches):				
Water Table Present? Yes No V Depth (inches):				
Saturation Present? Yes <u>No</u> Depth (inches): <u>(includes capillary fringe)</u>	Wetland Hydrology Present? Yes No			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	revious inspections), if available:			
Remarks: No subsurface or obvious visual signs of wetland	hydrology.			

VEGETATION – Use scientific names of plants.

Sampling Point: wasc034e_xu

Tree Stratum (Plot size: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1 Populus tromulaidos	<u>10</u>	<u> </u>		Number of Dominant Species
		I		That Are OBL, FACW, or FAC: 3 (A)
2			·	Total Number of Dominant
3		·	·	Species Across All Strata: <u>b</u> (B)
4		·		Percent of Dominant Species
5			·	That Are OBL, FACW, of FAC: <u>50</u> (A/B)
6		·		Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	10	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>15</u> x 2 = <u>30</u>
1. <u>Alnus incana</u>	10	Y	FACW	FAC species x 3 =75
2. <u>Malus sp.</u>	10	Y		FACU species <u>57</u> x 4 = <u>228</u>
3. Cornus alba	5	Y	FACW	UPL species $50 \times 5 = 250$
4				Column Totals: <u>147</u> (A) <u>583</u> (B)
5				Prevalence Index = B/A = <u>3.97</u>
6	_		·	Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
	25	- Total Ca	·	2 - Dominance Test is >50%
			ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>3</u>)	50	V	וסו	4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Bromus inermis</u>	0	<u> </u>		data in Remarks or on a separate sheet)
2. <u>Poa pratensis</u>	25	<u> </u>	FACU	
3. <u>Carex gracillima</u>	10	<u> N </u>	FACU	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Ranunculus acris</u>	5	N	FAC	be present, unless disturbed or problematic.
5. <u>Equisetum arvense</u>	5	<u>N</u>	FAC	Definitions of Vegetation Strata:
6. <u>Agrimonia striata</u>	5	N	<u>FACU</u>	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Tilia americana</u>	5	N	<u>FACU</u>	at breast height (DBH), regardless of height.
8. <u>Acer rubrum</u>	5	N	FAC	Sapling/shrub – Woody plants less than 3 in DBH
9. <u>Fragaria virginiana</u>	5	N	FACU	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Solidago canadensis</u>	5	N	FACU	Herb – All herbaceous (non-woody) plants, regardless
11. Taraxacum officinale	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
	122	= Total Co	Ver	height.
Woody Vino Stratum (Plot size: 30)		- 10tal 00	VCI	
(Flot size)				
l			·	
2		·	·	
3				Hydrophytic
4		·		Present? Yes No 🗸
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)	mooth k	oroma (Canada goldenrod, planted apple, and
Carex gracillima	berry, s			Sanada goldeniod, planted apple, and

Profile Desc	ription: (D	Describe	to the dept	h needed to docur	nent the	indicator	or confirm	the absence	of indicators.)		
Depth		Matrix		Redo	x Feature	S					
(inches)		moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	<u>Texture</u>	Remarks		
0-8	<u>7.5R</u>	3/2	100		0						
<u> 8-19 </u>	<u>5YR</u>	4/2	100		0			C			
					·	·					
					·	·					
					·	·	·				
	·		<u> </u>		·	·					
					·						
					·	·					
					·	·					
¹ Type: C=Co	oncentratio	n, D=Depl	letion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.	² Location:	: PL=Pore Lining, M=Matrix.		
Hydric Soil	Indicators:	:						Indicators	for Problematic Hydric Soils ³ :		
Histosol	(A1)		-	Polyvalue Belov	v Surface	(S8) (LR	RR,	2 cm N	luck (A10) (LRR K, L, MLRA 149B)		
Histic Ep	pipedon (A2	2)		MLRA 149B))			Coast Prairie Redox (A16) (LRR K, L, R)			
Black Hi	stic (A3)	• 4)	-	Thin Dark Surface (S9) (LRR R, MLRA 149B)) 5 cm M	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
Hydroge Stratifier	1 avers (A	44 <i>)</i> 5)	-	Loamy Gleved I	Matrix (F2	1) (LKK K 2)	, L)	Dark S	lue Below Surface (S8) (LRR K 1)		
Depleted	d Below Da	s) rk Surface	e (A11)	Depleted Matrix (F2)				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 M	lucky Mine	ral (S1)	_	Depleted Dark Surface (F7)				Piedmont Floodplain Soils (F19) (MLRA 149B)			
Sandy G	Bleyed Matr	ix (S4)	-	Redox Depressions (F8)				Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
Sandy R	Redox (S5)							Red Parent Material (F21)			
Stripped	Matrix (S6			N				Very Shallow Dark Surface (TF12)			
Dark Su	rface (S7) (LRR R, N	ILRA 149B)				Other (Explain in Remarks)		
³ Indicators of	f hvdrophvt	ic vegetat	ion and wet	land hydrology mus	t be pres	ent. unless	s disturbed	or problematic			
Restrictive I	Layer (if ob	oserved):						1	<u> </u>		
Type:											
Depth (in	ches):							Hydric Soil	Present? Yes No 🗸		
Remarks:								-			
No redox	feature	es or o	ther hvo	tric soil indica	ators						
	louidie	00 01 0	anor nye								



wasc034e_xu_S



wasc034e_xu_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling Date: <u>2020-05-27</u>
Applicant/Owner: Enbridge		State: Wisconsin Sampling Point: wasb1001e_w
Investigator(s): KDF/SAM	Section, Township, Range: <u>Sec</u>	c 08 T045N R003W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.38</u>	9360 Long: <u>-90.</u>	765415 Datum: WGS84
Soil Map Unit Name: Portwing-Herbster complex, () to 6 percent slopes	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 C	Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology natura	Illy problematic? (If needed, exp	plain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sho	wing sampling point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes v No Hydric Soil Present? Yes v No Wetland Hydrology Present? Yes v No	Is the Sampled Area within a Wetland?	Yes _
Remarks: (Explain alternative procedures here or in a separate The emergent wetland is located within a s	hallow ravine adjacent to	a fallow apple orchard.
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	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 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): 0	
Saturation Present? Yes <u>v</u> No Depth (inches): <u>0</u> Wet (includes capillary fringe)	tland Hydrology Present? Yes 🖌 No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections)), if available:
Demarka	
The hydrologic regime is seasonally saturated with recharge h	vdrology. Standing water is present

The hydrologic regime is seasonally saturated with recharge hydrology. Standing water is present within the feature at the time of survey due to recent heavy precipitation, though the feature likely remains saturated throughout the growing season. Remnant biomass within the wetland is bent and matted down in the direction of drainage.

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wasb1001e_w</u>

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Iree Stratum</u> (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>2</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
	0	= Total Co	ver	OBL species <u>46</u> x 1 = <u>46</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)				FACW species <u>52</u> x 2 = <u>104</u>
1				FAC species4 x 3 =12
2.				FACU species x 4 =
3				UPL species x 5 =
а	<u></u>			Column Totals: <u>102</u> (A) <u>162</u> (B)
5.				Prevalence Index = B/A = <u>1.588235294117647</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: 5)				3 - Prevalence Index is ≤3.0 ¹
1 Equisotum sylvaticum	50	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Equisetum sylvaticum</u>	<u> </u>	 		Problematic Hydrophytic Vegetation ¹ (Explain)
	<u> </u>	 		
3. <u>Carex atherodes</u>		<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Juncus effusus</u>		<u> </u>		be present, unless disturbed or problematic.
5. <u>Equisetum arvense</u>	2	<u> N</u>	FAC	Definitions of Vegetation Strata:
6. <u>Ranunculus acris</u>	2	<u> N</u>	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Rubus pubescens</u>	2	N	<u>FACW</u>	at breast height (DBH), regardless of height.
8. <u>Carex cf. utriculata</u>	1	N	OBL	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
	102	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1.				
2				
3				Il ologija do sta
0				Vegetation
· · · · · · · · · · · · · · · · · · ·		- Total Car		Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	U		ver	
Fresh (wet) meadow dominated by nea	r contin	uous ar	ound co	over of horsetail species, with
graminoids scattered throughout. Cares	<pre>< stipata</pre>	and gia	ant gold	enrod are present within the wetland

outside of the sample plot.

SOIL

Profile Des	cription: (Describe	to the de	oth needed	to docun	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth	epth Matrix Redox Features				_						
(inches)	<u>Color (</u>	moist)		<u> </u>	noist)		Type'		<u>Texture</u>	Remarks	
0-6	<u>7.5YR</u>	3/2	<u> 100 </u>			0	·		CL		
6-20	<u>7.5R</u>	3/2	90	<u>7.5YR</u>	4/6	_10	C	M	C		
			·								
						·					
						·					
	·					·					
						·					
	oncontratio		lotion PM	-Poducod N	Antrix MS	-Maskor	Sand Gr	aine	² Location	- PL-Poro Lining M-Matrix	
Hydric Soil	Indicators:	п, D-Dep					i Sanu Gra	airis.	Indicators	for Problematic Hydric Soils ³ :	
Histoso	(A1)			Polyva	alue Belov	v Surface	(S8) (LRF	RR,	2 cm M	1uck (A10) (LRR K, L, MLRA 149B)	
Histic E	pipedon (A2	2)		ŃLI	RA 149B)	1			Coast I	Prairie Redox (A16) (LRR K, L, R)	
Black H	istic (A3)			Thin D	ark Surfa	ce (S9) (L	.RR R, MI	LRA 149B)	5 cm N	lucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (/	44) 5)		Loamy	/ Mucky N	/lineral (F	1) (LRR K	, L)	Dark S	urface (S7) (LRR K, L)	
Stratifie	d Layers (A d Below Da	5) rk Surfaci	ο (Δ11)	Loamy	/ Gleyed I ed Matrix	viatrix (F2	.)		Polyva Thin Dr	IUE BEIOW SUITACE (S8) (LRR K, L)	
Depiete Thick D	ark Surface	(A12)	e (ATT)	Deplet	Dark Su	face (F6)			Iron-Manganese Masses (F12) (I RR K I R)		
Sandy M	/lucky Mine	ral (S1)		Deplet	ed Dark S	Surface (F	7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)	
Sandy (Gleyed Matr	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			D)					Very S	hallow Dark Surface (TF12)	
Dark Su	inace (S7) (/ILRA 149	в)					Other (Explain in Remarks)	
³ Indicators of	f hydrophyt	ic vegetat	tion and w	etland hydro	ology mus	t be prese	ent, unless	s disturbed	or problematic		
Restrictive	Layer (if ol	oserved):									
Туре:											
Depth (in	ches):								Hydric Soil	Present? Yes <u><</u> No	
Remarks:											
Soils are	e clay loa	am ab	ove cla	ly with re	edox p	resent	from 6	6-20 inc	hes below	the soil surface. Soils	
meet the	F6 indi	cator f	or hyd	ric soils.							
1											



wasb1001e_w_E



wasb1001e_w_N

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

Evaluator(s):		
KDF/SAM		
Date of visit(s):		
2020-05-27		
Ecological Landsca	ape:	
Lake Superior Clay Plair		
Watershed:		
LS12, Marengo River		
WWI Class:		
N/A		
Wetland Type(s):		
PEM - Fresh (wet) meadow		
	,	
Wetland Size:	Wetland Area Impacted	
0.0182	0.0182	
Vegetation:		
Plant Community Description(s):		
Fresh (wet) meadow dominated by		
near continuous ground cover of horsetail		
species, with graminoids scattered		
throughout.		
	Evaluator(s): KDF/SAM Date of visit(s): 2020-05-27 Ecological Landsca Lake Superior Clay Plair Watershed: LS12, Marengo River Wetland Size: 0.0182 Vegetation: Plant Community D Fresh (wet) mea near-continuous species, with gra throughout.	

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	Y	Y	Visually or physically accessible to public
4	Ν	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	Y	Wetland and contiguous habitat >10 acres
2	N	N	3 or more strata present (>10% cover)
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	N	N	100 m buffer – natural land cover <u>>50%(south) 75% (north) intact</u>
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	Ν	N	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	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
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>	N	N	Storm and Eleaduator Storage
1	V	X	Pasin watland constricted outlet, has through flow or is adjacent to a stream
2	Y N	Y	Water flew through wetland is NOT channelized
2			
3	T N	T N	Evidence of flashy hydrology
5			Point or non-point source inflow
6	N	N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <10% wetland
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	Y	Y	Provides substantial storage of storm and floodwater based on previous section
2	Ý	Ý	Basin wetland or constricted outlet
3	Ň	Ň	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	Ν	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	Ν	N	Stormwater or surface water from agricultural land is major hydrology source
8	Ν	N	Discharge to surface water
9	Ν	Ν	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	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

WH-1: The feature is located in a disturbed field/apple orchard, with roads and residential properties nearby, but the potential for this area to qualify as contiguous habitat. WH-4: The surrounding area is disturbed by human use and roads/residential properties, so this land, although mostly not used for agriculture or developed u, is not intact. WH-7: The surrounding area includes tree and shrub cover that provides habitat for observed avian species.

WH-10, FA-2: Standing water is present within the wetland that may provide temporary habitat for adult amphibians.

FA-4: Vegetation is likely inundated in the spring after snowmelt and continues to be inundated after heavy precipitation events.

ST-3, WQ-5: Dense, persistent vegetation dominated by horsetails and graminoids. Remnant biomass further indicates persistent ground cover throughout the growing season.

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	Avians/ observed in trees in close proximity to the feature				

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)
Equisetum sylvaticum*			PEM	Interrupted
Carex atherodes			PEM	Rare
Carex crinita			PEM	Barren
Equisetum arvense			PEM	Barren
Juncus effusus			PEM	Barren
Carex cf. utriculata			PEM	Barren
Carex stipata			PEM	Barren
Ranunculus acris			PEM	Barren
Rubus pubescens			PEM	Barren
Rumex crispus			PEM	Barren
Solidago gigantea			PEM	Barren

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

The vegetation within the wetland is comprised of native species with very low amounts of observed invasive species, although the area is somewhat disturbed and has relatively low diversity.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is likely to be impacted by runoff from the adjacent paved county road, though drainage patterns show that water within the wetland drains in the direction of the road. The surrounding area is impacted by a fallow orchard and cover of non-native species within nearby areas, including a wetland. Ditches are present along the roadways surrounding the feature, but do not impact the wetland itself as they are not connected to the feature.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The feature has moderate overall diversity dominated by native species. Little cover of invasive species was observed within the feature.
Human Use Values	The feature is visible from a public road but is located on private land and unlikely to be used for recreation purposes.
Wildlife Habitat	Current standing water within the feature may provide temporary habitat for frogs and toads. The surrounding area includes habitat for avians and were.
Fish and Aquatic Life Habitat	Current standing water and spring inundation may provide temporary habitat for frogs and toads but would not support fish.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a basin wetland with dense persistent vegetation. The feature receives inputs from the surrounding area including a paved roadway to the north.
Water Quality Protection	The feature provides substantial flood and stormwater storage within the depression and has dense persistent ground cover vegetation.
Groundwater Processes	The feature is seasonally saturated with recharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland Sampling Date: 2020-05-27
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasb1001_u
	Section Township Range: Sec 08 T045N R003W
Landform (hillslope terrace etc.): Side Slope	cal relief (concave, convex, none): None Slope (%): 3-7%
Subragian (I BD as MI DA): Northcentral Forests Let. 46 29022	5 Long - 00 765471
Call Mar Heit News Dortwing Horbster complex 0 to	<u>5</u> Long. <u>-50.705471</u> Datum. <u>W6564</u>
Soli Map Unit Name: POILWIIIG-HEIDSLEI COMPLEX, U.U.	
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes <u>/</u> No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate repo Sample recorded on a slope leading to a small	rt.)
dependent on recharge hydrology from the adi	acent landscape. Sample area serves to move
surface flow directly into the wetland feature.	
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) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surf	ace (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
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:
	-, -, -, -, -, -, -, -, -, -, -, -, -, -
Remarks:	a field current Decent because raises within the next 04
No signs of wetland hydrology at the time of th	e field survey. Recent neavy rains within the past 24
nours. Surface hydrology flows down into the	wetland teature. No signs of discharge at the sample
location.	

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wasb1001_u</u>

Tree Stratum (Dist size) 20	Absolute	Dominant	Indicator	Dominance Test worksheet:
(Plot size. <u>50</u>)	% Cover	<u>Species</u> ?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata. $\underline{4}$ (B)
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:
	0	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species 5 x 2 = 10
1				FAC species 15 $x^3 = 45$
2				FACU species 52 $x = 208$
3				$\begin{array}{c c} \text{OPL species} & \underline{10} & x \text{ 5} = \underline{50} \\ \text{Column Totals:} & \underline{82} & (A) & \underline{212} & (B) \end{array}$
4				$\frac{1}{2} = \frac{1}{2} = \frac{1}$
5				Prevalence Index = B/A = <u>3.817073170731707</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: 5)				3 - Prevalence Index is ≤3.0 ¹
1. Poe pretensis	20	V	FACU	4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Tod praterisis</u>	10	 		Problematic Hydrophytic Vegetation ¹ (Explain)
	10	<u> </u>	EACU	
3. <u>Solidago canadensis</u>	10	<u> </u>	FACU	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Equisetum arvense</u>		<u> </u>	FAC	be present, unless disturbed or problematic.
5. <u>Potentilla simplex</u>	5	<u> </u>	FACU	Definitions of Vegetation Strata:
6. <u>Cornus alba</u>	5	N	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Acer rubrum</u>	5	N	FAC	at breast height (DBH), regardless of height.
8. <u>Amelanchier sp.</u>	5	N		Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Lotus corniculatus</u>	5	N	<u>FACU</u>	and greater than or equal to 3.28 ft (1 m) tall.
10. Leucanthemum vulgare	5	N	UPL	Herb – All herbaceous (non-woody) plants, regardless
11. Bromus inermis	5	Ν	UPL	of size, and woody plants less than 3.28 ft tall.
12. <u>Taraxacum officinale</u>	2	N	FACU	Woody vines – All woody vines greater than 3.28 ft in
	87	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1				
2			·	
2				
S			·	Hydrophytic Vegetation
4			·	Present? Yes No 🗸
Remarks: (Include photo numbers here or on a constate	U	= I otal Co	ver	
Open field of Kentucky bluegrass and s	smooth I	brome a	alona wit	th ruderal forb species. Apple trees
throughout.			0	

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth		Matrix			Redox Features						
(inches)	<u>Color (</u>	moist)	%	<u>Color (r</u>	noist)		Type'		Texture	Remarks	
0-9	<u>7.5YR</u>	3/3	100			0	·		CL		
9-18	5YR	4/4	90	5YR	4/6	10	С	Μ	С	concentrations faint	
							·				
				·		· . <u></u>					
						·	·				
						·	·				
							·				
¹ Type: C=C	oncentratior	n, D=Depl	etion, RM	Reduced I	Matrix, MS	S=Masked	d Sand Gra	ains.	² Locatior	n: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:								Indicators	for Problematic Hydric Soils ³ :	
Histosol	(A1)			Polyva	alue Belov	v Surface	(S8) (LRF	RR,	2 cm M	Muck (A10) (LRR K, L, MLRA 149B)	
Histic Ep	pipedon (A2	2)		ML	RA 149B)	(00) (Coast	Prairie Redox (A16) (LRR K, L, R)	
Black Hi Hydroge	suc (A3) en Sulfide (A	4)			v Mucky M	ice (59) (I /lineral (F	1) (I RR K	L N 149B)	5 cm M Dark S	Surface (S7) (IRR K I)	
Stratified	d Layers (A	5)		Loam	y Gleyed I	Matrix (F2	!) (בוגוג ו ג	, =/	Polyva	alue Below Surface (S8) (LRR K, L)	
Depleted	d Below Da	, rk Surface	e (A11)	Deple	ted Matrix	(F3)	·		Thin Dark Surface (S9) (LRR K, L)		
Thick Da	ark Surface	(A12)		Redox	Coark Sur	rface (F6)			Iron-Manganese Masses (F12) (LRR K, L, R)		
Sandy M	Aucky Miner	al (S1)		Deple	ted Dark S	Surface (F	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
Sandy G	Bleyed Matri	ix (S4)		Redox	Depress	ions (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy P	(edox (55) I Matrix (S6))							Very Shallow Dark Surface (TE12)		
Dark Su	rface (S7) (, LRR R. M	LRA 1491	3)	Other (Explain in Remarks)						
	()(,		,							
³ Indicators o	f hydrophyti	ic vegetati	on and we	etland hydro	ology mus	t be prese	ent, unless	disturbed	or problemation	С.	
Restrictive	Layer (if ob	served):									
Туре:											
Depth (in	ches):								Hydric Soil	Present? Yes No 🗸	
Remarks:											
Redox co	oncentra	ations a	are fair	nt and F	21 not	met.					



wasb1001_u_N



wasb1001_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling Date: <u>2020-05-28</u>				
Applicant/Owner: Enbridge	State:	Wisconsin Sampling Point: wasb1002e_w				
Investigator(s): <u>KDF/SAM</u>	Section, Township, Range: <u>Sec 08</u>	T045N R003W				
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): <u>Cc</u>	ncave Slope (%): 0-2%				
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.38</u>	8469 Long: <u>-90.7647</u>	32 Datum: WGS84				
Soil Map Unit Name: Kellogg-Allendale-Ashwabay c	omplex, 2 to 6 percent slopes NW	I classification:				
Are climatic / hydrologic conditions on the site typical for this time	e of year? Yes 🔽 No (If no, ex	plain in Remarks.)				
Are Vegetation, Soil, or Hydrology signifi	cantly disturbed? Are "Normal Circums	stances" present? Yes 🖌 No				
Are Vegetation, Soil, or Hydrology natura	ally problematic? (If needed, explain a	ny 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? Ye	≥s <u> </u>				
Wetland Hydrology Present? Yes <u>·</u> No	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate	e report.) vithin a small depression surro	unded by balsam poplar				
		unded by balsam poplar.				

HYDROLOGY

Wetland Hydrology Indicato	rs:				Secondary Indicators (minimum of two required)
Primary Indicators (minimum	of one is requ	Surface Soil Cracks (B6)			
Surface Water (A1)		_	Vater-Stained Leav	es (B9)	Drainage Patterns (B10)
High Water Table (A2)		_	Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)		_	Marl Deposits (B15	1	Dry-Season Water Table (C2)
Water Marks (B1)		-	Hydrogen Sulfide C	dor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)		-	Oxidized Rhizosphe	res on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		-	Presence of Reduc	ed Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)		-	Recent Iron Reduct	on in Tilled Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)		-	Thin Muck Surface	(C7)	Shallow Aquitard (D3)
Inundation Visible on Aeri	al Imagery (E	37) _	Other (Explain in R	marks)	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): 3		
Saturation Present?	Yes 🖌	No	Depth (inches): 0	Wetland	Hydrology Present? Yes 🖌 No
(includes capillary fringe)		<u></u>			
Describe Recorded Data (stre	am gauge, m	ionitorin	ig well, aerial photos, p	evious inspections), it av	ailable:
Remarks:					
The hydrologic regin	ne is sea	sona	lly saturated wit	h recharge hydro	blogy. There is a high water table
at 3 inches below the soil surface and saturation at the surface. The high water table is likely an					
artifact of recent hea	vy precij	oitatic	on at the time of	survey.	0
	<i>.</i>			5	

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1002e_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1 Populus balsamifera	<u>25</u>	V	FACW	Number of Dominant Species That Are OBLE FACING or FAC: 2 (A)
2 Populus tremulaides	<u> </u>	 		That are OBL, FACW, of FAC: (A)
				Total Number of Dominant Species Across All Strata: 3 (B)
0				
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
5				
0				Prevalence Index worksheet:
/				Total % Cover of: Multiply by:
	40	= Total Cov	/er	OBL species $()$ $x = 0$
Sapling/Shrub Stratum (Plot size: 15)				FACW species 75 $x^2 = 150$
1			·	FACUspecies $2 \times 4 = 8$
2				$\frac{1}{2} = \frac{1}{2} + \frac{1}{2} = \frac{1}{2}$
3				Column Totals: 94 (A) 209 (B)
4				
5				Prevalence Index = B/A = <u>2.22</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Cov	/er	∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹
1 Phalaris arundinacea	50	Y	FACW	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2 Acer negundo	2	N	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Glechoma bederacea	2	N	FACU	
			<u>17.00</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 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.
12				Woody vines – All woody vines greater than 3.28 ft in
12	54	- Total Ca		height.
Marchy Vine Streture (Distring)			/ei	
Woody vine Stratum (Plot size. 30)				
1				
2				
3				Hydrophytic Vogetation
4				Present? Yes <u>v</u> No
	0	= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate The vegetation is representative of a from the second	^{sheet.)} esh (we	t) mead	ow dom	inated by reed canary grass. There is

The vegetation is representative of a fresh (wet) meadow dominated by reed canary grass. There is interrupted canopy cover of balsam poplar, but the trees are rooted upslope outside of the wetland overhanging the wetland. The feature is not considered a forested wetland, despite the overhead canopy coverage. Poa spp. are also present within the wetland outside of the sample plot.

Profile Desc	cription: (Describe t	o the dep	oth needed	to docun	nent the i	indicator	or confirm	the absence of indicate	ators.)	
Depth	Matrix			Redo	x Feature	s				
<u>(inches)</u>	Color (moist)	%	Color (n	noist)	%	Type'	Loc ²	Texture	Remarks	
0-4	<u>7.5YR 3/1</u>	100			0			SL		
	<u>7.5YR 3/2</u>	95	<u>7.5YR</u>	3/4	5	С	Μ	SL		
6-20	<u>7.5YR 3/2</u>	95	<u>7.5YR</u>	3/4	5	С	M	SCL		
·										
								·		
¹ Type: C=C	oncentration, D=Depl	etion, RM	=Reduced N	/atrix, MS	S=Masked	d Sand Gra	ains.	² Location: PL=Po	re Lining, M=Matrix.	
Hydric Soil	Indicators:							Indicators for Prob	lematic Hydric Soils':	
Histosol	(A1) pipeden (A2)		Polyva		v Surface	(S8) (LRF	RR,	2 cm Muck (A10	0) (LRR K, L, MLRA 149B)	
Black H	istic (A3)		Thin D	ark Surfa	ce (S9) (I	RR R. MI	LRA 149B	5 cm Muckv Pe	at or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A4)		Loamy	Mucky M	lineral (F	1) (LRR K	, L)	Dark Surface (S	67) (LRR K, L)	
Stratifie	d Layers (A5)		Loamy	Gleyed I	Matrix (F2	<u>!</u>)		Polyvalue Belov	w Surface (S8) (LRR K, L)	
Deplete	d Below Dark Surface	e (A11)	Deplet	ed Matrix	(F3)			Thin Dark Surfa	ice (S9) (LRR K, L)	
Thick Da	ark Surface (A12)		_∠ Redox	Dark Sur	face (F6)			Iron-Manganes	e Masses (F12) (LRR K, L, R)	
Sandy N	Aucky Mineral (S1)		Deplet	Doprossi	Surface (F	-7)		Pleamont Flood	(MLRA 149B)	
Sandy C	Redox (S5)			Depressi				Red Parent Mat	terial (F21)	
Stripped	Matrix (S6)							Very Shallow Dark Surface (TF12)		
Dark Su	rface (S7) (LRR R, M	ILRA 149	B)					Other (Explain i	n Remarks)	
³ Indicators o	f hydrophytic vegetat	ion and w	etland hydro	ology mus	t be prese	ent, unless	s disturbed	or problematic.		
Restrictive	Layer (if observed):		-							
Туре:										
Depth (in	ches):							Hydric Soil Present	? Yes 🖌 No	
Remarks:		hovor				rodov	ooourri	ag 1 inchas hal	w the soil ourface	
Solis are sandy loam above sandy clay loam with redox occurring 4 inches below the soil surface.										
				50115.						



wasb1002e_w_N



wasb1002e_w_S

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):		
wasb1002	2020-05-28		
Location:	Ecological Landsca	ape:	
PLSS: sec 08 T045N R003W	Lako Superior Clay Plair		
	Lake Superior Clay Flair	I	
Lat: <u>46.388439</u> Long: <u>-90.764725</u>	Watershed:		
	LS12, Marengo River		
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes	Wetland Type(s):		
	PEM - Fresh wet meadow		
Field Verified:			
Soils not verified. Soils were sandy loam above	Wetland Size:	Wetland Area Impacted	
sandy clay loam with redox occurring 4 inches	0.0206	0.0206	
below the soils surface.	Vegetation:		
	Plant Community D	Description(s):	
Hydrology:	The vegetation is repres	entative of a fresh (wet) meadow dominated	
The hydrologic regime is seasonally saturated, with recharge	by reed canary grass. The	nere is interrupted canopy cover of balsam	
nydrology. I here is a high water table at 3 inches below the soil	overhanging the wetland	The feature would not be considered a	
artifact of recent heavy precipitation at the time of survey	forested wetland, despite	e the canopy coverage.	

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	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	Ν	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	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	V	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
0		, ,	plans
8	N	N	Part of a large nabitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present <u>>45 days</u>
10	N	N	Standing water provides nabitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudilats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			FISH and Aquatic Life Habitat
1	N	N	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	N	N	Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable
2	N	Ν	Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
			water levels of high llows – II no, not applicable
<u>ः</u>	N	N	Storm and Eleadwater Storage
51	X	X	Basin watland, constricted outlet, has through flow or is adjacent to a stream
	Y	Y	Mater flew through wetland is NOT channelized
2	Y	Y Y	
3	N	Y	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 Determine the hold $\geq 10\%$ of the museff frame contribution area from a 2 year 24 hour starm event.
8	N	N	Voter Quality Protection
1			valer wally Fillection
	IN V	Ý	Provides substantial storage of storm and hoodwater based on previous section
2	Y	Y	Water flow through wetland is NOT channelized
3	Y	Y	Vegeteted wetland especieted with a lake or stream
4	N	N	
5	N	Y	Dense, persistent vegetation
0	N	<u>N</u>	Signs of excess numerits, such as algae blooms, neavy macrophyte growin
/	N	N	Sionnwater of surface water from agricultural land is major hydrology source
ð 0	IN N		Discharge to sufface water Notural land cover in 100m buffer erec < 50%
9	N	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	N	N	Springs, seeps or indicators of groundwater present
2	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

HU-1: There is a small blind located nearby that may be used for hunting purposes. WH-1: The feature is surrounded by fallow field and planted apple trees, with a residential property nearby. The area likely functions as somewhat contiguous habitat connecting small forested patches of land. ST-3, WQ-5: There is near-continuous cover of herbaceous vegetation. WQ-1: The small depression stores stormwater but is likely limited by its small size.

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

Observed	Potential	Species/Habitat/Comments
	Y	Avians / surrounding apple trees may provide habitat around the feature
	Y	Mammals

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

Observed	Potential	Species/Habitat

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	Continuous
Populus balsamifera*			PEM	Interrupted
Glechoma hederacea			PEM	Rare
Poa pratensis			PEM	Rare
Populus tremuloides			PEM	Rare
Acer negundo			PEM	Barren
Geum cf. aleppicum			PEM	Barren
Poa palustris			PEM	Barren
Ranunculus acris			PEM	Barren
Fraxinus pennsylvanica			PEM	Barren
Taraxacum officinale			PEM	Barren
		ļ		
		ļ		

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

The vegetation is predominately comprised of non-native, disturbance-oriented species, resulting in low overall diversity within the feature. Balsam poplar overhangs the feature and provides canopy cover for the wetland, but it is rooted upslope outside of the wetland boundary.

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

Assessment	Buffer	Historic	Impact	Relative Frequency**	Stressor
7.104 (7.0.9			2010.	Troquonoy	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
X	Х		Н	С	Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
	V				Other (list below):
	X		н	U U	Apple orcnard
X	X		M	UC	

* 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 fallow orchard and is impacted by the historic land use. The feature is dominated by non-native species, limiting diversity within the wetland. The surrounding area is highly influenced by the orchard. There is an old shed present south of the feature with much debris throughout the surrounding area, including old farm equipment.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	There is low overall diversity within the feature due to presence of invasive, non-native species.
Human Use Values	The feature is located on private land and is not visible to the public. There is a small blind nearby that may or may not be used for hunting.
Wildlife Habitat	The wetland itself does not provide much habitat, but the area immediately surrounding the feature includes apple trees that provide habitat for avians.
Fish and Aquatic Life Habitat	N/A
Shoreline Protection	N/A
Flood and Stormwater Storage	Most of the wetland includes near-continuous ground cover. The feature receives runoff from the surrounding area, though likely does not substantially store flood and stormwater due to its small size.
Water Quality Protection	See above. The feature is not associated with a waterbody.
Groundwater Processes	The feature is seasonally saturated with recharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relo	cation Proiec	t City/0	County: Ashland	Sampling Date: <u>2020-05-28</u>	
pplicant/Owner: Enbridge State: Wisconsin Sampling Point: wasb1002					
nvestigator(s): <u>SAM/KDF</u> Section, Township, Range: <u>sec 08 T045N R003W</u>					
Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): Convex Slope (%): 3-7%					
Subregion (LRR or MLRA); N	orthcentral Forests	^s Lat: 46.388379	Lona: -9().764799 Datum: WGS84	
Soil Map Unit Name: Kelloo	a-Allendale-A	shwabay complex.	2 to 6 percent slor	Des NWI classification:	
Are climatic / bydrologic condi	tions on the site typ	ical for this time of year?	les V No	(If no, explain in Remarks)	
Are Vigetation Sail	or Hydrology		rbod? Aro "Normal		
				Circumstances present? Yes <u>v</u> No	
Are Vegetation, Soil	, or Hydrology	<pre>/ naturally problem</pre>	atic? (If needed, e	explain any answers in Remarks.)	
SUMMARY OF FINDING	GS – Attach si	te map showing san	npling point locatio	ons, transects, important features, etc.	
Hydrophytic Vegetation Pres	ent? 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	/e procedures here	or in a separate report.)	, and aultivated	apple trees. Demoent form	
Sample recorded in		ed in Smooth Dron	tural watered dar	apple trees. Remnant farm	
initastructure prese	nt. Adjacent i	io a slight, non-ha	lural welland dep	pression.	
HYDROLOGY					
Wetland Hydrology Indicat	ors:			Secondary Indicators (minimum of two required)	
Primary Indicators (minimum	of one is required:	check all that apply)		Surface Soil Cracks (B6)	
Surface Water (A1)	<u></u>	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 Oc	lor (C1)	Crayfish Burrows (C8)	
Sediment Deposits (B2)		Oxidized Rhizospher	res on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)	
Drift Deposits (B3)		Presence of Reduce	d Iron (C4)	Stunted or Stressed Plants (D1)	
Algal Mat or Crust (B4)		Recent Iron Reduction	on in Tilled Soils (C6)	Geomorphic Position (D2)	
Iron Deposits (B5)		Thin Muck Surface (C7)	Shallow Aquitard (D3)	
Inundation Visible on Ae	erial Imagery (B7)	Other (Explain in Re	marks)	Microtopographic Relief (D4)	
Sparsely Vegetated Cor	ncave Surface (B8)			✓ FAC-Neutral Test (D5)	
Field Observations:					
Surface Water Present?	Yes No _	✓ Depth (inches):			
Water Table Present?	Yes No _	✓ Depth (inches):			
Saturation Present?	Yes No _	✓ Depth (inches):	Wetland H	lydrology Present? Yes No	
Describe Recorded Data (st	ream gauge, monito	ring well, aerial photos, pre	evious inspections), if ava	ilable:	
, v	3 3 ,	5, 1, 1	1 //		
Remarks:	tabla within (20 inches of the s	urfaco Samplo r	peorded on a slope with no signs	
of discharge Only		20 IIICHES OF THE S	ullace. Sample R	ecorded on a slope with no signs	
of discharge. Only o	one secondar	y indicator of nyd	lology met.		

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1002_u

Trace Structures (Dict sizes 20	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>Populus paisaminera</u>		<u> </u>	FACW	That Are OBL, FACW, or FAC: 2 (A)
2. <u>Maius sp.</u>		<u> </u>		Total Number of Dominant
3				Species Across All Strata: <u>4</u> (B)
4				Percent of Dominant Species
5				
6		·		Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	/er	OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species 45 x 2 = 90
1				FAC species 5 $x_3 = 15$
2				$\frac{112}{12} = \frac{112}{12} = 1$
3				Column Totals: 124 (A) 453 (B)
4				
5				Prevalence Index = B/A = <u>3.653225806451613</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Cov	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Bromus inermis</u>	50	Y	UPL	data in Remarks or on a separate sheet)
2. <i>Phalaris arundinacea</i>	20	<u> </u>	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Glechoma hederacea</u>	10	N	<u>FACU</u>	¹ Indicators of hydric coil and watland hydrology must
4. <u>Poa pratensis</u>	5	N	<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Ranunculus acris</u>	5	N	FAC	Definitions of Vegetation Strata:
6. <u>Arctium minus</u>	5	N	<u>FACU</u>	Tree Maadu plante 2 in (7 C arr) as means in diamatan
7. <u>Asclepias syriaca</u>	2	N	UPL	at breast height (DBH), regardless of height.
8. <u>Taraxacum officinale</u>	2	N	<u>FACU</u>	Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	99	= Total Cov	/er	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1	<u> </u>			
2				
3.				Hydrophytic
4.				Vegetation
	0	= Total Cov	/er	Present? Yes No V
Remarks: (Include photo numbers here or on a separate	sheet.)			1
Immediate area is dominated by smoot	h brome	e with re	ed cana	ary grass is growing upslope. Fallow
field of smooth brome and Kentucky blu	uegrass			

Profile Desc	cription: (Describe t	to the depth	needed to document the	indicator or confirm	the absence of indicato	rs.)
Depth (inches)	Matrix Color (moist)	<u> </u>	<u>Redox Features</u> Color (moist) % Type ¹ Loc ²		Texture	Remarks
<u>(</u>	7.5YR 3/2	100	<u> </u>	<u>.,,po</u> <u>Loo</u>		
0 10	7.5VP 4/4	100	0			
8-18	<u>7.51K 4/4</u>	100	0_			
				<u> </u>		
¹ Type: C=C	oncentration, D=Depl	etion, RM=R	educed Matrix, MS=Maske	d Sand Grains.	² Location: PL=Pore	Lining, M=Matrix.
Hydric Soil	Indicators:	,	,		Indicators for Problem	matic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Below Surface	e (S8) (LRR R,	2 cm Muck (A10) ((LRR K, L, MLRA 149B)
Black Hi	pipedon (A2) istic (A3)		MLRA 149B) Thin Dark Surface (S9) (Coast Prairie Red	ox (A16) (LRR K, L, R) or Peat (S3) (I RR K I R)
Hydroge	en Sulfide (A4)		Loamy Mucky Mineral (F	1) (LRR K, L)	Dark Surface (S7)	(LRR K, L)
Stratified	d Layers (A5)		_ Loamy Gleyed Matrix (F2	2)	Polyvalue Below S	Surface (S8) (LRR K, L)
Depleted	d Below Dark Surface	e (A11)	Depleted Matrix (F3)		Thin Dark Surface	(S9) (LRR K, L)
Sandy M	Ark Surface (A12) Aucky Mineral (S1)		Depleted Dark Surface (F6) =7)	Piedmont Floodpla	ain Soils (F12) (LRR K, L, R)
Sandy G	Gleyed Matrix (S4)		Redox Depressions (F8)	.,	Mesic Spodic (TA	6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)				Red Parent Materi	al (F21)
Stripped	Matrix (S6)				Very Shallow Dark	Surface (TF12)
Dark Su	rface (S7) (LRR R, M	ILRA 149B)			Other (Explain in F	Remarks)
³ Indicators o	f hydrophytic vegetat	ion and wetla	nd hydrology must be pres	ent, unless disturbed o	or problematic.	
Restrictive	Layer (if observed):					
Туре:			_			
Depth (in	ches):				Hydric Soil Present?	Yes No
Remarks:		مانه ما م	rofilo. Toxturo oon	aiotopt through	aut	
Reduxie	atures lacking	i in soli p	iome. Texture con	sistent through	iout.	


wasb1002_u_S



wasb1002_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: As	shland	_ Sampling Date: <u>2020-05-27</u>		
Applicant/Owner: Enbridge		State: Wiscon	sin Sampling Point: wasc035e_xw		
Investigator(s): <u>KDF/SAM</u>	Section, Townsh	nip, Range: <u>sec 08 T045</u>	N R003W		
Landform (hillslope, terrace, etc.): Depression	Local relief (concav	e, convex, none): <u>Concave</u>	Slope (%): <u>0-2%</u>		
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.3896</u>	531	Long: <u>-90.764679</u>	Datum: <u>WGS84</u>		
Soil Map Unit Name: Cornucopia silt loam, 15 to 45 p	percent slope:	S 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 significan	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? Ves 🖌 No	Is the Sa	mpled Area			

Hydrophytic vegetation Present?	Yes No Yes No	within a Wetland? Yes <u> V</u> No
Wetland Hydrology Present?	Yes 🖌 No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced The emergent wetland is	ures here or in a separate report.) located within a roadside	ditch.

HYDROLOGY

Wetland Hydrology Indicators	:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of	one is required;	Surface Soil Cracks (B6)	
Surface Water (A1)		Water-Stained Leaves (B9)	_∠ Drainage Patterns (B10)
High Water Table (A2)		Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)		Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1)		Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)		Oxidized Rhizospheres on Living Ro	oots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils	s (C6) <u>v</u> Geomorphic Position (D2)
Iron Deposits (B5)		Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial	l Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave	ve Surface (B8)		FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present?	Yes No _	✓ Depth (inches):	
Water Table Present?	Yes No _	✓ Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes No _	_ ✔_ Depth (inches): N	Netland Hydrology Present? Yes <u>< No</u> No
Describe Recorded Data (stream	m gauge, monitor	oring well, aerial photos, previous inspectio	ns), if available:
Remarks: The hydrologic regime	e is season	nally saturated with recharge	hydrology. The feature is a roadside
ulter that receives ful		ie paveu ioauway and Sunoi	unuing area. It urains into a cuivert to

the west outside of the survey corridor.

VEGETATION – Use scientific names of plants.

Sampling Point: wasc035e_xw

Tree Stratum (Distaire: 20)	Absolute	Dominan	t Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u>)	% Cover	<u>Species</u>	<u>Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5.				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6				
7				Prevalence Index worksheet:
·		Tatal O		I otal % Cover of: Multiply by:
		= Total Co	over	OBL species 5 $x_1 = 5$
Sapling/Shrub Stratum (Plot size: 15)				FACW species 25 $x^2 = 50$
1				FAC species $\underline{8}$ $\underline{x3} = \underline{24}$
2				FACO species $2 \times 4 - 8$
3	<u> </u>		<u> </u>	$\begin{array}{c} \text{OFL species} \\ \text{Column Totals} \\ \text{Column Totals} \\ \begin{array}{c} 40 \\ (A) \\ \mathbf{P} \\ \mathbf$
4.				$\frac{1}{10000000000000000000000000000000000$
5				Prevalence Index = $B/A = 2.175$
6				Hydronhytic Vegetation Indicators:
/				\sim 2 - Dominance Test is >50%
	0	= Total Co	over	\sim 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Phalaris arundinacea</u>	25	Y	FACW	data in Remarks or on a separate sheet)
2. <u>Scirpus cf. microcarpus</u>	5	N	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Equisetum arvense	5	Ν	FAC	
4 Ranunculus acris	2	N	FAC	Indicators of hydric soil and wetland hydrology must
5 Tarayacum officinale	2	 N		be present, unless disturbed of problematic.
				Definitions of Vegetation Strata:
6. <u>Rumex crispus</u>	1	IN	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
	40	= Total Co	over	height.
Weedy Vine Stratum (Plat size: 30)				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes v No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)		_	
Fresh (wet) meadow dominated by ree	d canary	y grass	. Remna	ant biomass provides a near
continuous ground cover beneath the h	erbaced	ous veg	getation.	

Profile Description:	(Describe to	the depth	n needed to docun	nent the i	ndicator	or confirm	n the absence	of indicators.)
Depth	Matrix		Redo	x Features	s	0		
<u>(inches)</u> Col	or (moist)	%	Color (moist)	%	Type'	Loc	Texture	Remarks
·								
·								
·								
·								
·								
·								
·								
							·	
¹ Type: C=Concentra	ation, D=Deple	tion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil Indicate	ors:						Indicators	for Problematic Hydric Soils ³ :
Histosol (A1)			Polyvalue Below	v Surface	(S8) (LRF	RR,	2 cm N	/luck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon	(A2)		MLRA 149B)		. , .		Coast	Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3))		, Thin Dark Surfa	ce (S9) (L	.RR R. M	LRA 149B) 5 cm N	Aucky Peat or Peat (S3) (LRR K. L. R)
Hvdrogen Sulfid	, e (A4)	_	Loamv Muckv M	lineral (F1) (LRR K	. L)	, <u> </u>	Surface (S7) (LRR K. L)
Stratified Lavers	(A5)	_	Loamy Gleved I	Matrix (F2)	, ,	Polvva	lue Below Surface (S8) (LRR K. L)
Depleted Below	Dark Surface	(A11) —	Depleted Matrix	(F3)	/		Thin D	ark Surface (S9) (I RR K I)
Depicted Below Thick Dark Surf		(,,,,,,) _	Bedox Dark Su	face (E6)			Iron-M	andanese Masses (E12) (I PP K I P)
Thick Dark Sulla	inorol (S1)	_	_ Neutral Dark Sui		7)		IIOII-IVI Diodm	anyanese Masses (112) (LRR R, L, R)
Sandy Mucky M	$\frac{1100}{1000}$	-	_ Depleted Dark 3	Surrace (F	()		Fledin	Spedie (TAC) (ML DA 444A 445 449B)
Sandy Gleyed N	1atrix (54)	-	_ Redox Depress	ions (F8)				Spoale (1A6) (MILRA 144A, 145, 149B)
Sandy Redox (S	(5)							arent Material (F21)
Stripped Matrix	(S6)						Very S	shallow Dark Surface (TF12)
Dark Surface (S	7) (LRR R, ML	.RA 149B)					<u></u> Other	(Explain in Remarks)
2								
[°] Indicators of hydrop	hytic vegetatio	n and wet	and hydrology mus	t be prese	ent, unless	s disturbed	or problematio	D
Restrictive Layer (i	f observed):							
Туре:								
Depth (inches) [.]							Hydric Soil	Present? Yes <u><</u> No
Boperke:							-	
The soils work	not com	مامط طب	a ta tha laga	lion of	thow	Hondy	lithin a rad	adaida ditab. Tha aaila ara
The solis were	e not samp	pied du	e lo lhe local		the we		nunin a roa	auside ditch. The soils are
assumed to be	e hydric ba	ased or	n the landsca	pe pos	sition a	ind don	ninant veg	getation.
	-						-	
1								



wasc035e_xw_N



wasc035e_xw_W

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

Project name: Evaluator(s): Line 5 Relocation Project KDF/SAM File #: Date of visit(s): wasc035_x 2020-05-27 Location: Ecological Landscape: PLSS: sec 08 T045N R003W Late Superior Clay Plain Lat: <u>46.389607</u> Long: <u>-90.764678</u> County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u> Soils: Mapped Type(s): Kellogs-Allendale-Ashwabay complex, 2 to 6 percent slopes. Cornucopia WWI Class: Field Verified: N/A Series not verified. Soils were not sampled due to potential underground utilities located within the ditch. Wetland Type(s): Hydrology: Watorspice The hydrologic regime is seasonally saturated with recharge hydrology. The hydrologic regime is a roadide ditch that receives runoff from the paved	WETLAND IDENTIFICATION				
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readway and currounding area and excess water after provinitation events	The feature is a roadside ditch that receives runoff from the paved	canary grass. Remnant biomass provides a			
drains into a culvert to the west outside of the survey corridor.	drains into a culvert to the west outside of the survey corridor.	near-continuous ground cover beneath the			
herbaceous vegetation.	· · · · · · · · · · · · · · · · · · ·	herbaceous vegetation.			

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	Y	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	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	Ν	N	3 or more strata present (>10% cover)
3	Ν	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	Ν	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 <u>> 4</u> 5 days
10	Ν	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
2	Ν	Ν	Potential for erosion due to wind fetch, waves, neavy boat traffic, erosive soils, fluctuating
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	N	N	Water flow through wetland is NOT channelized
3	Y	Y	Dense, persistent vegetation
4	N	Ň	Evidence of flashv hvdrology
5	Y	Y	Point or non-point source inflow
6	Ň	Ň	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <10% wetland
8	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	Y	Provides substantial storage of storm and floodwater based on previous section
2	Y	Y	Basin wetland <u>or</u> constricted outlet
3	Ν	N	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	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	Ν	Location near a groundwater divide or a headwater wetland
3	N	Ν	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-3: The roadside ditch feature is located along a public road and is visible to the public. WH-4: The feature is located adjacent to a road, which breaks up intact land cover. T-3, WQ-5: The feature has dense persistent herbaceous vegetation, further confirmed by dense mat of remnant biomass. ST-1: Depressional feature with constricted outlet outside of the survey corridor, where water would drain into a culvert.

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

Observed	Potential	Species/Habitat/Comments

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	Interrupted
Equisetum arvense			PEM	Rare
Scirpus cf. microcarpus			PEM	Rare
Onoclea sensibilis			PEM	Barren
Ranunculus acris			PEM	Barren
Rumex crispus			PEM	Barren
Taraxacum officinale			PEM	Barren

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

The feature is dominated by disturbance-oriented species with low overall diversity. Non-native species dominate the roadside ditch.

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
Х	Х		Н	С	Drainage – tiles, ditches
Х	х		М	С	Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
Х	Х		М	C	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		Н	C	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	Y		NA		Removal of herbaceous stratum – mowing,
	~		IVI	00	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
	Х		M	UC	Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

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

**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 roadside ditch is highly impacted by the adjacent paved road and associated runoff stressors. The feature is dominated by non-native species. The surrounding area is impacted by the roadway, non-native species coverage and residential land use.

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 non-native species, resulting in low overall diversity.
Human Use Values	The feature is a roadside ditch and is visible to the public but would not be used for recreation purposes.
Wildlife Habitat	Trees and shrubs are not present within the feature. There is no standing water present within the feature to provide aquatic habitat, and the roadside location means wildlife use is reduced.
Fish and Aquatic Life Habitat	N/A
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature receives inputs from a paved road and the surrounding area. The feature within the survey corridor is relatively small, but extends outside of the corridor. Dense persistent vegetation is present throughout.
Water Quality Protection	See above.
Groundwater Processes	The feature is seasonally saturated with recharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: <u>Ashland</u>	Sampling	Date: <u>2020-05-27</u>
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Sampli	ng Point: <u>wasc035e_xu</u>
Investigator(s): <u>SAM/KDF</u>	Section, Township, Rang	e: <u>sec 08 T045N R003</u>	N
Landform (hillslope, terrace, etc.): <u>Rise</u>	Local relief (concave, convex	x, none): <u>Convex</u>	Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.3895	598 Long:	-90.764726	Datum: WGS84
Soil Map Unit Name: Kellogg-Allendale-Ashwabay cor	nplex, 2 to 6 percent	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 significat	ntly disturbed? Are "No	ormal Circumstances" present?	Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If need	ded, 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 <u> </u>	Is the Sampled Area within a Wetland? Yes No		
Wetland Hydrology Present? Yes No		No 🖌	If yes, optional Wetland Site ID:		
Remarks: (Explain alternative procedu Roadside bank along High	ires here or in a iway 13.	a separate report.)			

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 No <u>v</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
Saturation Present? Yes No _ Depth (inclus): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	Wetland Hydrology Present? Yes No ions), if available:
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Saturation Present? Yes No Depth (incluse): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks: Immediate area with a convex shape and no visual signs of	Wetland Hydrology Present? Yes No ions), if available: wetland hydrology. Water table and
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks: Immediate area with a convex shape and no visual signs of saturation could not be observed due to digging restrictions	Wetland Hydrology Present? Yes No ions), if available:
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 inspection Remarks: Immediate area with a convex shape and no visual signs of saturation could not be observed due to digging restrictions	Wetland Hydrology Present? Yes No ions), if available: wetland hydrology. Water table and within the roadside.
Saturation Present? Yes No _ Depth (incluse): [includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection in the stream gauge, monitoring well, aerial photos, previous inspection in the stream gauge and no visual signs of saturation could not be observed due to digging restrictions	Wetland Hydrology Present? Yes No ions), if available: wetland hydrology. Water table and within the roadside.
Saturation Present? Yes No _ Depth (incluse): [includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection in the stream gauge, monitoring well, aerial photos, previous inspection in the stream gauge area with a convex shape and no visual signs of saturation could not be observed due to digging restrictions	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ Depth (include): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks: Immediate area with a convex shape and no visual signs of saturation could not be observed due to digging restrictions	Wetland Hydrology Present? Yes No ions), if available: wetland hydrology. Water table and within the roadside.
Saturation Present? Yes No _ Depth (inches): [includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks: Immediate area with a convex shape and no visual signs of saturation could not be observed due to digging restrictions	Wetland Hydrology Present? Yes No
Naturation Present? Yes No Depth (inches): [includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks: Immediate area with a convex shape and no visual signs of saturation could not be observed due to digging restrictions	Wetland Hydrology Present? Yes No ions), if available: wetland hydrology. Water table and within the roadside.
Saturation Present? Yes No _ Depth (inches): [includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks: Immediate area with a convex shape and no visual signs of saturation could not be observed due to digging restrictions	Wetland Hydrology Present? Yes No ions), if available: wetland hydrology. Water table and within the roadside.
Saturation Present? Yes No _ Depth (inches): [includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect. Remarks: Immediate area with a convex shape and no visual signs of saturation could not be observed due to digging restrictions	Wetland Hydrology Present? Yes No ions), if available: wetland hydrology. Water table and within the roadside.

VEGETATION – Use scientific names of plants.

Sampling Point: wasc035e_xu

Trop Stratum (Plat size: 30)	Absolute	Dominan	t Indicator	Dominance Test worksheet:
(FIOLSIZE. <u>50</u>)	% Cover	Species		Number of Dominant Species
1				That Are OBL, FACW, or FAC:(A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL EACIV or EAC: 0 (A/B)
5				$\begin{array}{c} \text{That Ale OBL, FACW; OF FAC.} \\ \underline{\textbf{U}} \\ \end{array} $
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	over	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =0
1				FAC species 7 x 3 = 21
2				FACU species <u>84</u> x 4 = <u>336</u>
3				$\begin{array}{c} \text{UPL species} \underline{5} x5 = \underline{25} \\ \text{Column Tatalax} 00 (A) \underline{282} (B) \end{array}$
4.				Column Totals: <u>96</u> (A) <u>382</u> (B)
5.				Prevalence Index = B/A = <u>3.9791666666666666666</u>
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
··	0	= Total Co	over	2 - Dominance Test is >50%
Horb Stratum (Plot size: 5			JVEI	3 - Prevalence Index is ≤3.0 ¹
A Dee protonoio	50	V	EACU	4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Fod praterisis</u>	10	 		Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Dactylis giornerata</u>		<u> </u>		
3. <u>Prunus virginiana</u>	5	<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>laraxacum officinale</u>	5	<u> N</u>	<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Equisetum arvense</u>	5	<u> N</u>	FAC	Definitions of Vegetation Strata:
6. <u>Lotus corniculatus</u>	5	N	<u>FACU</u>	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Leucanthemum vulgare</u>	5	<u> N </u>	UPL	at breast height (DBH), regardless of height.
8. <u>Maianthemum racemosum</u>	5	N	<u>FACU</u>	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Agrimonia striata</u>	2	<u>N</u>	FACU	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Ranunculus acris</u>	2	N	FAC	Herb – All herbaceous (non-woody) plants, regardless
11. <u>Achillea millefolium</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
	96	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30)				
1				
··				
2				
3				Hydrophytic Vegetation
4				Present? Yes No 🗸
Pomarka: (Include photo numbers here or on a congrete	<u> </u>	= I otal Co	over	
Roadside that is likely mowed. Includes	s Kentud	cky blue	egrass, o	ox-eve daisy, field horsetail, dandelion,
and orchard grass.		,	5 /	

(inches) Color (moist)	% Color	(moist) %	Type ¹	loc^2	Toyturo	Remarks
		<u>(11015t) /6</u>	<u> </u>			Remarks
		, ·				
	·					
		· · · · · · · · · · · · · · · · · · ·				
				·	·	
		,				
		·				
ype: C=Concentration, D=Depletion	on, RM=Reduced	Matrix, MS=Maske	ed Sand Gra	ains.	² Location: PL=Por	re Lining, M=Matrix.
ydric Soil Indicators:					Indicators for Prob	lematic Hydric Soils':
_ Histosol (A1)	Poly	alue Below Surfac	e (S8) (LRF	RR,	2 cm Muck (A10	0) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	ML	RA 149B)			Coast Prairie Re	edox (A16) (LRR K, L, R)
Black Histic (A3)	Thin	Dark Surface (S9)	(LRR R, MI	LRA 149B)	5 cm Mucky Pea	at or Peat (S3) (LRR K, L,
Hydrogen Sulfide (A4)	Loam	ny Mucky Mineral (F1) (LRR K F2)	, L)	Dark Surface (S	
_ Stratilied Layers (AS)	Loan Loan	iy Gleyed Matrix (F	-2)		Thin Dark Surfa	
_ Depleted Delow Dark Sulface (A Thick Dark Surface (A12)	Redc	av Dark Surface (Ff	3)		Iron-Manganese	Masses (F12) (IRR K I
Sandy Mucky Mineral (S1)	Nede	eted Dark Surface	(F7)		Piedmont Flood	plain Soils (F19) (MLRA 14
Sandy Gleved Matrix (S4)	Redo	x Depressions (F8	()		Mesic Spodic (T	A6) (MLRA 144A, 145, 14
Sandy Redox (S5)			/		Red Parent Mat	erial (F21)
Stripped Matrix (S6)					Very Shallow Da	ark Surface (TF12)
Dark Surface (S7) (LRR R, MLF	RA 149B)				Other (Explain i	n Remarks)
,	,					
ndicators of hydrophytic vegetation	and wetland hyd	rology must be pre	sent, unless	s disturbed o	or problematic.	
estrictive Layer (if observed):						
Туре:						
Depth (inches)					Hydric Soil Present	? Yes No_ <i>•</i>
emarks:						
oils not evaluated due t	to the noten	tial for buried	d utilitica	s Soils a	ara likaly fill ma	torial associated w
au construction. Lanos	cape position	and domin	iant veg	jetation	suggests solls	are non-nyunc.



wasc035e_xu_S



wasc035e_xu_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland Sampling Date: 2020-05-27
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wasc032e_xw</u>
Investigator(s): <u>KDF/SAM</u>	Section, Township, Range: <u>sec 08 T045N R003W</u>
Landform (hillslope, terrace, etc.): Floodplain	cal relief (concave, convex, none): <u>None</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.38837	3Long: <u>-90.763201</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Cornucopia silt loam, 15 to 45 pe	rcent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes 🔽 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes <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 V No Hydric Soil Present? Yes V No	Is the Sampled Area within a Wetland? Yes <u>✓</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 repo The emergent wetland is located within a ravin	^{rt.)} e in mesic hardwood 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 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) <u> </u>
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>v</u> No Depth (inches): <u>6</u>	
Saturation Present? Yes <u>v</u> No Depth (inches): <u>6</u> Weth (includes capillary fringe)	land Hydrology Present? Yes 🖌 No No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections),	if available:
Remarks.	
The hydrologic regime is seasonally saturated. The feature is a	ssociated with an intermittent stream
flowing north through the wetland with multiple tributaries	
nowing north through the worlding with multiple thoutanee.	

VEGETATION – Use scientific names of plants.

Sampling Point: wasc032e_xw

	Absolute	Dominant	Indicator	Dominance Test worksheet
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Dominance rest worksneet:
1. <u>Fraxinus pennsylvanica</u>	10	Y	FACW	That Are OBL, FACW, or FAC: 3 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:(5(A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
	10	= Total Cov	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>24</u> x 2 = <u>48</u>
1. Ostrva virginiana	5	Y	FACU	FAC species <u>5</u> x 3 = <u>15</u>
2 Salix bebbiana	<u> </u>	Ý	FACW	FACU species <u>5</u> x 4 = <u>20</u>
			17.011	UPL species x 5 =
3				Column Totals: <u>84</u> (A) <u>133</u> (B)
4				Prevalence Index = $B/A = 1.58333333333333333333333333333333333333$
5				Hydrophytic Vegetation Indicators:
o				1 Panid Test for Hydrophytic Vagetation
7				2 - Dominance Test is >50%
	10	= Total Cov	ver	$\frac{1}{2}$ 2 - Dominance results - 50%
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Glyceria striata</u>	50	<u> </u>	OBL	data in Remarks or on a separate sheet)
2. <u>Impatiens capensis</u>	5	<u>N</u>	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Equisetum arvense</u>	5	<u> N </u>	FAC	¹ Indiastors of hydric coil and watland hydrology must
4. <u>Solidago gigantea</u>	2	N	FACW	be present, unless disturbed or problematic.
5. <u>Fraxinus pennsylvanica</u>	2	<u>N</u>	<u>FACW</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			. <u> </u>	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
	64	= Total Cov	ver	noight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4.				Vegetation
	0	= Total Cov	ver	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	sheet.)		-	1
The vegetation at the sample point is re	epresen	tative of	f a fresh	(wet) meadow dominated by fowl
mannagrass with sparse canopy along	the mar	gins do	minatec	by green ash. Vegetation within the
overall feature is predominantly gramin	oids wit	h giant	goldenro	od and field horsetail present

throughout.

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redo	ox Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc ²	Texture	Remarks
0-2	<u>7.5YR 3/2</u>	100		0			SI	
2-8	<u>7.5YR 3/1</u>	95	<u>10YR 2/1</u>	5	C	M	SIL	
8-12	<u>7.5YR 3/1</u>	100		0			S	
12-20	<u>7.5YR 3/1</u>	100		0			SL	
				_				
					·			
					·			
					·			
					<u> </u>			
					·			
				_				
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						² Location	n: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators:					Indicators	for Problematic Hydric Soils":		
Histosol (A1) Polyvalue Below Surface (S8) (LRR R,						2 cm N	Muck (A10) (LRR K, L, MLRA 149B)	
	bipedon (AZ)		WILRA 1498) 200 (SO) (I		DA 1400)	Coast	Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3) I hin Dark Sufface (S9) (LRR R, MLRA 149B)						Dark S	Surface (S7) (IRR K I)	
Stratified	d Lavers (A5)		Loamy Gleved	Matrix (F2	·) (EIXIX IX ?)	, ⊑)	Polyva	alue Below Surface (S8) (I RR K I)
Deplete	d Below Dark Surface	e (A11)	Depleted Matri	x (F3)	-)		Thin D	Dark Surface (S9) (LRR K. L)
Thick Da	ark Surface (A12)	()	Redox Dark Su	Inface (F6))		✓ Iron-M	anganese Masses (F12) (LRR K. L. R)
Sandy N	/ucky Mineral (S1)		Depleted Dark	Surface (F	-7)		Piedm	ont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4) Redox Depressions (F8)						Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)	
Sandy Redox (S5)						Red P	arent Material (F21)	
Stripped Matrix (S6)						Very S	Shallow Dark Surface (TF12)	
Dark Surface (S7) (LRR R, MLRA 149B)						Other	(Explain in Remarks)	
³ Indicators o	f hydrophytic vegetati	on and w	etland hydrology mu	st be pres	ent, unless	s disturbed	or problemation	C.
Restrictive	Layer (if observed):							
Туре:								
Depth (in	ches):						Hydric Soil	Present? Yes <u> </u>

Remarks:

Soils are silt over silt loam over sand over sandy loam with iron-manganese masses present from 2-8 inches below the soil surface. Soils meet the F12 indicator for hydric soils. Soils are naturally problematic due to flooding activity.



wasc032e_xw_S



wasc032e_xw_SW

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):		
wasc032_x	2020-05-27		
Location:	Ecological Landsca	ape:	
PLSS: sec 08 T045N R003W	Lake Superior Clay Plai	n	
Lat: <u>46.388378</u> Long: <u>-90.763201</u>	Watershed:		
	LSTZ, Marengo River		
County: <u>Ashland</u> I own/City/Village: <u>Ashland town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Cornucopia silt loam, 15 to 45 percent slopes	Wetland Type(s):		
	PEM - fresh (wet) meadow		
Field Verified:			
Series not verified. Soils were silt above silt loam over	Wetland Size:	Wetland Area Impacted	
sand above sandy loam with black iron-manganese	0.0983	0.0983	
masses present from 2-8 inches below the soil surface.	Vegetation:		
	Plant Community Description(s):		
Hydrology:	The vegetation at the sample point is representative of a		
The hydrologic regime is seasonally saturated. The feature is associated	fresh (wet) meadow dominated by fowl manna grass, with		
tributaries and evidence of flashy hydrology likely flooding after heavy	sparse canopy along the margins dominated by green		
precipitation events. There is a high water table at 6 inches below the soil	ash. The overall feature is predominately graminoids with		
surface.	giant goldenrod and	field horsetail present throughout.	

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	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	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	Ν	N	3 or more strata present (>10% cover)
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	N	Y	100 m buffer – natural land cover <u>></u> 50%(south) 75% (north) intact
5	N	N	Occurs in a Joint Venture priority township
6	Y	Y	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	Ν	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	Ν	N	Part of a large habitat block that supports area sensitive species
9	Ν	Ν	Ephemeral pond with water present >45 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	Ν	N	Wetland is connected or contiguous with perennial stream or lake
2	Ν	N	Standing water provides habitat for amphibians and aquatic invertebrates
3	Ν	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	Y	Vegetation is inundated in spring
SP			Shoreline Protection
1	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
0			Water levels or high flows – If no, hot applicable
3	N	N	Densely rooted emergent or woody vegetation
51	X	Ň	Storm and Floodwater Storage
1	Y	Y	Water flow through wetland in NOT channelized
2	IN N		
3		Ý V	Evidence of flashy hydrology
5	T N	ř V	Point or pop-point source inflow
6	IN 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
ŴQ			Water Quality Protection
1	N	Y	Provides substantial storage of storm and floodwater based on previous section
2	Y	Ý	Basin wetland or constricted outlet
3	N	Ň	Water flow through wetland is NOT channelized
4	Y	Y	Vegetated wetland associated with a lake or stream
5	N	Ý	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	N	Y	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	Y	Y	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

GW-1: There is a high water table at 6 inches below the soil surface. No springs or seep were observed.

WQ-7: There is an active hay field southeast of feature that like provides runoff to the feature and associated intermittent stream.

WQ-8: The water table is above the stream and likely discharges to the stream.

ST-3, WQ-5: Portions of the wetland along the stream are densely vegetated, while some areas have interrupted ground cover. ST-4: Leaf litter and debris within the wetland and associated stream indicate flashy hydrology.

- ST-5: There is a gravel road south of the feature that may provide runoff to the stream and carried to the wetland. There is a paved road to the north that may also provide runoff to the feature, but the stream flows north and likely carries runoff away from the wetland.
- WH-6: Interspersion of emergent wetland and aquatic habitat within the associated streams.

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

Observed	Potential	Species/Habitat/Comments
	Y	Frogs and toads / aquatic habitat within the associated stream
	Y	Avian habitat

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 / aquatic habitat within the associated stream

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)
Glyceria striata*			PEM	Rare
Phalaris arundinacea*			PEM	Rare
Carex crinita*			PEM	Rare
Equisetum arvense			PEM	Rare
Fraxinus pennsylvanica			PEM	Rare
Solidago gigantea			PEM	Rare
Acer saccharum			PEM	Barren
Athyrium filix-femina			PEM	Barren
Carex leptonervia			PEM	Barren
Carex stipata			PEM	Barren
Impatiens capensis			PEM	Barren
Ostrya virginiana			PEM	Barren
Scirpus microcarpus			PEM	Barren
Arisaema triphyllum			PEM	Barren
Barbarea vulgaris			PEM	Barren
Geum rivale			PEM	Barren
Rumex orbiculatus			PEM	Barren
Salix bebbiana			PEM	Barren
Taraxacum officinale			PEM	Barren

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

The feature includes a relatively diverse assemblage of species with patches of the wetland dominated by non-native species, localizing the effect of reduced diversity due to invasive species. Minimal tree cover is present along the margins of the wetland.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is impacted by stormwater discharge and cover of non-native species. There is an active hay field southeast of the feature that likely provides polluted inputs to the associated intermittent stream flowing through the wetland. The surrounding area is impacted by nearby roads and associated stressors, as well as an above-ground utility corridor south of the feature. The direction of the associated stream running toward the road reduces the impact of road-related stressors on the wetland.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Portions of the feature are dominated by invasive species, but overall the feature includes a diverse assemblage of native species. Floristic integrity will reduced if disturbance allows reed canary grass to spread.
Human Use Values	Though the feature is potentially visible to the public, it is located on private land and is unlikely to be used for recreation purposes.
Wildlife Habitat	There are diverse habitats present within the feature. The associated stream provides temporary habitat for frogs and toad, and the surrounding area provides trees and shrubs for avian species.
Fish and Aquatic Life Habitat	The associated stream provides temporary habitat for frogs and toads. There is no potential for fish habitat.
Shoreline Protection	The feature is associated with an intermittent stream. There is not much deeply rooted woody vegetation present along the banks.
Flood and Stormwater Storage	The feature is located along a stream and is flooded after heavy precipitation events. Portions of the wetland are densely vegetated, while areas likely experiencing more flooding have interrupted ground cover. The wetland likely receives non-point source flow.
Water Quality Protection	See above. The feature is northeast of an active hay field. Runoff from the field is likely carried north by the stream through the wetland. There is a high water table above the stream level that likely discharges to the stream after heavy precipitation events.
Groundwater Processes	The feature is seasonally saturated with a high water table.

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 Pro	Dject City	y/County: <u>Ashland</u>	Sam	pling Date: <u>2020-05-27</u>
Applicant/Owner: Enbridge	-		_ State: Wisconsin Sa	mpling Point: wasc032e_xu
Investigator(s): <u>KDF/SAM</u>	Se	ction, Township, Range: <u>S</u>	<u>ec 08 T045N R0</u>	03W
Landform (hillslope, terrace, etc.): Side S	lope Local	relief (concave, convex, no	ne): <u>Convex</u>	Slope (%): <u>8-15%</u>
Subregion (LRR or MLRA):	orests Lat: 46.388461	Long: _ -9().763085	Datum: <u>WGS84</u>
Soil Map Unit Name: Cornucopia silt	loam, 15 to 45 perce	ent slopes	NWI classification:	
Are climatic / hydrologic conditions on the si	te typical for this time of year?	Yes 🖌 No	(If no, explain in Remark	(S.)
Are Vegetation, Soil, or Hydr	rology significantly dis	turbed? Are "Norma	l Circumstances" preser	t? Yes No
Are Vegetation, Soil, or Hydr	rology naturally proble	ematic? (If needed,	explain any answers in F	Remarks.)
SUMMARY OF FINDINGS - Attac	:h site map showing sa	ampling point location	ons, transects, imp	oortant features, etc.
Hydrophytic Vegetation Present?	/es No ✓ ∕es No ✓	Is the Sampled Area within a Wetland?	Yes N	lo
Wetland Hydrology Present?	res No 🖌	If yes, optional Wetland	d Site ID:	
Remarks: (Explain alternative procedures The sample point is located of	here or in a separate report.) In a slope within me	sic hardwood fore	st nearest the w	etland.
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is requ	uired; check all that apply)		Surface Soil Crack	s (B6)
Surface Water (A1)	Water-Stained Lea	aves (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 Se	pils (C6) Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No _	✓ Depth (inches):	
Water Table Present? Yes No	✓ Depth (inches):	
Saturation Present? Yes <u>No</u> (includes capillary fringe)	✓ Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monito	ring well, aerial photos, previous inspec	tions), if available:
Remarks: No indicators of wetland hydrolog	ring well, aerial photos, previous inspec	tions), if available:
Remarks: No indicators of wetland hydrolog	ring well, aerial photos, previous inspec gy were observed.	tions), if available:
Remarks: No indicators of wetland hydrolog	ring well, aerial photos, previous inspec gy were observed.	tions), if available:
Remarks: No indicators of wetland hydrolog	ring well, aerial photos, previous inspec	tions), if available:
Remarks: No indicators of wetland hydrolog	ring well, aerial photos, previous inspec	tions), if available:
Remarks: No indicators of wetland hydrolog	ring well, aerial photos, previous inspec	tions), if available:
Remarks: No indicators of wetland hydrolog	ring well, aerial photos, previous inspec	tions), if available:
Remarks: No indicators of wetland hydrolog	ring well, aerial photos, previous inspec	tions), if available:
Remarks: No indicators of wetland hydrolog	ring well, aerial photos, previous inspec	tions), if available:

VEGETATION – Use scientific names of plants.

Sampling Point: wasc032e_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>	50	<u> </u>	FACU	That Are OBL, FACW, or FAC: (A)
2. <u>Ostrya virginiana</u>	15	<u> </u>	FACU	Total Number of Dominant
3				Species Across All Strata:8 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>25</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	65	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size:15)				FACW species <u>16</u> x 2 = <u>32</u>
1. Ostrva virginiana	50	Y	FACU	FAC species x 3 =6
2. Fraxinus pennsylvanica	15	Y	FACW	FACU species <u>119</u> x 4 = <u>476</u>
3			<u></u>	UPL species x 5 =
3				Column Totals: <u>137</u> (A) <u>514</u> (B)
4			·	Prevalence Index = $B/A = 3.7518248175182483$
5				
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	65	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				$3 - \text{Frevalence index is } \leq 3.0$
1. <u>Equisetum hyemale</u>	2	Y	FAC	data in Remarks or on a separate sheet)
2. Acer saccharum	1	Y	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Carex gracillima	1	Y	FACU	
A Tilia americana	 1	 N		¹ Indicators of hydric soil and wetland hydrology must
- Symphyotrichum on				be present, unless disturbed of problematic.
5. <u>Symphyounchum sp.</u>				Definitions of Vegetation Strata:
6. <u>Pyroia elliptica</u>		<u> </u>	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Fraxinus pennsylvanica</u>	1	N	FACW	at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11			. <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
	8	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1				
··			·	
2			·	
3			·	Hydrophytic Vegetation
4			·	Present? Yes No 🗸
	0	= Total Co	ver	
The vegetation at the sample point is reised of the second	epresen	tative o	f upland	dominated by sugar maple and

SOIL

Profile Desc	ription: (Describe t	o the dept	h needed to docum	ent the i	indicator	or confirm	the absence of i	ndicators.)
Depth	Matrix		Redox	Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	<u>5YR 3/3</u>	100		0				
10-18	<u>2.5YR 4/4</u>	100		0			C	
		·			·			
		·			·			
		<u> </u>			·			
					·			
					·			
					·			
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Masked	Sand Gra	ains.	² Location: PL	_=Pore Lining, M=Matrix.
Hydric Soil	Indicators:				(0.0) (1.0.0		Indicators for	Problematic Hydric Solls":
Histosol	(A1) Ninodon (A2)	-	Polyvalue Below	/ Surface	(S8) (LR F	R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
Black Hi	stic (A3)		Thin Dark Surfac	ce (S9) (I		RA 149B)	5 cm Muck	$(\mathbf{L}\mathbf{R}\mathbf{R}\mathbf{K},\mathbf{L},\mathbf{R})$
Hydroge	n Sulfide (A4)	-	Loamy Mucky M	lineral (F	1) (LRR K	, L)	Dark Surfa	ce (S7) (LRR K, L)
Stratified	d Layers (A5)	-	Loamy Gleyed N	/latrix (F2	2)	. ,	Polyvalue	Below Surface (S8) (LRR K, L)
Depleted	d Below Dark Surface	e (A11)	Depleted Matrix	(F3)			Thin Dark	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 (F	7)		Piedmont I	Floodplain Soils (F19) (MLRA 149B)
Sandy G	Bleyed Matrix (S4)	-	Redox Depressi	ons (F8)			Mesic Spo	dic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Stripped Matrix (S6)					Red Paren	t Material (F21)	
Dark Su	rface (S7) (LRR R. M	LRA 149B)				Other (Exp	lain in Remarks)
			/				<u> </u>	
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 Pre	sent? Yes No∕_
Remarks:								
Soils are	clay loam abo	ove clay	with no obse	rved i	ndicato	ors of hy	ydric soils. S	oils are not well-drained
with low	permeability ra	ates on	the slope.					



wasc032e_xu_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling Date: <u>2020-05-29</u>			
Applicant/Owner: Enbridge	Stat	e: <u>Wisconsin</u> Sampling Point: <u>wasb1005e_w</u>			
Investigator(s): <u>KDF/SAM</u>	Section, Township, Range: <u>Sec 0</u>	8 T045N R003W			
Landform (hillslope, terrace, etc.): Side Slope	Local relief (concave, convex, none): <u>N</u>	lone Slope (%): <u>3-7%</u>			
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.3867	771Long: <u>-90.763</u>	3013 Datum: WGS84			
Soil Map Unit Name: Kellogg-Allendale-Ashwabay con	nplex, 2 to 6 percent slopes	IWI classification:			
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes No (If no,	explain in Remarks.)			
Are Vegetation, Soil, or Hydrology significant	ntly disturbed? Are "Normal Circu	mstances" 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	ing sampling point locations, t	ransects, 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>/</u> No			
Wetland Hydrology Present? Yes <u>v</u> No	If yes, optional Wetland Site I	D:			
Remarks: (Explain alternative procedures here or in a separate re	eport.) Archard which was previous	ly disturbed			
The realitie is localed within a failow apple of	fendra which was previous	iy distarbed.			

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	coots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soil	ls (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	_∠ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No</u> Depth (inches):	
Water Table Present? Yes <u>v</u> No Depth (inches): <u>8</u>	
Saturation Present? Yes <u>v</u> No <u>Depth</u> (inches): <u>8</u>	Wetland Hydrology Present? Yes <u>v</u> No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial protos, previous inspection	ons), il avallable:
Remarks:	
The hydrologic regime is seasonally saturated with discharg	e hydrology. The feature is located on a
slope and water drains north through the feature to waterbo	dy sasb1002i. There is a high water
table with saturation at 8 inches below the soil surface	,

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1005e_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan Species?	t Indicator	Dominance Test worksheet:
1 Populus tremuloides	<u></u> 5	V		Number of Dominant Species
				That Are OBL, FACW, or FAC: $\underline{4}$ (A)
3				Total Number of Dominant Species Across All Strata: 5 (B)
3				
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)
5				
7				Prevalence Index worksheet:
/	- <u></u>	Tatal O		Total % Cover of:Multiply by:
Oralia (Ohmath Otastana (Dhataisan 15)			over	OBL species $()$ $x = 0$
Sapling/Shrub Stratum (Plot size: 15)	4 5	V		FAC species $12 \times 3 = 36$
1. <u>Maius domestica</u>		<u> </u>	<u> </u>	FACU species 9 $x 4 = 36$
2. <u>Fraxinus pennsylvanica</u>	5	<u> </u>	FACW	UPL species x 5 =10
3		·		Column Totals: <u>110</u> (A) <u>256</u> (B)
4		·		$\mathbf{P}_{\mathbf{r}}_{\mathbf{r}_{\mathbf{r}}}}}}}}}}$
5		·		$\frac{1}{2.32121212121212121212121212121212121212$
6				Hydrophytic Vegetation Indicators:
7		· - <u></u>		1 - Rapid Test for Hydrophytic Vegetation
	20	= Total Co	over	\sim 2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Spiraea alba</u>	50	Y	FACW	data in Remarks or on a separate sheet)
2. <u>Onoclea sensibilis</u>	30	Y	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Carex gracillima</u>	5	N	<u>FACU</u>	¹ Indiastars of hydric soil and watland hydrology must
4. <u>Poa pratensis</u>	2	N	FACU	be present, unless disturbed or problematic.
5. <u>Carex arctata</u>	2	N		Definitions of Vegetation Strata:
6. <u>Bromus inermis</u>	2	N	UPL	
7. <u>Fraxinus pennsylvanica</u>	2	N	FACW	at breast height (DBH), regardless of height.
8. <u>Fragaria virginiana</u>	2	N	FACU	Sanling/shrub Woody plants loss than 3 in DRH
9. Cornus racemosa	2	Ν	FAC	and greater than or equal to 3.28 ft (1 m) tall.
10. Equisetum arvense	2	N	FAC	Herb – All herbaceous (non-woody) plants, regardless
11. Ranunculus acris	2	Ν	FAC	of size, and woody plants less than 3.28 ft tall.
12. Equisetum hvemale	1	N	FAC	Woody vines – All woody vines greater than 3.28 ft in
	102	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30)				
1				
2		·		
3	_	·		I hadro a ha địo
а				Vegetation
			wer	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	 sheet)			
The vegetation is representative of a fr	esh (we	t) mead	dow dom	inated by white meadowsweet and

sensitive fern. Shrub cover of apple and green ash are present within the wetland, but overall the feature is an emergent wetland.

Profile Desc	cription: (Describe t	o the de	oth needed	to docun	nent the	indicator	or confirm	the absence	of indicators.)	
Depth	Matrix			Redo	x Feature	S				
(inches)	Color (moist)	%	Color (n	noist)	%	Type ¹	Loc ²	Texture	Remarks	
0-6	<u>7.5YR 3/2</u>	100			0			SICL		
6-14	7.5YR 3/2	95	<u>7.5YR</u>	4/6	5	C	M	SICL		
14-18	<u>7.5YR 4/3</u>	98	5YR	3/4	2	С	Μ	SIL		
						·				
						<u> </u>				
						<u> </u>				
						<u></u>				
						<u> </u>				
¹ Type C=C	oncentration D=Depl	etion RM	=Reduced M	Aatrix MS	S=Masked	d Sand Gra	ains	² Location	PI =Pore Lining M=Matrix	
Hydric Soil	Indicators:	<u></u>						Indicators	for Problematic Hydric Soils ³ :	
Histosol	(A1)		Polyva	lue Belov	v Surface	(S8) (LRF	RR,	2 cm M	uck (A10) (LRR K, L, MLRA 149B)	
Histic E	pipedon (A2)		MLF	RA 149B)				Coast F	Prairie Redox (A16) (LRR K, L, R)	
Black H	istic (A3)		Thin D	ark Surfa	ce (S9) (I	LRR R, MI	.RA 149B)	5 cm M	ucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A4)		Loamy		lineral (F	1) (LRR K	, L)	Dark St	urface (S7) (LRR K, L)	
Strauille	d Below Dark Surface	(Δ11)	Loaniy	od Matrix	viaurix (F∠ (E3)	2)		Polyval Thin Da	ark Surface (S0) (LRR K, L)	
Thick D	ark Surface (A12)	(,,,,)	Depiet	Dark Sur	face (F6)	1		Iron-Manganese Masses (F12) (I RR K		
Sandy M	Sandy Mucky Mineral (S1)		Deplet	Depleted Dark Surface (F0)				Piedmo	nt Floodplain Soils (F19) (MLRA 149B)	
Sandy C	Gleved Matrix (S4)		Redox Depressions (F8)			edox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A. 145. 149B)				
Sandy F	Redox (S5)		(0)			Red Parent Material (F21)				
Stripped	Matrix (S6)						Very Shallow Dark Surface (TF12)			
Dark Su	rface (S7) (LRR R, M	LRA 149	B)					Other (I	Explain in Remarks)	
³ Indicators o	f hydrophytic vegetati	on and w	etland hydro	logy mus	t be pres	ent, unless	disturbed	or problematic		
Restrictive	Layer (if observed):									
Туре:										

Depth (inches):

Hydric Soil Present? Yes <u>v</u> No _

Remarks:

Soils are silty clay loam above silt loam with redox occurring below 6 inches of the soil surface. Soils meet the F6 indicator for hydric soils.



wasb1005e_w_NE



wasb1005e_w_S

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

Evaluator(s):				
KDF/SAM				
Date of visit(s):				
2020-05-29				
Ecological Landsca	ape:			
Lake Superior Clay Plain				
Watershed:				
LS12, Marengo River				
WWI Class:				
N/A				
Wetland Type(s):				
PEM - Fresh (wet) meadow				
Wetland Size:	Wetland Area Impacted			
0.1411	0.1411			
Vegetation:				
Plant Community Description(s):				
The vegetation is representative of a fresh (wet) meadow dominated by white meadowsweet and sensitive fern, with graminoids present				
apple tree are present due to the historic use of the area as an apple				
orchard.				
	Evaluator(s): KDF/SAM Date of visit(s): 2020-05-29 Ecological Landsca Lake Superior Clay Plair Watershed: LS12, Marengo River WWI Class: N/A Wetland Type(s): PEM - Fresh (we Wetland Size: 0.1411 Vegetation: Plant Community D The vegetation is repress by white meadowsweet a throughout. Shrub cover the wetland, but overall the apple tree are present do orchard.			

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	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	Ν	3 or more strata present (>10% cover)
3	Ν	Ν	Within or adjacent to habitat corridor or established wildlife habitat area
4	Ν	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	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	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	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	Y	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	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	Y	Provides substantial storage of storm and floodwater based on previous section
2	N	Ν	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	Y	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	Y	Y	Discharge to surface water
9	N	Ν	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	Y	Y	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

WH-4: The surrounding area is partially forest around a forking stream, but is mainly disturbed grassland/apple orchard, which may still satisfy the condition of natural land cover. SP-1: The feature abuts an ephemeral stream to the northeast.

- ST-3, WQ-5: There is dense herbaceous/young woody vegetation present throughout the feature.
- WQ-8: The feature discharges to the associated stream downslope.
- GW-1: There is a high water table within the feature.

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

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

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

Observed	Potential	Species/Habitat

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)
Onoclea sensibilis*			PEM	Rare
Fraxinus pennsylvanica			PEM	Rare
Malus domestica*			PEM	Rare
Spiraea alba*			PEM	Rare
Carex arctata			PEM	Barren
Carex gracillima			PEM	Barren
Cornus racemosa			PEM	Barren
Equisetum arvense			PEM	Barren
Fragaria virginiana			PEM	Barren
Populus tremuloides			PEM	Barren
Ranunculus acris			PEM	Barren
Bromus inermis			PEM	Barren
Cornus sericea			PEM	Barren
Equisetum hyemale			PEM	Barren
Poa pratensis			PEM	Barren

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

The vegetation is predominately comprised of native vegetation. There are planted apple trees present within the feature and non-native species are scattered throughout.

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		М	С	Drainage – tiles, ditches
	х		L	UC	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		М	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.
					Removal of tree or shrub strata – logging,
					unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
Х	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):
		Х	Н	С	Apple orchard

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is impacted by past land use of an apple orchard, with non-native species present within and surrounding the feature. The surrounding area is influenced by a paved roadway and associated run off, as well as ditches alongside the road with a culvert draining water to the north.

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 vegetation is predominately native species, but a large component of the wetland and surrounding area is planted apple trees.
Human Use Values	The feature is located on private land and unlikely to be used for recreation purposes. The wetland is not visible to the public.
Wildlife Habitat	Dense herbaceous vegetation, along with some tree and shrub cover, provides potential habitat for avians. There is no standing water within the feature to provide habitat for frogs and toads, though there is an associated ephemeral stream that may provide temporary habitat.
Fish and Aquatic Life Habitat	N/A
Shoreline Protection	Only a small portion of the wetland connects to the ephemeral stream and likely does not provide substantial shoreline protection.
Flood and Stormwater Storage	There is dense herbaceous vegetation throughout the feature and is associated with a stream. The feature is significantly upslope from the waterbody and likely does not store flood water from the stream after major precipitation events.
Water Quality Protection	See above. The feature discharges to the ephemeral stream, providing some water quality protection.
Groundwater Processes	The feature exhibits discharge hydrology and has a high water table.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

Project/Site: Line 5 Relocation Project	City/County: Ashlar	<u>)d</u> Samplin	g Date: <u>2020-05-29</u>
Applicant/Owner: <u>Enbridge</u>		State: Wisconsin Samp	ling Point: <u>wasb1005_</u> u
Investigator(s): <u>SAM/KDF</u>	Section, Township, Ra	nge: <u>sec 08 T045N R003</u>	W
Landform (hillslope, terrace, etc.): <u>Rise</u>	Local relief (concave, con	vex, none): <u>Convex</u>	Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46	5.386700 Lon	g: <u>-90.763100</u>	
Soil Map Unit Name: Kellogg-Allendale-Ashwab	ay complex, 2 to 6 percer	nt slopes NWI classification:	
Are climatic / hydrologic conditions on the site typical for th	is 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 ne	eded, explain any answers in Rem	arks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling point l	ocations, transects, impor	tant features, etc.
Hydrophytic Vegetation Present? Yes N	ls the Sampled	Area	

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No <u><</u> No <u><</u>	within a Wetland? Yes No <u>/</u>
Wetland Hydrology Present?	Yes	No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed A former apple orchard, o	Jures here or in ONVEX in a	a separate report.) appearance an	d sloping towards the wetland feature.

HYDROLOGY

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

Sampling Point: <u>wasb1005_u</u>

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan Species?	t Indicator	Dominance Test worksheet:
1	<u></u>	000003		Number of Dominant Species
2				That are OBL, FACW, of FAC: (A)
3		·		Total Number of Dominant Species Across All Strata: 1 (B)
аа				
		·		That Are OBL, FACW, or FAC: (A/B)
6				
7		·		Prevalence Index worksheet:
<i>I</i>				Total % Cover of:Multiply by:
		= Total Co	over	OBL species $()$ $x_1 = 0$
Sapling/Shrub Stratum (Plot size:15)				FACW species $0 \times 2 = 0$
1				FACU species $19 \times 4 = 76$
2		·		$\frac{1760}{19} = \frac{19}{19} = \frac{19}{10} = $
3		·		Column Totals: 82 (A) 383 (B)
4				()
5				Prevalence Index = $B/A = \frac{4.670731707317073}{2}$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co	over	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹
1 Bromus inermis	50	Y	UPI	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2 Trifolium pratense	10	<u> </u>	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Symphyotrichum cordifolium	_ <u></u> 5	<u> </u>	17.00	
Symphyoancham cordinolium Fragaria virginiana	 	N	FACU	¹ Indicators of hydric soil and wetland hydrology must
5. Hieracium aurantiacum	 5	 N	1700	be present, unless disturbed of problematic.
5. Louconthomum vulgara	 	 		Definitions of Vegetation Strata:
		N		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Apocynum androsaemirolium</u>		<u>IN</u>		at breast height (DBH), regardless of height.
8. <u>Achillea millefolium</u>		<u> </u>	FACU	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Daucus carota</u>		<u>N</u>		and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Equisetum arvense</u>	2	<u> N </u>	FAC	Herb – All herbaceous (non-woody) plants, regardless
11. <u>Equisetum hyemale</u>	2	<u> N </u>	FAC	of size, and woody plants less than 3.20 it tail.
12. <u>Potentilla simplex</u>	2	<u>N</u>	<u>FACU</u>	Woody vines – All woody vines greater than 3.28 ft in beight
	92	= Total Co	over	noight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4.				Vegetation
	0	= Total Co	over	Present? Yes No V
Remarks: (Include photo numbers here or on a separate	sheet.)			
Sample point recorded in an opening w	vithin an	remna	nt apple	orchard dominated by smooth brome.

SOIL

Profile Desc	ription: (D	Describe	to the dept	h needed to document the indicator or confirm	the absence o	of indicators.)
Depth (inchos)	Color (Matrix	0/	Redox Features	Toyturo	Pomorko
<u>(inclies)</u>	5VR	3/2	100		SI	Remarks
40.00		2/4	400			
10-20	DIR	3/4	100		5	
			·			
			·		·	
			·			
			·			
			·			
			·		<u> </u>	
¹ Type: C=Co	oncentration	n, D=Dep	letion, RM=	Reduced Matrix, MS=Masked Sand Grains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:				Indicators f	or Problematic Hydric Soils":
HISTOSOI	(A1) Vinedon (A2	2)		Polyvalue Below Surface (S8) (LRR R, MI RA 149B)	2 cm Mi Coast P	JCK (A10) (LRR K, L, MLRA 149B) Irairie Redox (A16) (LRR K, L, R)
Black Hi	stic (A3)	-)		Thin Dark Surface (S9) (LRR R, MLRA 149B)	5 cm Mi	ucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	n Sulfide (A	\ 4)		Loamy Mucky Mineral (F1) (LRR K, L)	Dark Su	rface (S7) (LRR K, L)
Stratified	Layers (A	5)		Loamy Gleyed Matrix (F2)	Polyvalu	ue Below Surface (S8) (LRR K, L)
Depleted	d Below Da	rk Surface	e (A11)	Depleted Matrix (F3) Redex Dark Surface (F6)	Thin Da	rk Surface (S9) (LRR K, L)
Sandy M	luckv Miner	(A12) ral (S1)		Depleted Dark Surface (F7)	Piedmoi	nt Floodplain Soils (F19) (MLRA 149B)
Sandy G	leyed Matr	ix (S4)		Redox Depressions (F8)	Mesic S	podic (TA6) (MLRA 144A, 145, 149B)
Sandy R	edox (S5)				Red Par	rent Material (F21)
Stripped	Matrix (S6)		N N	Very Sh	allow Dark Surface (TF12)
Dark Su	rface (S7) (LRR R, N	ILRA 1498)	Other (E	-xplain in Remarks)
³ Indicators of	f hydrophyti	ic vegetat	ion and we	tland hydrology must be present, unless disturbed o	or problematic.	
Restrictive I	₋ayer (if ob	served):				
Туре:						
Depth (ind	ches):				Hydric Soil F	Present? Yes No
Remarks:		U				
Solis app	bear we	li drain	ied base	ed on the texture.		
l						



wasb1005_u_S



wasb1005_u_W

Project/Site: Line 5 Relocation Project	y/County: Ashland Sampling Date: 2020-05-28			
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasb1003s_w			
Investigator(s): KDF/SAM	Section, Township, Range: sec 08 T045N R003W			
Landform (billslope terrace etc.): Depression	relief (concave convex none): CONCAVE Slope (%): 0-2%			
Subregion (LRB or MLRA). Northcentral Forests Lat: 46 386161	Long: -90 763571 Datum: WGS84			
Soll Man Unit Name: Kellogg-Allendale-Ashwahay complex 2 to 6 percent slopes NWL descification:				
As alimetic (hudralanic conditions on the site trained for this time of user				
Are climatic / nydrologic conditions on the site typical for this time of years	Yes <u>V</u> No (If no, explain in Remarks.)			
Are Vegetation, Soil, or Hydrology significantly dis	sturbed? Are "Normal Circumstances" present? Yes <u>v</u> No			
Are Vegetation, Soil, or Hydrology naturally proble	ematic? (If needed, explain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing s	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			
Remarks: (Explain alternative procedures here or in a separate report.)				
ground cover within portions of the wetland is do was based on hydrology and hydric soils.	minated by Carex gracillima, the wetland delineation			
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 Lea	aves (B9) Drainage Patterns (B10)			
Aquatic Faulta (B2) Aquatic Faulta (B2) Aquatic Faulta (B2) Aquatic Faulta (B2)	5) Dry Season Water Table (C2)			
Water Marks (B1) Hydrogen Sulfide	5) Dry-Season Water Table (C2) Oder (C1) Cravitish Burrows (C8)			
Sediment Deposits (B2) Oxidized Rhizospi	cor (C1) Crayiisn Burrows (C8)			
Drift Deposits (B3) Presence of Redu	ced Iron (C4) Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4) Recent Iron Redu	ction in Tilled Soils (C6) Geomorphic Position (D2)			
Iron Deposits (B5) Thin Muck Surface	e (C7) Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7) Other (Explain in 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): <u>{</u>	3			
Saturation Present? Yes <u>v</u> No <u>Depth (inches)</u> : <u>(</u> includes capillary fringe)	∑ Wetland Hydrology Present? Yes <u>✓</u> No			
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:			
Remarks: The hydrologic regime is seasonally saturated w	ith recharge hydrology. There is a high water table			
at 8 inches and saturation at 6 inches. The water	r table is likely elevated due to the recent heavy			
precipitation events within the area.	asie is intery diovatoù duo to the robont hodvy			

Sampling Point: wasb1003s_w

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1		·		That Are OBL, FACW, or FAC: (A)
23.				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				
7				Prevalence Index worksheet:
/		Tatal Oa		Total % Cover of:Multiply by:
			/er	OBL species 0 $x_1 = 0$
Sapling/Shrub Stratum (Plot size: 15)				FACW species 33 $x^2 - 10$
1. <u>Alnus incana</u>		<u> Y </u>	FACW	FACU species $32 \times 4 = 128$
2. <u>Malus domestica</u>	25	<u> Y </u>		UPL species 9 $x_5 = 45$
3				Column Totals: 108 (A) 319 (B)
4				Prevalence Index = B/A = 2.9537037037037037
5				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
/				2 - Dominance Test is >50%
		= Total Cov	/er	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Carex castanea</u>	25	<u> Y </u>	FACW	data in Remarks or on a separate sheet)
2. <u>Carex gracillima</u>	20	<u> </u>	<u>FACU</u>	Problematic Hydrophytic Vegetation' (Explain)
3. <u>Ranunculus acris</u>	5	<u> N </u>	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Fragaria virginiana</u>	5	N	<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Poa pratensis</u>	5	<u>N</u>	<u>FACU</u>	Definitions of Vegetation Strata:
6. <u>Cornus racemosa</u>	5	N	FAC	Tree, Maashumlanta 2 in (7.0 am) an maan in diamatan
7. <u>Bromus inermis</u>	5	N	UPL	at breast height (DBH), regardless of height.
8. <u>Acer rubrum</u>	2	N	FAC	Sanling/chrub – Woody plants less than 3 in DBH
9. Medicago sativa	2	Ν	UPL	and greater than or equal to 3.28 ft (1 m) tall.
10. Leucanthemum vulgare	2	N	UPL	Herb – All herbaceous (non-woody) plants, regardless
11. <u>Solidago canadensis</u>	2	<u>N</u>	<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
	78	= Total Cov	/er	height.
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.)			1
The vegetation is representative of an a	alder thi	cket doi	minated	by speckled alder and graminoids.
Apple trees are also prevalent within th	e featur	e.		

SOIL

Profile Des	cription: (D	escribe	to the de	oth needed	to docun	nent the i	indicator	or confirm	the absence	of indicators.)	
Depth		Matrix			Redo	<u>x Feature</u>	s 1	. 2	-		
(inches)	<u>Color (n</u>	noist)		<u>Color (</u> r	noist)		Туре		Texture	Remarks	
0-8	<u>7.5YR</u>	3/1	100			0			SIL		
8-20	7.5YR	3/2	95	<u>7.5YR</u>	4/6	5	С	Μ	SICL		
——						·	·				
			·			· . <u></u>					
	_										
						·	·				
						·	·				
						·	·				
	opportunion	D-Don	lation PM	-Reduced N	Actrix MG		d Sand Cr	aina	² Legation	· DI - Doro Liping M-Metrix	
Hvdric Soil	Indicators:	, D–Dep			viau ix, ivic		a Sanu Gr	allis.	Indicators	for Problematic Hydric Soils ³ :	
Histosol	l (A1)			Polvva	alue Belov	v Surface	(S8) (LR	R.	2 cm N	/uck (A10) (LRR K. L. MLRA 149B)	
Histic E	pipedon (A2))		MLI	RA 149B))	(,	Coast	Prairie Redox (A16) (LRR K, L, R)	
Black H	istic (A3)			Thin D	ark 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)		Loamy	/ Mucky N	/lineral (F	1) (LRR K	, L)	Dark S	Surface (S7) (LRR K, L)	
Stratifie	d Layers (A5	5) 1. O f	- ()	Loamy	/ Gleyed I	Matrix (F2	2)		Polyva	lue Below Surface (S8) (LRR K, L)	
Depiete	a Below Dan	K Surrace	e (ATT)		ed Matrix	(F3) rface (F6)			I nin D	ark Surface (S9) (LRR N, L)	
Sandy M	Aucky Minera	al (S1)		Deplet	ted Dark Su	Surface (FO)	-7)		Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Eloodplain Soils (F19) (MI RA 1498)		
Sandy C	Gleyed Matrix	x (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) (L	RR R, N	ILRA 149	B)					Other	(Explain in Remarks)	
³ Indicators o	of bydropbytic		ion and w	otland bydra		t ha pros	ont unloca	e disturbod (or problematic	、 、	
Restrictive	l aver (if ob	served):			logy mus	t be prese		s distuibed (
Type [.]	_ujo: (05										
Danth (in	-1								Hydric Soil	Present? Ves 🗸 No	
Depth (In	icnes):								Tryanc oon		
Remarks:	s cilt loon		vo ciltu		ym with	o cobb	lo mivo	d in tou	varde the	bottom of the soil profile	
	siit ioan								valus ine	bolloni or the son prome	
and redd	ox occurr	ing at	8 inch	es belov	w the s	soli sur	tace.				



wasb1003s_w_E



wasb1003s_w_N

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

WETLAND IDENTIFICATION	WETLAND IDENTIFICATION							
Project name:	Evaluator(s):							
Line 5 Relocation Project	KDF/SAM							
File #:	Date of visit(s):							
wasb1003	2020-05-28							
Location:	Ecological Landsca	ape:						
PLSS: sec 08 T045N R003W	Lake Superior Clay Plair	2						
		1						
Lat: <u>46.386139</u> Long: <u>-90.763582</u>	Watershed:							
	LS12, Marengo River							
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u>								
Soils:	WWI Class:							
Mapped Type(s):	N/A							
Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes	Wetland Type(s):							
	PSS - Alder thicket							
Field Verified:								
Series not verified. Soils were silt loam above	Wetland Size:	Wetland Area Impacted						
silty clay loam with cobble intermixed throughout	0.0470	0.0470						
the bottom of the soil profile.	Vegetation:							
	Plant Community Description(s):							
Hydrology:	The vegetation is representative of an alder							
The hydrologic regime is seasonally saturated, with recharge	thickot dominated by speckled alder and							
hydrology. There is a high water table at 6 inches and saturation at								
8 incres. The high water table is likely higher than saturation due to	graminolos. App	ne trees are also prevalent						
מופ דבטבות הבמיץ אובטאומוטה ביצרוג׳ שונוווד נווב מופמ.	within the wetlar	nd.						

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	Ν	Ν	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Ν	Y	Wetland and contiguous habitat >10 acres
2	Ν	Ν	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	N	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	N	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	N	N	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present > 45 days
10	N	N	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			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 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
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	Y	Y	Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Y	Y	Water flow through wetland is NOT channelized
3	Y	Y	Dense, persistent vegetation
4	Ν	N	Evidence of flashy hydrology
5	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 <a href="mailto: 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	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	Ν	N	Discharge to surface water
9	Ν	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

WQ-1: The feature is a subtle depression receiving runoff from the surrounding area, and is of a small size with limited potential to store significant amounts of flood and stormwater. WH-7: Alder and apple trees provide avian habitat, as indicated by the observed species within the 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	Warbler species
Y	Y	Hummingbird
Y	Y	Deer
Y	Y	Other avians

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

Observed	Potential	Species/Habitat

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
Carex castanea*			PSS	Patchy
Carex gracillima*			PSS	Patchy
Malus domestica*			PSS	Patchy
Bromus inermis			PSS	Rare
Carex arctata			PSS	Rare
Poa pratensis			PSS	Rare
Acer rubrum			PSS	Barren
Cornus racemosa			PSS	Barren
Fragaria virginiana			PSS	Barren
Ranunculus acris			PSS	Barren
Rhamnus cathartica			PSS	Barren
Solidago canadensis			PSS	Barren
Leucanthemum vulgare			PSS	Barren
Medicago sativa			PSS	Barren

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

There is relatively middling diversity within the small wetland. The vegetation is predominately native species, but with invasive and non-native species present throughout.

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
	Х		L	С	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	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.
					Removal of tree or shrub strata – logging,
					unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
X	X		H	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):
		Х	Н	С	Apple orchard

* 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 significantly impacted by previous disturbance from the land use of an apple orchard. Non-native and invasive species are present throughout the feature and the surrounding area. Within the buffer, there is a gravel road with wide, linear ditches and an above-ground utility corridor running alongside it on the north side of the road. The surrounding area is likely impacted by stressors associated with the gravel road, such as stormwater discharge and polluted runoff.

SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE								
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	There is relatively moderate overall diversity within the small wetland feature. Non-native and invasive species are present thoughout.
Human Use Values	The feature is located on private land and is unlikely to be used for recreation purposes.
Wildlife Habitat	Shrub cover within the wetland provides habitat for avians as indicated by observed species at the time of survey.
Fish and Aquatic Life Habitat	N/A
Shoreline Protection	N/A
Flood and Stormwater Storage	Subtle depression within the landscape receives runoff from the surrounding area but is limited by its small size. There is dense persistent vegetation within the feature.
Water Quality Protection	See above. The feature is not associated with a waterbody.
Groundwater Processes	The feature exhibits recharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

Project/Site: Line 5 Relocation Project	v/County: Ashland Sampling Date: 2020-05-28
Applicant/Owner: Enhridge	State: Wisconsin Sampling Point: wash1003 u
	State Sampling Form
Investigator(s). <u>SAIVI/NDF</u> Se	Ction, Township, Range. <u>SEC 00 T045N R005W</u>
Landform (hillslope, terrace, etc.): <u>I all</u> Local	relief (concave, convex, none): <u>NONE</u> Slope (%): <u>U-2%</u>
Subregion (LRR or MLRA): Montheentral Polests Lat: 46.386116	Long: <u>-90.763568</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex	<u>, 2 to 6 percent slopes</u> NWI classification:
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 dis	.turbed? Are "Normal Circumstances" present? Yes 🗾 🖌 No
Are Vegetation, Soil, or Hydrology naturally proble	matic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No 🗸	is the Sampled Area within a Wetland? Yes No V
Hydric Soil Present? Yes No 🖌	
Wetland Hydrology Present? Yes No V	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	iacent to a small marginally wet depression
Situated a fact or more higher in elevation than t	be wetland area
	le welland area.
HYPROLOCY	
	Consudant (Indiantons (minimum of two nonvined)
wetland Hydrology indicators:	Secondary indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	
Surface Water (A1) Water-Stained Lea	aves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B1	3) Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B1)	5) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide	Jdor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosph	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Redu	ced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduc	ction 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 F	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): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:
Remarks:	and at the second late at the Area surface surface
No signs or discharge or recharge hydrology obs	erved at the sample location. Any surface water
here likely drains to the small wetland depression	to the north. Recent heavy rains within the past
two days.	

Sampling Point: wasb1003_u

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				Inat Are OBL, FACW, or FAC: <u>50</u> (A/B)
6			. <u> </u>	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Cov	/er	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =4
1. <u>Cornus racemosa</u>	10	Y	FAC	FAC species <u>65</u> x 3 = <u>195</u>
2. <u>Malus domestica</u>	10	Y		FACU species <u>95</u> x 4 = <u>380</u>
3				UPL species $10 \times 5 = 50$
4.				Column rotals: 172 (A) 629 (B)
5				Prevalence Index = B/A = <u>3.6569767441860463</u>
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
	20	= Total Cov	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹
1 Carey gracillima	75	V	FACU	4 - Morphological Adaptations ¹ (Provide supporting
2 Cornus racomosa	<u> </u>	 	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Erogaria virginiana	10	 		
3. <u>Tragana virginiana</u>	10	N		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Solidago canadensis</u>	<u></u>			be present, unless disturbed or problematic.
5. Bromus mermis	<u> </u>	<u> </u>		Definitions of Vegetation Strata:
6. <u>Leucantnemum vuigare</u>		<u> </u>		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Ranunculus acris</u>		<u> </u>	FAC	at breast height (DBH), regardless of height.
8. <u>Carex castanea</u>	2	<u> </u>	FACW	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Carex sp.</u>	2	<u> N </u>		and greater than or equal to 3.28 ft (1 m) tall.
10			·	Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 it tall.
12				Woody vines – All woody vines greater than 3.28 ft in height
	164	= Total Cov	/er	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4				Vegetation
	0	= Total Co	/er	
Remarks: (Include photo numbers here or on a separate	sheet.)			· · · · · · · · ·
Area planted with apple trees. Speckle	d alder p	present	in the a	rea, but herbaceous layer dominated
by Carex gracillima in the immediate ar	ea alon	g with g	ray dog	wood. Carex arctata also mixed in

throughout the overall area. Immature ovales present.

SOIL

Profile Desc	cription: (Describe t	o the dep	oth needed	to docun	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth	Matrix			Redo	x Features	\$	2			
(inches)	Color (moist)	%	Color (n	<u>noist)</u>	%	Type'	Loc	Texture	Remarks	
0-11	<u>7.5YR 3/2</u>	98	<u>10YR</u>	5/6	2	C	M	SICL		
11-18	7.5YR 3/3	85	<u>7.5YR</u>	4/4	15	C	M	SICL		
					·					
					·					
					·					
					·	<u> </u>				
					·					
					·					
					·	·				
. <u></u>	. <u></u>				·	. <u> </u>		<u> </u>		
¹ Type: C=C	oncentration, D=Deple	etion, RM	=Reduced N	/atrix, MS	S=Masked	Sand Gra	ains.	² Location:	PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:		Dahara		0			Indicators	for Problematic Hydric Solis":	
Histosol Histic Fi	(A1) ninedon (A2)		Polyva	iue Belov 24 149B)	v Surrace	(58) (LR F	Κ ,	2 cm M Coast F	IUCK (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R)	
Black Hi	istic (A3)		Thin D	ark Surfa	, ice (S9) (L	RR R, MI	LRA 149B)	5 cm M	lucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A4)		Loamy	Mucky N	/lineral (F1) (LRR K	, L)	Dark S	urface (S7) (LRR K, L)	
Stratified	d Layers (A5)		Loamy	Gleyed I	Matrix (F2))		Polyval	ue Below Surface (S8) (LRR K, L)	
Deplete	d Below Dark Surface	(A11)	Deplet	ed Matrix	(F3) faco (F6)			I hin Da	ark Surface (S9) (LRR K, L)	
Sandy N	Ark Surface (A12) Aucky Mineral (S1)		Redux	ed Dark Su	Surface (F0)	7)		Piedmo	ont Floodplain Soils (F12) (LRR R, L, R)	
Sandy G	Gleyed Matrix (S4)		Redox	Depress	ions (F8)	.,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy F	Redox (S5)							Red Pa	arent Material (F21)	
Stripped	Matrix (S6)							Very SI	hallow Dark Surface (TF12)	
Dark Su	rface (S7) (LRR R, M	LRA 149	B)					Other (Explain in Remarks)	
³ Indicators o	f hydrophytic vegetati	on and w	etland hydro	logy mus	t be prese	nt, unless	s disturbed	or problematic		
Restrictive	Layer (if observed):		,	0,						
Type:										
Depth (in	ches):							Hydric Soil	Present? Yes No	
Remarks:	,									
Redox o	bserved throug	ghout t	he profil	e, but	no hyc	lric ind	icators	were met.		
			•		,					



wasb1003_u_E



wasb1003_u_W

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling Da	te: <u>2020-05-28</u>
Applicant/Owner: Enbridge		State: Wisconsin Sampling I	Point: <u>wasb1004s_w</u>
Investigator(s): <u>KDF/SAM</u>	Section, Township, Range: <u>Se</u>	ec 08 T045N R003W	
Landform (hillslope, terrace, etc.): Toeslope	Local relief (concave, convex, nor	ne): <u>Concave</u>	Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Morthcentral Forests Lat: 46.386	350 Long: <u>-90</u>). 762932 Da	atum: <u>WGS84</u>
Soil Map Unit Name: <u>Kellogg-Allendale-Ashwabay cor</u>	<u>nplex, 2 to 6 percent slop</u>	DES 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 significa	ntly disturbed? Are "Normal	Circumstances" present? Yes	✓ No
Are Vegetation 🖌 , Soil, or Hydrology naturally	v problematic? (If needed, e	xplain any answers in Remarks	.)
SUMMARY OF FINDINGS – Attach site map show	ing sampling point locatio	ons, transects, importan	t features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes _ ✔ No Yes _ ✔ No	Is the Sampled Area within a Wetland? Yes <u><</u> No
Wetland Hydrology Present?	Yes 🖌 No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedur	res here or in a separate report.)	

The feature is located within a fallow orchard and is not of natural origin. The vegetation is naturally problematic within areas of the wetland and does not meet requirements for hydrophytic vegetation within those areas, but the wetland was delineated based on hydrology, topography, and hydric soils.

HYDROLOGY

Wetland Hydrology Indicato	ors:	Secondary Indicators (minimum of two required)	
Primary Indicators (minimum	of one is required; che	Surface Soil Cracks (B6)	
Surface Water (A1)	<u></u>	_ 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)		Roots (C3) Saturation Visible on Aerial Imagery (C9)	
Drift Deposits (B3)		Stunted or Stressed Plants (D1)	
Algal Mat or Crust (B4)		oils (C6) <u></u> Geomorphic Position (D2)	
Iron Deposits (B5)		_ Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aer	ial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Cond	ave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present?	Yes 🖌 No 🔄	_ Depth (inches): <u>1</u>	
Water Table Present?	Yes 🖌 No 🔄	_ Depth (inches): 0	
Saturation Present? (includes capillary fringe)	Yes 🖌 No	_ Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <u>v</u> No
Describe Recorded Data (stre	am gauge, monitoring	well, aerial photos, previous inspect	tions), if available:

Remarks:

The feature is located on a toe slope. The hydrologic regime is seasonally saturated with discharge hydrology. Discharge is coming from the south, moving north through the feature. A high water table was observed at the sample plot and throughout the feature, including upslope. Surface water is present within the lowest portion of the wetland, and the sample plot is located outside of the standing water along the edge.

Sampling Point: wasb1004s_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan Species?	t Indicator	Dominance Test worksheet:
1 Populus tremuloides	<u>15</u>	V	FAC.	Number of Dominant Species That Are OBL $FACINAL er FAC:$ (A)
2		I		$\begin{array}{c} \text{That Ale OBL, FACW, of FAC.} \\ \underline{4} \\ \end{array} $
3				Total Number of Dominant Species Across All Strata: 6 (B)
4				Percent of Dominant Species
5.				That Are OBL, FACW, or FAC: <u>67</u> (A/B)
6				Provolance Index workshoot:
7				Total % Cover of Multiply by
	15	= Total Co	over	OBL species 2 x 1 = 2
Sapling/Shrub Stratum (Plot size:15)				FACW species <u>52</u> x 2 = <u>104</u>
1. <u>Salix bebbiana</u>	20	Y	FACW	FAC species23 x 3 =69
2. <u>Malus domestica</u>	15	Y		FACU species <u>15</u> x 4 = <u>60</u>
3. <u>Salix cf. petiolaris</u>	10	Y	FACW	UPL species 0 x 5 = 0
4. Populus tremuloides	5	Ν	FAC	Column lotais: $\underline{92}$ (A) $\underline{235}$ (B)
5.				Prevalence Index = B/A = <u>2.55</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	50	= Total Co	over	∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				\sim 3 - Prevalence Index is $\leq 3.0^{1}$
1. Onoclea sensibilis	20	Y	FACW	data in Remarks or on a separate sheet)
2. Carex gracillima	10	Y	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Carex arctata</u>	5	N		1
4. <u>Juncus cf. effusus</u>	2	N	OBL	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Acer rubrum</u>	2	N	FAC	Definitions of Vegetation Strata
6. <u>Fraxinus pennsylvanica</u>	2	N	FACW	
7. <u>Poa pratensis</u>	2	N	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8. Fragaria virginiana	2	Ν	FACU	Sanling/shrub Woody plants loss than 3 in DRH
9. Equisetum arvense	1	Ν	FAC	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Solidago canadensis</u>	1	Ν	FACU	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
	47	= Total Co	over	height.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes Y
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a senarate	sheet)			1

The vegetation at the sample plot is dominated by domestic apple with speckled alder and willow species present throughout. The shrub cover present within the feature characterizes it as a shrub community, though in a natural setting the feature would be characterized as a fresh (wet) meadow. The ground cover is dominated by graminoids and sensitive fern. Throughout the wetland, many upland species, particularly Carex gracillima, were observed, but the system is highly disturbed due to past land use.

SOIL

Profile Desc	cription: (Describe	to the dep	oth needed to docum	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
0-14	<u>7.5YR 2.5/1</u>	95	<u>7.5YR 3/4</u>	5	<u> </u>	M	SIL	
14-20	5YR 3/4	100	3/4	0			SL	
		·						
		·		·				
		·		·			<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=Pore Lining, M=Matrix.
Histosol Histic E Black H Hydroge Stratifier	(A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5)		Polyvalue Belov MLRA 149B) Thin Dark Surfa Loamy Mucky M Loamy Gleyed I	v Surface ice (S9) (I /lineral (F /latrix (F2	e (S8) (LRF LRR R, M 1) (LRR K 2)	R R, LRA 149B) , L)	2 cm M Coast I) 5 cm M Dark S Polyva	Nuck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Nucky Peat or Peat (S3) (LRR K, L, R) urface (S7) (LRR K, L) Iue Below Surface (S8) (LRR K, L)
Deplete Thick Da	d Below Dark Suriac ark Surface (A12)	e (ATT)	Depleted Matrix	(F3) face (F6))		Iron-Ma	ark Surface (S9) (LRR N, L) anganese Masses (E12) (LRR K L R)
Sandy N	/lucky Mineral (S1)		Depleted Dark S	Surface (F	- 7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy C	Gleyed Matrix (S4)		Redox Depress	ions (F8)			Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)						Red Pa	arent Material (F21)
Stripped	I Matrix (S6) Inface (S7) (I RR R II	M RA 149	B)				Very S	hallow Dark Surface (TF12) Explain in Remarks)
			D)					
³ Indicators o	f hydrophytic vegeta	ion and w	etland hydrology mus	t be pres	ent, unless	s disturbed	or problematio	
Restrictive	Layer (if observed):							
Туре:								
Depth (in	ches):						Hydric Soil	Present? Yes <u><</u> No
Remarks:							· 	
Soils are	silt loam abo	ve san	dy loam with re	edox p	resent	from 0-	-14 inches	below the soil surface.
The soils	s meet the F6	indicat	or for hydric so	oils.				



wasb1004s_w_E



wasb1004s_w_N

Project/Site: Line 5 Relocation Pro	oject	City/County: Ashland	Samp	oling Date: <u>2020-05-29</u>
Applicant/Owner: Enbridge			State: Wisconsin Sa	mpling Point: <u>wasb1004f_w</u>
Investigator(s): KDF/SAM		Section, Township, Range: Section	ec 08 T045N R0	03W
Landform (hillslope, terrace, etc.): Side S	lope Lo	cal relief (concave, convex, non	e): <u>None</u>	Slope (%): <u>8-15%</u>
Subregion (LRR or MLRA): Northcentral Fc	orests Lat: <u>46.38645</u>	2 Long: <u>-90</u>	.761943	Datum: WGS84
Soil Map Unit Name: Cornucopia silt	loam, 15 to 45 pe	rcent slopes	NWI classification:	
Are climatic / hydrologic conditions on the sit	e typical for this time of ye	ear? Yes 🖌 No (lf no, explain in Remark	s.)
Are Vegetation, Soil, or Hydro	ology significantly	disturbed? Are "Normal	Circumstances" present	? Yes 🖌 No
Are Vegetation, Soil, or Hydro	ology naturally pro	oblematic? (If needed, e	xplain any answers in R	emarks.)
SUMMARY OF FINDINGS – Attac	h site map showing	sampling point locatio	ns, transects, imp	ortant features, etc.
Hydrophytic Vegetation Present?YHydric Soil Present?YWetland Hydrology Present?YRemarks: (Explain alternative procedures I	res _ ✔ No res _ ✔ No res _ ✔ No here or in a separate repo	Is the Sampled Area within a Wetland? If yes, optional Wetland	Yes _ ✓ _ N Site ID:	o
Upland species are present the hydric soils.	hroughout, but the	e feature was delinea	ted based on hy	drology and
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators (n	ninimum of two required)
Primary Indicators (minimum of one is requ	ired; check all that apply)		Surface Soil Cracks	s (B6)
Surface Water (A1)	Water-Stained	Leaves (B9)	Drainage Patterns	(B10)
High Water Table (A2)	Aquatic Fauna	(B13)	Moss Trim Lines (B	16)
Saturation (A3)	Marl Deposits ((B15)	Dry-Season Water	Table (C2)
Water Marks (B1)	Hydrogen Sulfi	de Odor (C1)	Crayfish Burrows (0)	28)
Sediment Deposits (B2)	Oxidized Rhizo	 Saturation Visible on Aerial Imagery (C9) 		

Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1)

____ Shallow Aquitard (D3)

Wetland Hydrology Present? Yes _
 No _

Microtopographic Relief (D4)
 FAC-Neutral Test (D5)

____ Recent Iron Reduction in Tilled Soils (C6) ____ Geomorphic Position (D2)

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

Yes _____ No ___ Depth (inches): ___

Remarks:

Drift Deposits (B3)

Iron Deposits (B5)

Surface Water Present? Water Table Present?

Field Observations:

Saturation Present?

_ Algal Mat or Crust (B4)

____ Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

The feature is characterized by undulating topography with drainageways sloping towards ephemeral streams. The hydrologic regime is seasonally saturated with discharge hydrology. Discharge from the wetland feeds multiple ephemeral streams running through the feature from south to north.

___ Thin Muck Surface (C7)

Other (Explain in Remarks)

Sampling Point: wasb1004f_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1 Populus tremulaides	<u>50</u>	V		Number of Dominant Species
2. Fravinus nannaylyanias	<u> </u>			That Are OBL, FACW, or FAC: (A)
		<u> </u>	<u>FACW</u>	Total Number of Dominant
3				Species Across Air Strata. <u>5</u> (B)
4			······	Percent of Dominant Species That Are OBL EACW or EAC: 100 (A/B)
5				
6			·	Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
	65	= Total Cov	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>109</u> x 2 = <u>218</u>
1. <u>Fraxinus pennsylvanica</u>	50	<u> Y </u>	<u>FACW</u>	FAC species $85 \times 3 = 255$
2. <u>Ulmus americana</u>	5	N	FACW	FACU species 2 $x 4 = 8$
3				Column Totals: 196 (A) 181 (B)
4				
5	<u> </u>			Prevalence Index = $B/A = \frac{2.454081632653061}{2.454081632653061}$
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
	55	= Total Cov	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹
1 Fraxinus pennsylvanica	30	Y	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
 Fauisetum hvemale 	<u> </u>	Ý	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Onoclea sensibilis	5	N	FACW	
Athyrium angustum	5	 N	FAC	¹ Indicators of hydric soil and wetland hydrology must
5 Acer rubrum	2	<u>N</u>	FAC	
6. Equisetum pratense	2	 N	FACW	Definitions of Vegetation Strata:
7 Ranunculus acris	2	<u> </u>	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8 Pyrola elliptica	2	<u></u>	FACU	a breast height (DDF), regardless of height.
 <u>r yrola cilipilda</u> Spiraea alba 	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.
10 Acer pequado	_ <u></u>	 N	FAC	
		IN		of size, and woody plants less than 3.28 ft tall.
10				Woody vines – All woody vines greater than 3.28 ft in
12	76			height.
20	_/0	= Total Cov	ver	
Woody Vine Stratum (Plot size: 30)				
1				
2				
3				Hydrophytic
4		·		Present? Yes <u>✓</u> No
		= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate	sheet.) Arthern I	hardwor	nd swan	np dominated by quaking aspen and
green ash with paper birch scattered th	roughoi	It. Gree	n ash is	s most prevalent in the understory
Ground cover is dominated by tall scou	rina-rus	h with a	bundan	It green ash saplings and fern species.
Ground cover is dominated by tall scou	ring-rus	n with a	ibundan	it green as saplings and tern species.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			Redox	<u> Features</u>	s 1	. 2	- ·	
(inches)			<u>Color (</u> r	noist)		Type			Remarks
0-2	<u>7.5YR 3/2</u>	100			0			SIL	
2-12	<u>7.5YR 3/2</u>	90	<u>7.5YR</u>	4/6	10	C	M	SIL	
12-18	<u>7.5YR 3/2</u>	8			0			SI	
12-18	<u>7.5YR 4/4</u>	90	<u>7.5YR</u>	4/6	2	_C	M	SI	
¹ Type: C=Co	oncentration, D=Depl	etion, RM	=Reduced M	/atrix, MS	=Masked	Sand Gra	ains.	² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :									
Hydric Soil Indicators: Polyvalue Below Surface (S8) (LRR R,					2 cm M Coast 5 cm M Dark S Polyva Thin D Iron-M Piedm Nesic Red P Very S Other or problematic	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) ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21) Shallow Dark Surface (TF12) (Explain in Remarks) c.			
Туре:									
Depth (ind	ches):							Hydric Soil	Present? Yes <u>~</u> No
Remarks: Soils are silt loam above silt with redox starting at 2 inches below the soil surface. Soils meet the F6 indicator for hydric soils.									





wasb1004f_w_S

Project/Site: Line 5 Relo	cation Pr	oiect	City/C	ounty: Ashland	Sampling Date: 2020-05-29			
Applicant/Owner: Enbridge	9	,	,	,	State: Wisconsin Sampling Point: wasb1004e_v			
Investigator(s): KDF/SAN	1		Sectio	on, Township, Range:	sec 08 T045N R003W			
Landform (hillslope, terrace, e		ession	Local reli	ef (concave, convex, r	none): Concave Slope (%): 0-2%			
Subregion (I RR or MI RA): N	orthcentral F	orests	at: 46 386506	long: -(20 761557 Datum: WGS84			
Soil Man Unit Namo: Kelloc	a-Allonda	 ⊳lo_∆ch	au <u>40.000000</u>	2 to 6 percent sl				
	<u>iy-Alienua</u>							
Are climatic / hydrologic condi	ions on the s	ite typica	al for this time of year? Y	es <u>v</u> No	_ (If no, explain in Remarks.)			
Are Vegetation, Soil	, or Hyd	Irology	significantly distur	bed? Are "Norn	nal Circumstances" present? Yes <u>v</u> No			
Are Vegetation, Soil	, or Hyd	Irology	naturally problema	atic? (If needed	l, explain any answers in Remarks.)			
SUMMARY OF FINDING	3S – Atta	ch site	map showing sam	pling point locat	ions, transects, important features, etc.			
Hvdrophytic Vegetation Pres	ent?	Yes 🖌	No	Is the Sampled Area	3			
Hydric Soil Present?		Yes 🖌	No	within a Wetland?	Yes 🗹 No			
Wetland Hydrology Present?		Yes 🖌	No	If yes, optional Wetla	nd Site ID:			
Remarks: (Explain alternativ	e procedures	here or	in a separate report.)					
The sedge meadow	is locate	ed with	nin a depression	and is part of a	a large wetland complex that			
HYDROLOGY								
Wetland Hydrology Indicat	ors:				Secondary Indicators (minimum of two required)			
Primary Indicators (minimum	of one is req	uired; ch	eck 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)			
Vator Marks (B1)		Dry-Season Water Table (C2)						
Sediment Deposits (B2)		es on Living Roots (C?	Craylish Burrows (C8)					
Drift Deposits (B3)		-	Presence of Reduced	I Iron (C4)	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4)	Algal Mat or Crust (B4) Presence of Reduced from (C4) Recent Iron Reduction in Tilled Soils (C				ils (C6) \checkmark Geomorphic Position (D2)			
Iron Deposits (B5) Thin Muck Surface (C7)					Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)					Microtopographic Relief (D4)			
Sparsely Vegetated Cor	cave Surface	e (B8)			✓ FAC-Neutral Test (D5)			
Field Observations:								
Surface Water Present?	Yes 🖌	No	Depth (inches): <u>1</u>					
Water Table Present?	Yes 🖌	_ No	Depth (inches): 0					
Saturation Present?	Yes 🖌	_ No	Depth (inches): 0	Wetland	d Hydrology Present? Yes <u> Ves </u>			
Describe Recorded Data (str	eam daude. I	nonitorin	g well, aerial photos, pre	vious inspections), if a	vailable:			
, , , , , , , , , , , , , , , , , , ,	55,		5, 1, 1	1 //				
Remarks:	mo is sor	sona	lly saturated Su	faco wator is n	recent at the time of the survey			
with a high water to	hle and a	asura	tion to the ourfoor	nace water is p	resent at the time of the survey			
with a high water ta	ble and s	salura		e.				

Sampling Point: wasb1004e_w

	Absolute	Dominan	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u>)	% Cover	<u>Species</u> ?	<u>Status</u>	Number of Dominant Species
1		·		That Are OBL, FACW, or FAC: (A)
2		· <u> </u>		Total Number of Dominant
3		·	<u> </u>	Species Across All Strata: (B)
4		·	<u> </u>	Percent of Dominant Species
5		·	<u> </u>	(A'B)
6				Prevalence Index worksheet:
7		·	<u> </u>	Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species <u>46</u> x 1 = <u>46</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)				FACW species9 x 2 =18
1			<u> </u>	FAC species <u>1</u> x 3 = <u>3</u>
2				FACU species $1 \times 4 = 4$
3.				UPL species $0 \times 5 = 0$
4.				Column Totals: <u>57</u> (A) <u>71</u> (B)
5			·	Prevalence Index = B/A = <u>1.2456140350877194</u>
6				Hydrophytic Vegetation Indicators:
7		·		 1 - Rapid Test for Hydrophytic Vegetation
·		- Total Ca		∠ 2 - Dominance Test is >50%
Hade Objectures (Distributed on E			ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>5</u>)	20	V		4 - Morphological Adaptations ¹ (Provide supporting
	<u> </u>	<u> </u>		data in Remarks or on a separate sheet)
2. <u>Spiraea alba</u>		<u> </u>	FACW	
3. <u>Lycopus americanus</u>	5	<u> N </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Carex stipata</u>	5	<u> N </u>	OBL	be present, unless disturbed or problematic.
5. <u>Eupatorium perfoliatum</u>	2	<u>N</u>	<u>FACW</u>	Definitions of Vegetation Strata:
6. <u>Carex pellita</u>	2	N	OBL	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Cicuta maculata</u>	2	N	OBL	at breast height (DBH), regardless of height.
8. <u>Juncus effusus</u>	2	N	OBL	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Onoclea sensibilis</u>	1	N	FACW	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Taraxacum officinale</u>	1	N	<u>FACU</u>	Herb – All herbaceous (non-woody) plants, regardless
11. <u>Equisetum arvense</u>	1	N	FAC	of size, and woody plants less than 3.28 ft tall.
12. Phalaris arundinacea	1	Ν	FACW	Woody vines – All woody vines greater than 3.28 ft in
	57	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)		_		
1				
··		·	<u></u>	
2				the developed of
		·	·	Hydrophytic Vegetation
4			<u> </u>	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a congrate o	U		ver	
			• •	

The feature is representative of a sedge meadow with interrupted ground cover dominated by Carex cf. stricta. Vegetation is predominantly present around the tussocks with remnant biomass and leaf litter in areas of standing water.

SOIL

Profile Desc	ription: (Describe t	o the dep	oth needed	to docun	nent the i	indicator	or confirm	the absence	of indicators.)	
Depth	Matrix	Matrix Redox Features				0				
(inches)	Color (moist)	%	<u>Color (n</u>	noist)	%	Type ¹	Loc ²	Texture	Remarks	
0-10	<u>7.5YR 2.5/1</u>	90	<u>7.5YR</u>	5/6	10	<u>C</u>	M	SL		
10-18	7.5YR 4/4	95	7.5YR	5/6	5	С	Μ	SICL		
					·	·				
					·	·				
					·	·				
					·	·				
					·	·				
¹ Type: C=C	oncentration, D=Deple	etion, RM	=Reduced N	/atrix, 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)		Polyva	lue Belov	v Surface	(S8) (LRF	RR,	2 cm Muck (A10) (LRR K, L, MLRA 149B)		
Histic Ep	oipedon (A2)		MLF	RA 149B)	(00) (Coast Prairie Redox (A16) (LRR K, L, R)		
Black HI Hydroge	suc (A3) en Sulfide (A4)			ark Suria Mucky N	ice (59) (L /lineral (F	1) (I RR K	LRA 149B)	5 cm Mucky Peat or Peat (53) (LRR K, L, R) Dark Surface (S7) (LRR K, L)		
Stratified	d Layers (A5)		Loamy	Gleyed I	Matrix (F2	!) !)	, _/	Polyva	alue Below Surface (S8) (LRR K, L)	
Depleted	d Below Dark Surface	(A11)	Deplet	ed Matrix	(F3)			Thin D	Park Surface (S9) (LRR K, L)	
Thick Da	Thick Dark Surface (A12)							Iron-Manganese Masses (F12) (LRR K, L, R)		
Sandy M	Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)							Piedmont Floodplain Soils (F19) (MLRA 149B)		
Sandy G	Sandy Gleyed Matrix (S4) Redox Depressions (F8)							Mesic Spodic (1A6) (MLRA 144A, 145, 149B) Red Parent Material (E21)		
Sandy R	Sandy Redox (S5) Stripped Matrix (S6)						Verv S	Shallow Dark Surface (TF12)		
Dark Surface (S7) (LRR R, MLRA 149B)						Other	(Explain in Remarks)			
									,	
³ Indicators o	f hydrophytic vegetati	on and w	etland hydro	logy mus	t be prese	ent, unless	s disturbed	or problematio	o.	
Restrictive	Layer (if observed):									
Type:										
Depth (in	ches):							Hydric Soil	Present? Yes <u><</u> No	
Remarks:										
Soils are sandy loam above silty clay loam with redox present throughout. Soils meet the F6										
indicator for hydric soils.										




wasb1004e_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):		
wasb1004	2020-05-28		
Location:	Ecological Landsca	ipe:	
PLSS: sec 08 T045N R003W	Lake Superior Clay Plain		
Lat: <u>46.386365</u> Long: <u>-90.762975</u>	Watershed:		
	LS12, Marengo River		
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes. Cornucopia	Wetland Type(s):		
silt loam, 15 to 45 percent slopes.	PFO/PSS/PEM - Hardwood swamp/shrub-carr/fresh (wet)		
Field Verified:	meadow complex		
Series not verified. Solis were a slit loam over slit in the forested	Wetland Size:	Wetland Area Impacted	
sandy loam over sandy clay loam in the emergent component. Soils were	4.9353	4.9353	
thus relatively consistent in type, as well as reduced soil presence,	Vegetation:		
throughout the wetland.	Plant Community Description(s):		
Hydrology: The feature is characterized by undulating topography with significant portions of the wetland complex	Vegetation within the forested component of the green ash, with paper birch scattered throughout scouring-rush with abundant green ash saplings	wetland is representative of northern hardwood swamp dominated by quaking aspen and . Green ash is most prevalent in the understory. Ground cover is dominated by tall and fern species. Vegetation within the shrub component of the wetland is representative	
located on slopes. The hydrologic regime is seasonally saturated with mostly discharge hydrology, though the emergent component of the welland exhibits recharge hydrology. Discharge is coming from the south	of a fresh (wet) meadow system dominated by an shrub cover present within the feature characteriz characterized as a fresh (wet) meadow. The grou	sple trees with speckled alder, quaking aspen, and willow species present throughout. The zes it as a shrub community, though in a natural setting the feature would be ind cover is dominated by araminoids and sensitive fern. Throughout the wetland. many	
moving north through the feature, and feeds into a network of streams running through the complex. A high water table was observed throughout the feature including upslope. Surface water is present within	upland species, particularly graceful sedge, were the emergent component is representative of a s	observed, but the system is highly disturbed due to past land use. The vegetation within edge meadow with interrupted ground cover dominated by Carex cf. stricta. Vegetation is	
the lowest portions of the wetland complex.	precommany present around the tussocos, with part ground covered by remnant biomass and real inter in areas of standing water. The emergent component continues to a roadside ditch dominated by reed canary grass and woodland horsetail. Meadow willow is also present within the roadside 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	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	Y	Y	3 or more strata present (>10% cover)
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	N	N	100 m buffer – natural land cover <a>>50% (south) 75% (north) intact
5	Ν	Ν	Occurs in a Joint Venture priority township
6	Y	Y	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	N	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	N	N	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present > 45 days
10		× ×	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	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	N	Y	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	Y	Y	Water flow through wetland is NOT channelized
3	Ν	Y	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	Ν	Within a watershed with <a href="mailto: 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	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	Y	Y	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	Y	Stormwater or surface water from agricultural land is major hydrology source
8	Y	Y	Discharge to surface water
9	N	Y	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	Y	Y	Springs, seeps or indicators of groundwater present
2	N	Ν	Location near a groundwater divide or a headwater wetland
3	N	Ν	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

SP-2: Soils are fairly sandy throughout the feature.

GW-1: The feature exhibits discharge hydrology.

ST-3, WQ-5: Within the shrub component of the wetland complex, there is dense persistent vegetation throughout the feature, barring the lowest area with current surface water. Ground cover is less dense within the forested component and portions of the emergent component of the wetland complex. The roadside ditch is relatively densely vegetated with abundant downed woody debris limiting some areas.

ST-5: The complex is located near a gravel road and receives stormwater runoff from it and the surrounding area.

WH-10, FA-2: Current standing water provides temporary habitat for frogs and toads within the shrub and emergent components of the wetland. There are ephemeral streams present within the forested component that may also provide temporary habitat for frogs and toads.

WQ-8: The feature discharges to a network of ephemeral streams within the complex.

WQ-7: The emergent component of the wetland is located adjacent to a hay field and receives runoff from the field after precipitation events.

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 present within the standing water of the feature
Y	Y	Avians / shrub and tree cover
Y	Y	Black bears / scat observed
Y	Y	Deer / tracks observed

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 pennsylvanica*			PSS, PFO, PEM	Patchy
Populus tremuloides*			PSS, PFO	Rare
Alnus incana*			PSS	Rare
Carex gracillima*			PSS, PEM	Rare
Equisetum hyemale			PSS, PFO	Rare
Malus domestica*			PSS	Rare
Onoclea sensibilis*			PSS, PFO, PEM	Rare
Acer rubrum			PSS, PFO	Barren
Athyrium filix-femina			PFO	Barren
Carex arctata			PSS	Barren
Carex stricta			PEM	Barren
Fragaria virginiana			PSS, PFO, PEM	Barren
Phalaris arundinacea			PEM	Barren
Salix bebbiana			PSS	Barren
Salix petiolaris			PSS, PEM	Barren
Acer negundo			PFO, PEM	Barren
Acer saccharum			PFO	Barren
Barbarea vulgaris			PEM	Barren
Betula papyrifera			PFO	Barren
Carex castanea			PSS	Barren
Carex crinita			PFO	Barren
Carex pellita			PEM	Barren
Carex stipata			PEM	Barren
Cicuta maculata			PEM	Barren
Cornus racemosa			PSS, PEM	Barren
Cornus sericea			PSS	Barren
Equisetum arvense			PSS, PFO, PEM	Barren
Equisetum pratense			PFO	Barren

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

There is high overall diversity within the feature with good representation of native species. Non-native species are scattered throughout the wetland complex.

Additional species: Equisetum sylvaticum (Plant Communities: PEM, Abundance: Barren), Geum cf. aleppicum (Plant Communities: PSS, PEM, Abundance: Barren), Impatiens capensis (Plant Communities: PEM, Abundance: Barren), Juncus effusus (Plant Communities: PSS, PEM, Abundance: Barren), Leucanthemum vulgare (Plant Communities: PSS, Abundance: Barren), Leucanthemum vulgare (Plant Communities: PSS, Abundance: Barren), Leucanthemum vulgare (Plant Communities: PSS, Abundance: Barren), Lycopus americanus (Plant Communities: PEM, Abundance: Barren), Leucanthemum vulgare (Plant Communities: PSS, Abundance: Barren), Lycopus americanus (Plant Communities: PEM, Abundance: Barren), Nedicago cf. sativa (Plant Communities: PSS, Abundance: Barren), Pyrola elliptica (Plant Communities: PSS, Abundance: Barren), Pyrola elliptica (Plant Communities: PSO, Abundance: Barren), Ranunculus acris (Plant Communities: PSS, Abundance: Barren), Solidago canadensis (Plant Communities: PSS, Abundance: Barren), Solidago canadensis (Plant Communities: PSS, Abundance: Barren), Solidago canadensis (Plant Communities: PSS, Abundance: Barren), Taraxacum officinale (Plant Communities: PSS, Abundance: Barren), Taraxacum officinale (Plant Communities: PSS, Abundance: Barren), Tieraxacum officinale (Plant Communities: PSS, Abundance: Barren), Viola labradorica (Plant Communities: PEM, Abundance: B

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
Х	Х		М	С	Drainage – tiles, ditches
					Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
Х	Х		L	С	Polluted runoff
					Pond construction
					Agriculture – row crops
	Х		M	С	Agriculture – hay
					Agriculture – pasture
	Х		M	С	Roads or railroad
Х	Х		L	UC	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	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		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):
		Х	Н	С	Apple orchard

* 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 complex has been historically disturbed. The wetland is located within, and adjacent to, a fallow apple orchard that has had a significant impact on composition. The feature is located near a gravel road and receives stormwater from the road and surrounding area, including a hay field. The surrounding area is impacted by the roadway and associated ditches, as well as runoff. There is also an above-ground utility corridor running alongside the road to the north.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	There is high overall diversity within the feature represented by
	native species. Some non-native species are also present.
Human Use Values	The feature is located on private land and appears to be used for hunting purposes.
	stand and feed plot located near the forested and emergent components of the
	wetland. Part of the feature is located along the road and is visible to the public.
Wildlife Habitat	There is a diverse assemblage of habitats present within the wetland complex, including forested, shrub, and emergent wetlands, as well as a network of streams running through the feature. The feature provides temporary aquatic habitat for frogs and toads as observed within the wetland. Tree and shrub cover provides habitat for avians. Evidence of deer and black bears is present throughout the surrounding area.
Fish and Aquatic Life	Shallow standing water within the shrub and emergent components
Habitat	of the wetland, as well as the connected streams, provide habitat for
	frogs and toads. There is no potential fish habitat.
Shoreline Protection	The wetland complex is associated with a network of streams.
	Erosion is apparent along the banks of some of the stream features.
Flood and Stormwater	The forested and shrub components of the feature are located on slopes, and the emergent
Storage	and surrounding area. Overall discharge hydrology is present. There is dense persistent
	vegetation throughout portions of the wetland complex, barring low areas of pooling water.
Water Quality	See above. The feature is associated with a network of streams.
FIDIECIDI	The feature also receives runoff from an adjacent hay field.
Groundwater	The complex exhibits recharge and discharge hydrology with a high
11000305	water table throughout.

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: Ashland	Sampling Date: 2020-05-28
Applicant/Owner: Enbridge	_ State: <u>Wisconsin</u> Sampling Point: <u>wasb1004_u1</u>	
Investigator(s): <u>SAM/KDF</u>	Section, Township, Range: <u>Se</u>	ec 08 T045N R003W
Landform (hillslope, terrace, etc.): Rise	Local relief (concave, convex, nor	ne): <u>None</u> Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46	5.386075 Long: -90).763106 Datum: WGS84
Soil Map Unit Name: Kellogg-Allendale-Ashwaba	ay complex, 2 to 6 percent slop	DES NWI classification:
Are climatic / hydrologic conditions on the site typical for thi	s time of year? Yes ✔ No	 (If no, explain in Remarks.)
Are Vegetation . Soil . or Hydrology s	significantly disturbed? Are "Normal	Circumstances" present? Yes 🗸 No
Are Vegetation Soil or Hydrology r	naturally problematic? (If needed e	explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map	showing sampling point location	ins, transects, important features, etc.
Hydrophytic Vegetation Present? YesN Hydric Soil Present? YesN Wetland Hydrology Present? YesN Remarks: (Explain alternative procedures here or in a sep Sample point well elevated above when apple orchard that slopes down to the r	Is the Sampled Area within a Wetland? Io <u>v</u> If yes, optional Wetland parate report.) re the wetland point was reconcernent.	Yes No
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all	that apply)	Surface Soil Cracks (B6)
High Water Table (A2)	er-Stained Leaves (B9)	Drainage Patterns (B10) Moss Trim Lines (B16)
$\sum_{i=1}^{i=1} \max_{j=1}^{i=1} $		Dry-Season Water Table (C2)
Water Marks (B1)	Cravfish Burrows (C8)	
Sediment Deposits (B2) Oxid	Saturation Visible on Aerial Imagery (C9)	
Drift Deposits (B3) Pres	sence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	ent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)	Shallow Aguitard (D3)	

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 Conc	ave Surface (B8)			FAC-Neutral Test (D5)		
Field Observations:						
Surface Water Present?	Yes No	~	_ Depth (inches):			
Water Table Present?	Yes 🖌 No		Depth (inches): <u>15</u>			
Saturation Present? (includes capillary fringe)	Yes <u>No</u>	~	_ Depth (inches):	Wetland Hydrology Present? Yes No _	~	

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

Remarks:

Water table at 15 inches. Surrounding area with obvious discharge that is the primary hydrologic source for the associated wetland. Sample recorded on a slope with no evidence of sheet flow, thus confirming the hydrologic source for the wetland.

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wasb1004_u1</u>

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	t Indicator Status	Dominance Test worksheet:
1			·	That Are OBL, FACW, or FAC: (A)
2			·	Total Number of Dominant
3			·	Species Across All Strata: (B)
4			·	Percent of Dominant Species
5			·	
6			·	Prevalence Index worksheet:
7			·	Total % Cover of: Multiply by:
		= Total Co	ver	OBL species $()$ $x = 0$
Sapling/Shrub Stratum (Plot size: 15)	00	V		FACW species 0 $x_2 = 0$
1. <u>Maius domestica</u>	20	<u> </u>	<u> </u>	FACU species $69 \times 4 = 276$
2				UPL species <u>12</u> x 5 = <u>60</u>
3			·	Column Totals: <u>92</u> (A) <u>369</u> (B)
45			·	Prevalence Index = B/A = <u>4.010869565217392</u>
6			<u> </u>	Hydrophytic Vegetation Indicators:
7			<u> </u>	1 - Rapid Test for Hydrophytic Vegetation
	20	- Total Co	vor	2 - Dominance Test is >50%
Horb Stratum (Blot size: 5	_20_	- 10(a) C0	vei	3 - Prevalence Index is ≤3.0 ¹
<u>Herb Stratum</u> (Piot size)	50	Y	FACU	4 - Morphological Adaptations ¹ (Provide supporting
2 Leucanthemum vulgare	<u> </u>	 N		Problematic Hydrophytic Vegetation ¹ (Explain)
3. Carey gracillima	<u></u> 10	<u> </u>	FACU	
A Acer rubrum	_ <u></u> 5	<u>N</u>	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must
5. Potentilla simplex	 5	<u>N</u>	FACU	
6 Solidado canadensis	2	<u> </u>	FACU	Definitions of Vegetation Strata:
7 Symphyotrichum of cordifolium	2	<u> </u>	1700	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8 Ranunculus acris	2	<u>N</u>	FAC	at breast neight (DBH), regardless of neight.
 Asclenias syriaca 		<u>N</u>		Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10 Fragaria virginiana	2	 N		
10. <u>Tragana virginiana</u>	2	N		of size, and woody plants less than 3.28 ft tall.
12 Equisotum anyonso	2	<u> </u>		Woody vines – All woody vines greater than 3.28 ft in
				height.
Woody Vine Stratum (Plot size: 30)		= Total Co	ver	
1.				
2.				
3.				Hydrophytic
4.				Vegetation
	0	= Total Co	ver	Present? Yes No
Remarks: (Include photo numbers here or on a separate	sheet.)			
Planted apple orchard. Immediate area	a domina	ated by	Carex g	racillima and pale bellwort along with
cultivated apple.				

SOIL

Profile Desc	ription: (Describe te	o the depth	needed to docum	ent the i	indicator	or confirm	the absence	of indicators.)		
Depth	Matrix		Redox	Feature	s					
(inches)	Color (moist)	<u>%</u> _	Color (moist)		Type ¹	Loc ²	Texture	Remarks		
	<u>7.5YR 3/2</u>	100		0	·		SICL	gritty		
<u>14-18</u>	<u>7.5YR 3/3</u>	_50		0	·		SL			
14-18	<u>7.5YR 3/2</u>	50		0	·		SL			
					·					
					·					
					·					
					·					
					·					
					·					
1 Type: C=C		tion RM=6	Peduced Matrix MS	=Masker	Sand Gr	ains		PI = Pore Lining M=Matrix		
Hydric Soil	Indicators:			-Masket		amo.	Indicators	for Problematic Hydric Soils ³ :		
Histosol	(A1)	_	Polyvalue Below	Surface	(S8) (LRF	RR,	2 cm M	Muck (A10) (LRR K, L, MLRA 149B)		
Histic Ep	bipedon (A2)		MLRA 149B)	(00) (Coast	Prairie Redox (A16) (LRR K, L, R)		
Black Hi Hydroge	stic (A3) en Sulfide (A4)	_	_ Thin Dark Surfac	ce (S9) (I ineral (F	LRR R, MI 1) (LRR K	_RA 149B) . L)	5 cm M Dark S	Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L)		
Stratified	d Layers (A5)	_	Loamy Gleyed N	/atrix (F2	?)	, _,	Polyvalue Below Surface (S8) (LRR K, L)			
Depleted	d Below Dark Surface	(A11)	_ Depleted Matrix	(F3)			Thin Dark Surface (S9) (LRR K, L)			
Thick Da	ark Surface (A12)	_	Redox Dark Sur Depleted Dark S	tace (F6) Surface (F	-7)		Iron-Manganese Masses (F12) (LRR K, L, R)			
Sandy N Sandy G	Gleved Matrix (S4)		Redox Depressi	ons (F8)	1)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
Sandy R	Redox (S5)	_		()			Red P	arent Material (F21)		
Stripped	Matrix (S6)						Very Shallow Dark Surface (TF12)			
Dark Su	rface (S7) (LRR R, M	LRA 149B)					Other	(Explain in Remarks)		
³ Indicators of	f hydrophytic vegetati	on and wetl	and hydrology must	be prese	ent, unless	disturbed	or problemation	D.		
Restrictive I	Layer (if observed):									
Туре:										
Depth (ind	ches):						Hydric Soil	Present? Yes No 🗸		
Remarks:							·			
wixed ma	atrix for the B r	norizon.								



wasb1004_u1_E



wasb1004_u1_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

			•
Project/Site: Line 5 Relocation Project	City/County:	Ashland	Sampling Date: <u>2020-05-29</u>
Applicant/Owner: Enbridge			_ State: <u>Wisconsin</u> Sampling Point: <u>wasb1004_u2</u>
Investigator(s): <u>KDF/SAM</u>	Section, Tov	vnship, Range: <u>S</u>	ec 08 T045N R003W
Landform (hillslope, terrace, etc.): <u>Talf</u>	Local relief (cor	ncave, convex, nor	ne): <u>None</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat.	46.386557	Long: -90	0.761886 Datum: WGS84
Soil Map Unit Name: Kellogg-Allendale-Ashw	abay complex. 2 to 6	5 percent slop	Des NWI classification:
Are climatic / hydrologic conditions on the site typical fr	or this time of year? Yes	V No	(If no, explain in Remarks)
Are Vegetation Soil or Hydrology	significantly disturbed?	Are "Normal	
Are Vegetation, Soli, or Hydrology			
Are vegetation, Soli, or Hydrology	naturally problematic?	(ii needed, e	explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site m	nap showing sampling	g point locatio	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes Remarks: (Explain alternative procedures here or in The upland area is located within a the opening is used for a feed plot.	No v lis the within No v lif yes a separate report.)	e Sampled Area n a Wetland? a, optional Wetland rrounded by	Yes No Site ID: quaking aspen and green ash.
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; chec	k all that apply)		Secondary Indicators (minimum of two required) 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) iving Deete (C2)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on I	LIVING ROOLS $(C3)$	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Recent Iron Reduction in Ti	led Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)		Shallow Aguitard (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 H	lydrology Present? Yes No∕
(includes capillary fringe)	vell aerial photos, previous i	nepections) if ava	ilable:
Describe Recorded Data (stream gauge, monitoring r	veli, aeliai pilotos, pievious i	nspections), il ava	
Remarks: No indicators of wetland hydrology v	were observed.		

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1004_u2

Trop Stratum (Blot size: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:
		Species?	Status	Number of Dominant Species
1	<u></u>			That Are OBL, FACW, or FAC:() (A)
2				Total Number of Dominant
3	·			Species Across All Strata: (B)
4				Percent of Dominant Species
5	·			$\begin{array}{c} \text{That Ale OBL, FACW, OF FAC.} \\ \underline{\textbf{U}} \\ \end{array} $
6	·	·		Prevalence Index worksheet:
7	·			Total % Cover of: Multiply by:
	0	= Total Cov	/er	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =4
1				FAC species $3 \times 3 = 9$
2	. <u> </u>			FACU species 30 x 4 = 120
3				UPL species 15 $x_5 = 75$
4.				Column Totals: 50 (A) 208 (B)
5				Prevalence Index = B/A = <u>4.16</u>
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
··	0	- Total Co		2 - Dominance Test is >50%
Horb Stratum (Plat aize: 5				3 - Prevalence Index is ≤3.0 ¹
A Trifolium protonoo	20	V	EACU	4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Inioium pratense</u>		 		Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Taraxacum officinale</u>		<u> </u>	FACU	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Solidago cf. canadensis</u>	5	<u> N</u>	FACU	be present, unless disturbed or problematic.
5. <u>Bromus inermis</u>	5	<u> N </u>	UPL	Definitions of Vegetation Strata:
6. <u>Fraxinus pennsylvanica</u>	2	N	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Equisetum arvense</u>	1	<u> N </u>	FAC	at breast height (DBH), regardless of height.
8. <u>Equisetum hyemale</u>	1	N	FAC	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Barbarea vulgaris</u>	1	<u> N </u>	FAC	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
	50	= Total Cov	/er	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2.				
3.				Hydrophytic
4.	<u> </u>			Vegetation
	0	= Total Cov	/er	Present? Yes No 🗸
Remarks: (Include photo numbers here or on a separate s	sheet.)			
The vegetation is representative of upla	and. The	e ground	d cover	within the sample plot is dominated by

red clover with oxeye daisy and smooth brome present throughout. Outside of the sample plot, Canada goldenrod and reed canary grass are prevalent. Garden-yellow rocket is also scattered throughout the upland area. A few red and white pines are scattered throughout the opening.

SOIL

Profile Desc	cription: (Describe t	to the depth	needed to docun	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
0-6	7.5YR 3/2	100		0			L	
					·			
					·			
					·			
					·			
					·			
					·			
					·			
¹ Type: C=Co	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	S=Maske	d Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators 1	for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Belov	v Surface	(S8) (LRI	R R,	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	ce (S9) (I	LRR R, MI	LRA 149B)	5 cm M	ucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)		Loamy Mucky M	lineral (F	1) (LRR K	(, L)	Dark Su	urface (S7) (LRR K, L)
Stratified	d Layers (A5)		Loamy Gleyed I	Matrix (F2	2)		Polyval	ue Below Surface (S8) (LRR K, L)
Depleted	d Below Dark Surface	e (A11)	Depleted Matrix	(F3)			Thin Da	ark Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)		Redox Dark Su	face (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Sandy M	/ucky 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 S	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy R	Redox (S5)	_	_ '	(-)			Red Pa	rent Material (F21)
Stripped	I Matrix (S6)						Verv Sł	nallow Dark Surface (TF12)
Dark Su	rface (S7) (LRR R. M	ILRA 149B)					Other (Explain in Remarks)
	()()	- /						, ,
³ Indicators of	f hydrophytic vegetat	ion and wetl	and hydrology mus	t be pres	ent, unless	s disturbed	or problematic.	
Restrictive I	Laver (if observed):		, ,,	•	,			
	abbla							
Type. <u>C(</u>								
Depth (ind	ches): <u>6.0</u>						Hydric Soll	Present? Yes No V
Remarks:							•	
Soils are	loam through	out the o	observed pro	file wit	th a res	strictive	layer of co	obble present at 6 inches
below the	e soil surface		•				2	·



wasb1004_u2_E



wasb1004_u2_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling Date: 2020-06-01
	_ only/county: <u>//onlund</u>	State: Wisconsin Sampling Date: 2020 00 01
	Oction Translin Denne O	
	_ Section, Township, Range: <u>5</u>	
Landform (hillslope, terrace, etc.): <u>Depression</u> L	ocal relief (concave, convex, no	ne): <u>CONCAVE</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): <u>Northcentral Polests</u> Lat: <u>46.3931</u> ?	12Long: <u>-90</u>	0.779518 Datum: WGS84
Soil Map Unit Name: Portwing-Herbster complex, 0 to	6 percent slopes	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of \underline{y}	year? Yes <u>✓</u> No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	ly disturbed? Are "Norma	Il Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally p	oroblematic? (If needed,	explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	g sampling point location	ons, 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 rep The wetland is a seasonally saturated wet me dominated by Canada bluejoint, wild black cu water at the time of survey. Two culverts drain	Is the Sampled Area within a Wetland? If yes, optional Wetland ort.) adow located within a rrant, and spotted tou n into the wetland and	Yes No d Site ID: a roadside ditch. The feature is ich-me-not and has standing d one drains out of the wetland.
HYDROLOGY Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply	<u>')</u>	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stainer	d Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Faun	a (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits	; (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Su	Itide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhiz	cospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of P	Reduced Iron (C4)	Stunted of Stressed Plants (D1)
Algai Mat of Clust (B4) Recent from P		Geomorphic Position (D2) Shellow Aguitard (D2)
ITOIT Deposits (B3) Thin Muck St	nin Pomarka)	Shallow Aquitard (D3) Microtopographic Poliof (D4)
Sparsoly Vogetated Conceve Surface (R8)	in Remarks)	Microlopographic Relief (D4)
Field Observations:		
Surface Water Present? Ves 🗸 No. Depth (inche	as): 0.5	
Water Table Present? Ves No 🖌 Depth (inche	(5). <u>0.0</u>	
Saturation Present? Ves No / Depth (inche	s)Wetland (Hydrology Bresent? Ves 🗸 No
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial pho	tos, previous inspections), if ava	aliadie:
The feature is a seasonally saturated roadsid	e ditch and likely rece	eives surface water runoff from the
paved highway. Two culverts drain into the w	etland, and the wetlar	nd drains into a third culvert.

VEGETATION – Use scientific names of plants.

Sampling Point: wasc1006e_w

Trop Stratum (Plot size: 30)	Absolute	Dominant	t Indicator	Dominance Test worksheet:
1 Fravinus americana	<u></u> 5	V		Number of Dominant Species
2. Fravinus poppsylvanica	<u> </u>	 		That are OBL, FACW, or FAC: 4 (A)
			<u>17011</u>	Total Number of Dominant Species Across All Strata: 5 (B)
A			·	
T		·		That Are OBL, FACW, or FAC: 80 (A/B)
6	_	·		
7		·		Prevalence Index worksheet:
··	10	– Total Co		OBL species 10 × 1 = 10
Sapling/Shruh Stratum (Plot size: 15)		- 10tal C0	vei	FACW species $62 \times 2 = 124$
1 Dibos amoricanum	15	V		FAC species $12 \times 3 = 36$
			FACW	FACU species <u>11</u> x 4 = <u>44</u>
2			<u> </u>	UPL species x 5 =
3		·		Column Totals: <u>95</u> (A) <u>214</u> (B)
4			·	Prevalence Index = B/A = 2.2526315789473683
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 Impatiens capensis	30	Y	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Calamagrostis canadensis	<u> </u>	Ý	OBI	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Equisetum arvense	_ <u></u> 7	N	FAC	
4 Ribes americanum	7	<u> </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must
5. Rubus idaeus	5	 N	FAC	Definitions of Manufactions Objection
6 Solidago gigantea	5	 N	FACW	Definitions of Vegetation Strata:
7 Fragaria virginiana	2	 N	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8 Parthenocissus quinquefolia	2	 N	FACU	
 Sonchus arvensis 	2	 N	FACU	and greater than or equal to 3.28 ft (1 m) tall.
10			17.00	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
·	70	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)	<u> </u>	- 10(a) 00	VEI	
1		·	·	
2			·	Hadron In Co.
3			·	Vegetation
· +		– Total Co	vor	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	sheet.)	- 10(a) 00	VCI	
The feature is a wet meadow dominate	d by sp	otted to	uch-me-	not, wild black currant, and Canada
bluejoint. White ash and green ash are	presen	t on the	edge of	the wet meadow.

inches) Color (moist) %	$\frac{\text{Redox realures}}{\text{Color (moist)}} \qquad \% \qquad \text{Type}^1 \qquad \text{Loc}^2$	Texture Remarks	
		<u>Texture</u> <u>Remains</u>	
	·		
	·		
	·		
	·		
	·		
	·		
ype: C=Concentration, D=Depletion, RM	I=Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.	
ydric Soil Indicators:		Indicators for Problematic Hydric Soil	ls³:
_ 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	R K, L, R
_ Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1) (LRR K, L)	Dark Surface (S7) (LRR K, L)	
_ Straulled Layers (A5) Depleted Bolow Dark Surface (A11)	Loamy Gleyed Matrix (F2)	Polyvalue Below Surface (S8) (LRR	K , L)
Thick Dark Surface (A12)	Bedox Dark Surface (F6)	Iron-Manganese Masses (F12) (I RI	RKIF
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	Piedmont Floodplain Soils (F19) (M	LRA 149
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	Mesic Spodic (TA6) (MLRA 144A, 1	45, 149
Sandy Redox (S5)		Red Parent Material (F21)	
_ Stripped Matrix (S6)		Very Shallow Dark Surface (TF12)	
_ Dark Surface (S7) (LRR R, MLRA 149	B)	 Other (Explain in Remarks) 	
ndicators of hydrophytic vegetation and w	etland hydrology must be present, unless disturbed	or problematic.	
estrictive Layer (if observed):			
Туре:			
Depth (inches):		Hydric Soil Present? Yes <u><</u> N	lo
emarks:			
oils were not sampled due t	to the feature's location in a roadsid	de right-of-way and likely pro	kimity
nderground utilities. Howev	er, soils are assumed to be hydric b	based on the dominance of	
vdrophytic vegetation and v	vetland hydrology.		
	-)		



wasc1006e_w_NW



wasc1006e_w_SE

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	KDF/SAM Č			
File #:	Date of visit(s):			
wasb1006	2020-05-29			
Location:	Ecological Landsca	ape:		
PLSS: sec 08 T045N R003W	Lake Superior Clay Plair			
Lat: <u>46.385689</u> Long: <u>-90.763194</u>	Watershed:			
	LS12, Marengo River			
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u>				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes	Wetland Type(s):			
	PSS - Alder thicket			
Field Verified:				
Series not verified. Soils were silty clay loam throughout	Wetland Size:	Wetland Area Impacted		
the profile with redox starting at 8 inches below the soil	0.1210	0.1210		
surface. There is a restrictive cobble layer at 14 inches.	Vegetation:			
	Plant Community D	Description(s):		
Hydrology:	The vegetation is repr	esentative of an alder thicket dominated		
The feature is located with a subtle depression. The hydrologic regime is	by speckled alder with apple and red maple scattered			
seasonally saturated. The feature predominately exhibits recharge	throughout. There is interrupted ground cover within the			
observed within the upland. The feature receives runoff from the	feature due to shading	from the shrub stratum. Ground cover is		
surrounding area, including a roadway.	dominated by gramind	nus anu sensitive tern.		
Hydrology: The feature is located with a subtle depression. The hydrologic regime is seasonally saturated. The feature predominately exhibits recharge hydrology with some discharge, as evidenced by a low water table observed within the upland. The feature receives runoff from the surrounding area, including a roadway.	The vegetation is representative of an alder thicket dominated by speckled alder with apple and red maple scattered throughout. There is interrupted ground cover within the feature due to shading from the shrub stratum. Ground cover is dominated by graminoids and sensitive fern.			

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	Y	Y	Visually or physically accessible to public
4	Ν	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	N	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	Ν	N	3 or more strata present (>10% cover)
3	Ν	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	N	Y	100 m buffer – natural land cover <u>></u> 50%(south) 75% (north) intact
5	N	N	Occurs in a Joint Venture priority township
6	N	N	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	N	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	N	N	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present >45 days
10	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	Ν	N	Wetland is connected or contiguous with perennial stream or lake
2	Ν	N	Standing water provides habitat for amphibians and aquatic invertebrates
3	Ν	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	Ν	N	Vegetation is inundated in spring
SP			Shoreline Protection
1	Ν	N	Along shoreline of a stream, lake, pond or open water area (<u>></u> 1 acre) - if no, not applicable
2	NI	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	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	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	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	Y	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	N	N	Springs, seeps or indicators of groundwater present
2	Ν	N	Location near a groundwater divide or a headwater wetland
3	Ν	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

HU-3: The feature is visible from a public road but is located on private land. WH-7: Shrub cover may provide habitat for songbirds.

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

WQ-5: Portions of the wetland exhibit dense persistent vegetation, but shading from the shrub cover limits the density of vegetation.

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

Observed	Potential	Species/Habitat/Comments			
Y	Y	Avians / shrub cover of speckled alder and apple trees			
Y	Y	Deer / rubs on shrub trunks and tracks observed			

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
Carex gracillima*			PSS	Rare
Malus domestica			PSS	Rare
Onoclea sensibilis			PSS	Rare
Acer rubrum			PSS	Rare
Carex arctata			PSS	Rare
Equisetum arvense			PSS	Barren
Fragaria virginiana			PSS	Barren
Geum sp.			PSS	Barren
Ranunculus acris			PSS	Barren

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

The vegetation is a disturbed community with moderate overall diversity. The feature is dominated by native species, but non-native species are present within the wetland.

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

* 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 has been historically disturbed. The wetland is located within a fallow apple orchard that has had a significant impact on composition. The feature is located near a gravel road and likely receives stormwater from the road and surrounding area. The surrounding area is impacted by the roadway and associated ditches, as well as runoff. There is also an above-ground utility corridor running alongside the road to the north.

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 vegetation is comprised of native and non-native species with no observed invasive species. There is moderate overall diversity within the feature.
Human Use Values	The feature is visible to the public but is located on private land. The area is unlikely to be used for recreation purposes.
Wildlife Habitat	Shrub cover within the wetland provides habitat for avian species. Deer rubs were observed on speckled alder throughout the feature. There is no standing water present within the feature to provide habitat for amphibians.
Fish and Aquatic Life Habitat	N/A
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a small depression with patches of dense persistent vegetation. It is located near a gravel road and likely stores stormwater runoff from the surrounding area.
Water Quality Protection	See above. The feature is not associated with a waterbody.
Groundwater Processes	The feature predominately exhibits recharge hydrology with some evidence of discharge.

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: Ashland	Sampling	Date: 2020-05-29
Applicant/Owner: Enbridge		State: Wisconsin Samplir	ng Point: <u>wasb1006_u</u>
Investigator(s): <u>SAM/KDF</u>	Section, Township, Range:	sec 08 T045N R003V	N
Landform (hillslope, terrace, etc.): Talf	Local relief (concave, convex,	none): <u>None</u>	Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.3858	313 Long: <u>-</u>	90.763304	Datum: WGS84
Soil Map Unit Name: Kellogg-Allendale-Ashwabay cor	<u>nplex, 2 to 6 percent sl</u>	OPES NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes No	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? Are "Norr	mal Circumstances" present? Y	∕es No
Are Vegetation, Soil, or Hydrology naturally	v problematic? (If neede	d, explain any answers in Rema	rks.)

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

Hydrophytic Vegetation Present?	Yes	No <u> </u>	Is the Sampled Area	
Hydric Soil Present?	Yes		within a Wetland? Yes No	
Wetland Hydrology Present? Yes No 🖌		No	If yes, optional Wetland Site ID:	
Remarks: (Explain alternative proced	ures here or in a	a separate report.)		
Sample recorded in a rem	inant apple	e orchard.		

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living F	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So	ils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>Ves</u> No <u>V</u> Depth (inches):	
Water Table Present? Yes <u>v</u> No Depth (inches): <u>15</u>	
Saturation Present? Yes No 🖌 Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	ions), if available:
Remarks:	
Water table observed at 15 inches. Area is likely hydrologic	ally altered with the road to the south
which separates a large wetland complex. Subsurface hydr	ologic flow is moving south to north
	ologio non lo moving codar to norali

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1006_u

	Absolute	Dominant	Indicator	Dominance Test worksheet			
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	Species?	Status	Number of Dominant Species			
1				That Are OBL, FACW, or FAC: (A)			
2				Total Number of Dominant			
3				Species Across All Strata:(B)			
4				Percent of Dominant Species			
5				That Are OBL, FACW, or FAC: 40 (A/B)			
6			. <u> </u>	Prevalence Index worksheet:			
7				Total % Cover of: Multiply by:			
	0	= Total Co	ver	OBL species x 1 =0			
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>20</u> x 2 = <u>40</u>			
1. <u>Malus domestica</u>	20	Y		FAC species $2 \times 3 = 6$			
2. <u>Alnus incana</u>	5	Y	FACW	FACU species <u>42</u> x 4 = <u>168</u>			
3				UPL species $2 \times 5 = 10$			
4.				Column lotals: <u>66</u> (A) <u>224</u> (B)			
5				Prevalence Index = B/A = <u>3.39</u>			
6				Hydrophytic Vegetation Indicators:			
7				1 - Rapid Test for Hydrophytic Vegetation			
·	25	- Total Car		2 - Dominance Test is >50%			
Had Obstance (Distained F	_23_	- Total Co	ver	3 - Prevalence Index is ≤3.0 ¹			
Herb Stratum (Plot size: <u>5</u>)	4 -	V		4 - Morphological Adaptations ¹ (Provide supporting			
1. <u>Lotus corniculatus</u>	15	<u> </u>	FACU	data in Remarks or on a separate sheet)			
2. <u>Poa pratensis</u>		<u> </u>	FACU				
3. <u>Carex conoidea</u>	10	<u> </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must			
4. <u>Ulmus americana</u>	5	<u> N </u>	FACW	be present, unless disturbed or problematic.			
5. <u>Carex arctata</u>	5	<u> N</u>	. <u> </u>	Definitions of Vegetation Strata:			
6. <u>Carex gracillima</u>	5	N	<u>FACU</u>	Tree – Woody plants 3 in (7.6 cm) or more in diameter			
7. <u>Fragaria virginiana</u>	5	N	<u>FACU</u>	at breast height (DBH), regardless of height.			
8. <u>Rubus cf. allegheniensis</u>	5	N	<u>FACU</u>	Sapling/shrub – Woody plants less than 3 in. DBH			
9. <u>Asclepias syriaca</u>	2	N	UPL	and greater than or equal to 3.28 ft (1 m) tall.			
10. <i>Hieracium aurantiacum</i>	2	N		Herb – All herbaceous (non-woody) plants, regardless			
11. <u>Equisetum arvense</u>	2	Ν	FAC	of size, and woody plants less than 3.28 ft tall.			
12. Potentilla simplex	2	N	FACU	Woody vines – All woody vines greater than 3.28 ft in			
	68	= Total Co	ver	height.			
Woody Vine Stratum (Plot size: 30)							
1							
··							
2							
				Hydrophytic Vegetation			
4				──── Present? Yes No			
Pomorko: (Includo photo numbero horo er en o comorte	U	= I otal Co	ver				
Vagatation transitions from wotland to		Corova	onoidor	appears to be restricted to this			

Vegetation transitions from wetland to upland. Carex conoidea appears to be restricted to this specific location of the site. A specimen was collected and the ID was confirmed. Immature Carex species (Ovales) also observed.

SOIL

Profile Desc	cription: (Describe	to the depth	needed to docun	nent the i	ndicator or confirm	the absence of indic	ators.)
Depth (inches)	<u>Matrix</u>	0/2	<u>Redox Features</u>		Texture	Remarks	
<u>(inclies)</u>	7 5YR 3/2	100					
12 12	7.5VP 3/3	100					
12-10	<u>7.311 3/3</u>	100					
		<u> </u>					
¹ Type: C=Co	oncentration, D=Dep	etion, RM=Re	educed Matrix, MS	S=Masked	l Sand Grains.	² Location: PL=Po	re Lining, M=Matrix.
Hydric Soil	Indicators:					Indicators for Prot	ematic Hydric Soils ³ :
Histosol Histic Fr	(A1) Dipedon (A2)		Polyvalue Belov MI RA 149B)	v Surface	(S8) (LRR R ,	2 cm Muck (A1 Coast Prairie R	J) (LRR K, L, MLRA 149B) edox (A16) (LRR K L R)
Black Hi	stic (A3)		_ Thin Dark Surfa	ce (S9) (L	RR R, MLRA 149B)	5 cm Mucky Pe	at or Peat (S3) (LRR K, L, R)
Hydroge	n Sulfide (A4)		Loamy Mucky M	lineral (F1	1) (LRR K, L)	Dark Surface (S	S7) (LRR K, L)
Stratified	d Layers (A5) d Below Dark Surface	 Δ (Δ 1 1)	Loamy Gleyed I	Vatrix (F2)	Polyvalue Belo	<i>w</i> Surface (S8) (LRR K, L)
Thick Da	ark Surface (A12)		_ Redox Dark Su	face (F6)		Iron-Manganes	e Masses (F12) (LRR K, L, R)
Sandy M	lucky Mineral (S1)	_	_ Depleted Dark S	Surface (F	7)	Piedmont Floor	Iplain Soils (F19) (MLRA 149B)
Sandy G	Bleyed Matrix (S4)	<u> </u>	Redox Depress	ions (F8)		Mesic Spodic (FA6) (MLRA 144A, 145, 149B)
Sandy R	Matrix (S6)					Verv Shallow D	ark Surface (TF12)
Dark Su	rface (S7) (LRR R, N	ILRA 149B)				Other (Explain	in Remarks)
31 11 1							
"Indicators of Restrictive	f hydrophytic vegetat	ion and wetla	nd hydrology mus	t be prese	ent, unless disturbed	or problematic.	
Type:							
Depth (inc	ches):					Hydric Soil Present	? Yes No 🖌
Remarks:							
Soils ma	pped as a Kel	logg-Alle	ndale-Ashw	abay c	omplex, which	n includes mode	erately well drained to
poorly dr	ained soils.						



wasb1006_u_N



wasb1006_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	_ City/County: <u>Ashland</u>	Sampling Date: <u>2020-05-29</u>
Applicant/Owner: Enbridge	Stat	: <u>Wisconsin</u> Sampling Point: <u>wasb1007f_w</u>
Investigator(s): <u>KDF/SAM</u>	_ Section, Township, Range: <u>Sec 08</u>	3 T045N R003W
Landform (hillslope, terrace, etc.): Depression	_ocal relief (concave, convex, none): <u>C</u>	ONCAVE Slope (%): 0-2%
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.3875</u>	09 Long: <u>-90.761</u>	003 Datum: WGS84
Soil Map Unit Name: Kellogg-Allendale-Ashwabay com	plex, 2 to 6 percent slopes N	WI 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 Circui	nstances" 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 showin	ng sampling point locations, t	ransects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes No Yes No))	Is the Sampled Area within a Wetland?	Yes	No 🔽
Wetland Hydrology Present?	Yes 🖌 No)	If yes, optional Wetland Site	ID:	
Remarks: (Explain alternative procedu The feature is located with	res here or in a sepa n a subtle de	arate report.) pression a	djacent to a hay field	l.	

HYDROLOGY

Wetland Hydrology Indicators: Secondary Indicators (minimum of two	required)					
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)						
Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10)						
High Water Table (A2)						
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 Imager	y (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>12</u>						
Saturation Present? Yes <u>v</u> No Depth (inches): <u>6</u> Wetland Hydrology Present? Yes <u>v</u> No (includes capillary fringe)	»					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						
Remarks:						
The feature is seasonally saturated with recharge hydrology. A high water table and saturation	ו were					
observed within the feature. Drainage patterns were also observed.						

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1007f_w

Tree Stratum (Distaire) 20	Absolute	Dominant	Indicator	Dominance Test worksheet:			
<u>Tree Stratum</u> (Plot size: <u>50</u>)	<u>% Cover</u>	Species?		Number of Dominant Species			
		<u> </u>	FACW	That Are OBL, FACW, or FAC:4 (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:			
	50	= Total Cov	/er	OBL species x 1 =			
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>67</u> $x 2 = 134$			
1. <u>Fraxinus pennsylvanica</u>	10	<u> </u>	<u>FACW</u>	FAC species $16 \times 3 = 48$			
2. <u>Viburnum lentago</u>	10	Y	FAC	FACU species $16 \times 4 = 64$			
3. <u>Acer saccharum</u>	5	Y	<u>FACU</u>	Column Totals: 99 (A) 246 (B)			
4							
5	<u> </u>			Prevalence Index = B/A = <u>2.48484848484848484848484848484848484848</u>			
6				Hydrophytic Vegetation Indicators:			
7.				1 - Rapid Test for Hydrophytic Vegetation			
	25	= Total Cov	/er	2 - Dominance Test is >50%			
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹			
1 Onoclea sensibilis	5	Y	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
2 Carex gracillima	<u> </u>	Y	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)			
3 Parthenocissus inserta	<u> </u>	 	FACU				
A Acor rubrum	<u> </u>	 N		¹ Indicators of hydric soil and wetland hydrology must			
4. <u>Acer rubrum</u>	2			be present, unless disturbed or problematic.			
5. <u>Nanunculus acris</u>	<u> </u>	<u> </u>		Definitions of Vegetation Strata:			
6. <u>Equisetum arvense</u>		<u> </u>		Tree – Woody plants 3 in. (7.6 cm) or more in diameter			
7. <u>Phalaris arundinacea</u>		<u> </u>		at breast height (DBH), regardless of height.			
8. <u>Pyrola elliptica</u>		<u>IN</u>	FACU	Sapling/shrub – Woody plants less than 3 in. DBH			
9				and greater than or equal to 3.28 ft (1 m) tail.			
10			<u> </u>	Herb – All herbaceous (non-woody) plants, regardless			
11		·		of size, and woody plants less than 5.20 it tail.			
12				Woody vines – All woody vines greater than 3.28 ft in height			
	24	= 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.)							
I he feature is representative of a hard	NOOD SW	amp do	ominate	d by green ash with sparse ground			
cover dominated by graminoids, wood	me, and	a sensiti	ve iern.				

SOIL

Profile Desc	cription: (De	scribe t	o the dep	th needed to docum	ent the i	ndicator	or confirm	the absence	of indicators.)	
Depth	М	latrix		Redox	Feature	s				
(inches)	Color (mo	oist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-12	<u>7.5YR</u>	3/2	100		0			SCL		
12-18	7.5YR 🗧	3/1	100		0			SCL		
·										
	oncontration	D-Dopl	otion PM-		-Maakaa		aina	² L continn	- DI - Doro Liping M-Matrix	
Hvdric Soil	Indicators:	D-Depi		-Reduced Matrix, MS	-wasked	i Sanu Gi	allis.	Indicators	for Problematic Hydric Soils ³ :	
Histosol	(A1)			Polvvalue Below	Surface	(S8) (LR	R.	2 cm M	luck (A10) (LRR K. L. MLRA 149B)	
Histic E	oipedon (A2)			MLRA 149B)		< - / <	,	Coast Prairie Redox (A16) (LRR K, L, R)		
Black Hi	istic (A3)			Thin Dark Surfac	ce (S9) (I	RR R, M	LRA 149B)	5 cm N	lucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A4)		Loamy Mucky M	ineral (F	1) (LRR K	, L)	Dark S	urface (S7) (LRR K, L)	
Stratified Layers (A5) Loamy Gleyed Matrix (F2)					Polyvalue Below Surface (S8) (LRR K, L)					
Depleted Below Dark Surface (A11) Depleted Matrix (F3)					Thin Dark Surface (S9) (LRR K, L)					
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)					Piedmont Floodplain Soils (F12) (MI RA 149B)					
Sandy Gleyed Matrix (S4) Redox Depressions (F8)					Mesic Spodic (TA6) (MLRA 144A, 145, 149B)					
Sandy Redox (S5)					Red Pa	arent Material (F21)				
Stripped	I Matrix (S6)							Very S	hallow Dark Surface (TF12)	
Dark Su	rface (S7) (LF	RR R, M	LRA 149E	8)				Other (Explain in Remarks)	
31	6 haarda ahaa dha dha a			41 d. h d l						
Postrictivo	t nyaropnytic	vegetati	on and we	tiand hydrology must	be prese	ent, uniess	s disturbed (or problematic		
Tuno	Layer (II Obse	erveu).								
туре								Hydric Soil	Prosent? Vas No 🗸	
Depth (in	ches):							Tryune oon		
Remarks:	ro condu	ماميرا	oom th	roughout the	oil pr	ofilo N	o rodov	waa aha	arved within the soil	
Solis we	le Sanuy	Clay I	oan in			JIIIE. IN		was obse		
sample,	DUT SOIIS	were	assum	ed nydric base	ea on	nyarop	nytic ve	getation a	and wetland hydrology.	
1										



wasb1007f_w_S

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):				
wasb1007	2020-05-29				
Location:	Ecological Landsca	ape:			
PLSS: sec 08 T045N R003W	Lake Superior Clay Plair	Laka Superior Clay Plain			
Lat: <u>46.387509</u> Long: <u>-90.761003</u>	Watershed:				
	LS12, Marengo River				
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u>					
Soils:	WWI Class:				
Mapped Type(s):	N/A				
Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes	Wetland Type(s):				
	PFO - Hardwood swamp				
Field Verified:		•			
Series not verified. Soils were sandy clay loam	Wetland Size:	Wetland Area Impacted			
throughout the soil profile.	0.0653	0.0653			
5	Vegetation:	·			
	Plant Community Description(s):				
Hydrology:	The feature is representative of a hardwood				
The feature is is located within a small depression. The hydrologic	we have a substant of the second seco				
regime is seasonally saturated with recharge hydrology. A high	swamp uuminateu by green ash with a sparse				
water table and saturation were observed within the feature, and	ground cover dominated by graminolds,				
Dramage patterns are apparent throughout the realure.	woodbine, and s	sensitive fern.			

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	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	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	Ý	3 or more strata present (>10% cover)
3	N	Ň	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	Ν	Ν	Occurs in a Joint Venture priority township
6	Ν	Ν	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	N	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	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	Ν	N	Wetland is connected or contiguous with perennial stream or lake
2	Ν	N	Standing water provides habitat for amphibians and aquatic invertebrates
3	Ν	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	Ν	N	Vegetation is inundated in spring
SP			Shoreline Protection
1	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	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	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	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	Y	Y	Stormwater or surface water from agricultural land is major hydrology source
8	N	N	Discharge to surface water
9	Y	Y	Natural land cover in 100m 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	Ν	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

WH-1: Though the feature is adjacent to a hay field, it is on the edge of a forested habitat block that meets this requirement. WQ-7: The feature is located down slope of a hay field and likely receives runoff from the field. WQ-1: The feature is a closed basin wetland that may store substantial stormwater inputs.

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

Observed	Potential	Species/Habitat/Comments			
	Y	Avians / tree and shrub cover			
	Y	Black bears / reports of sightings in the area			
	Y	Deer / tracks observed			

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 pennsylvanica*			PFO	Interrupted
Viburnum lentago			PFO	Rare
Acer rubrum			PFO	Rare
Carex gracillima			PFO	Rare
Acer saccharum			PFO	Barren
Athyrium filix-femina			PFO	Barren
Onoclea sensibilis			PFO	Barren
Ostrya virginiana			PFO	Barren
Parthenocissus inserta			PFO	Barren
Spiraea alba			PFO	Barren
Abies balsamea			PFO	Barren
Equisetum arvense			PFO	Barren
Phalaris arundinacea			PFO	Barren
Pyrola elliptica			PFO	Barren
Ranunculus acris			PFO	Barren
Taraxacum officinale			PFO	Barren

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

Conservative species are represented within the feature. The feature is predominately comprised of native species with little invasive species cover.

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

Assessment	Buffer	Historic	Impact	Relative Froquency**	Stressor
			Levei	Trequency	Filling horms (non impounding)
					Draipage tiles ditches
					Hydrologic changes high capacity wells
					impounded water increased runoff
					Deint source or stormwater discharge
					Point source of stormwater discharge
					Polluled fulloit
	v			0	Agriculture – row crops
	Χ		п	U U	Agriculture – nay
					Agriculture – pasture
					Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
					Removal of herbaceous stratum – mowing,
					grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
					unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
Х	Х		L	UC	Cover of non-native and/or invasive species
	Х		L	UC	Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The feature is impacted by its proximity to a hay field and its associated runoff stressors. There is little invasive species cover within the wetland. The surrounding area is impacted by the hay field, as well as residential land use southeast 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					~
Flood and Stormwater Storage		~			
Water Quality Protection		~			
Groundwater Processes	~				

FUNCTION	RATIONALE
Floristic Integrity	A conservative assemblage of species is present within the wetland with minimal invasive species cover.
Human Use Values	The feature is located on private land and is unlikely to be used for recreation purposes.
Wildlife Habitat	Tree and shrub cover provides habitat for avians. Evidence of deer using the wetland was observed. There have also been reports of black bear presence within the immediate area.
Fish and Aquatic Life Habitat	N/A
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a small depression that receives runoff from the surrounding area. The feature is limited in the amount of stormwater it may store due to its small size.
Water Quality Protection	See above. The feature receives runoff from the adjacent hay field as it is located down slope. The feature is not associated with a waterbody.
Groundwater Processes	The feature exhibits recharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation P	roject City	//County: <u>Ashland</u>	Sampling Date: <u>2020-05-29</u>	
Applicant/Owner: <u>Enbridge</u>		State:	Wisconsin Sampling Point: wasb1007_u	
Investigator(s): <u>SAM/KDF</u>	Sec	ction, Township, Range: <u>SEC 08</u>	T045N R003W	
Landform (hillslope, terrace, etc.): <u>Shou</u>	lder Local	relief (concave, convex, none): <u>CC</u>	DNVEX Slope (%): <u>3-7%</u>	
Subregion (LRR or MLRA): Northcentral I	^{-orests} Lat: <u>46.387467</u>	Long: <u>-90.761</u> 1	12 Datum: WGS84	
Soil Map Unit Name: Kellogg-Allenda	ale-Ashwabay complex	, 2 to 6 percent slopes NM	/I classification:	
Are climatic / hydrologic conditions on the	site typical for this time of year?	Yes 🖌 No (If no, ex	plain in Remarks.)	
Are Vegetation, Soil, or Hy	drology significantly dis	urbed? Are "Normal Circum	stances" present? Yes No	
Are Vegetation, Soil, or Hy	drology naturally proble	matic? (If needed, explain a	ny answers in Remarks.)	
SUMMARY OF FINDINGS – Atta	ch site map showing sa	mpling point locations, tra	ansects, important features, etc.	
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative procedure Open field situated between planted in clover.	Yes <u>No</u> <u>v</u> Yes <u>No</u> <u>v</u> Yes <u>No</u> <u>v</u> s here or in a separate report.) woods. All surface fl	Is the Sampled Area within a Wetland? Y If yes, optional Wetland Site ID: ow drains into the adjac	esNo	
HYDROLOGY				
Wetland Hydrology Indicators:		Second	ary Indicators (minimum of two required)	
Primary Indicators (minimum of one is rec	quired; check all that apply)	Su	rface Soil Cracks (B6)	
Surface Water (A1)	Water-Stained Lea	/es (B9) Drainage Patterns (B10)		
High Water Table (A2)	Aquatic Fauna (B1	3) Mo	ss Trim Lines (B16)	
Saturation (A3)	Marl Deposits (B15) Dry	-Season Water Table (C2)	

Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Recent Iron Reduction in Tilled So	pils (C6) Geomorphic Position (D2)
Thin Muck Surface (C7)	Shallow Aquitard (D3)
Other (Explain in Remarks)	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)
✓ Depth (inches):	
✓ Depth (inches):	
✓ Depth (inches):	Wetland Hydrology Present? Yes No
ring wall parial photos, provinus inspac	tiona) if available:
ning wen, aenai priotos, previous inspec	uons), ii available.
	 Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks) ✓ Depth (inches):

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1007_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan	t Indicator	Dominance Test worksheet:
1	<u>_/0 COVEI</u>			Number of Dominant Species
1				That Are OBL, FACW, or FAC:() (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4			·	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	over	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =0
, 1				FAC species x 3 =
2				FACU species <u>75</u> x 4 = <u>300</u>
2				UPL species x 5 =0
S				Column Totals: <u>77</u> (A) <u>310</u> (B)
4				Prevalence index = B/Δ = 4.025974025974026
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. Trifolium pratense	75	Y	FACU	data in Remarks or on a separate sheet)
2. Bromus inermis	2	N	UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
3				
0				¹ Indicators of hydric soil and wetland hydrology must
				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		. <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				of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
	77	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30)	<u> </u>			
1				
2				
3				Hydrophytic Vegetation
4				Present? Yes No v
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)			
Open field planted in clover.				

SOIL

Profile Desc	ription: (E	Describe t	the dep	th needed	to docun	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth (inches)	Color (<u>Matrix</u> moist)	%	Color (i	Redo moist)	x Features %	S Type ¹	\log^2	Texture	Remarks	
0-15	5YR	3/3	85	5YR	5/8	15	C	<u></u>	SII	Romano	
15-18	5VR	5/6	05	5VP	5/8	5		<u> </u>	<u></u>		
15-10	<u> </u>	5/0			J/0				5		
						·		<u> </u>			
						·					
						·					
						·					
						·					
						·		<u> </u>			
						·					
¹ Type: C=Co	oncentratio	n, D=Depl	etion, RM	=Reduced	Matrix, MS	S=Masked	Sand Gra	ains.	² Location:	PL=Pore Lining, M=Matrix.	
Hydric Soil I	ndicators:								Indicators	for Problematic Hydric Soils ³ :	
Histosol	(A1)			Polyva	alue Belov	v Surface	(S8) (LRF	R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)		
Histic Ep	oipedon (A2 stic (Δ3)	2)		ML Thin F	RA 149B) Dark Surfa) Ice (SQ) (I		RA 149B)	Coast Prairie Redox (A16) (LRR K, L, R)		
Hydroge	n Sulfide (A	\ 4)		Loam	y Mucky N	/lineral (F1) (LRR K	, L)	Dark S	urface (S7) (LRR K, L)	
Stratified	l Layers (A	5)		Loam	y Gleyed I	Matrix (F2))	·	Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)		
Depleted	d Below Da	rk Surface	e (A11)	Deple	ted Matrix	(F3)					
Thick Da	ark Surface lucky Mine	(A12) ral (S1)		Redox	CDark Sui ted Dark S	fface (F6) Surface (F	7)		Iron-Ma Piedmo	anganese Masses (F12) (LRR K, L, R)	
Sandy G	leyed Matr	ix (S4)		Redox	Cord Dark Cord	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 Sur	rface (S7) (LRR R, M	ILRA 1491	3)					Other (Explain in Remarks)	
³ Indicators of	f hydrophyt	ic vegetat	ion and w	etland hydro	ology mus	t be prese	ent, unless	s disturbed o	or problematic		
Restrictive L	_ayer (if ot	oserved):									
Туре:											
Depth (inc	ches):								Hydric Soil	Present? Yes No 🗸	
Remarks:		-l't		Tarretorna					مامومدماري		
No nyaria	c soli in	dicator	s met.	rexture	e sugge	ests tha	at solis	s are mo	derately	well drained.	



wasb1007_u_E



wasb1007_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling Date: <u>2020-05-30</u>		
Applicant/Owner: Enbridge		State: Wisconsin Sampling Point: wasb1008e_w		
Investigator(s): KDF/SAM	Section, Township, Range: <u>Sec</u>	208 T045N R003W		
Landform (hillslope, terrace, etc.): Side Slope	Local relief (concave, convex, none	: <u>None</u> Slope (%): <u>0-2%</u>		
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.3	387008 Long: <u>-90.7</u>	760538 Datum: WGS84		
Soil Map Unit Name: Kellogg-Allendale-Ashwabay	complex, 2 to 6 percent slope	S NWI classification:		
Are climatic / hydrologic conditions on the site typical for this t	ime of year? Yes <u><</u> No (If	no, explain in Remarks.)		
Are Vegetation, Soil, or Hydrology sig	nificantly disturbed? Are "Normal C	ircumstances" present? Yes <u><</u> No		
Are Vegetation, Soil, or Hydrology nat	turally problematic? (If needed, exp	eded, explain any answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map sl	howing sampling point location	s, 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 <u>v</u> No	If yes, optional Wetland S	ite ID:		
Remarks: (Explain alternative procedures here or in a separ The feature is located within a hay field a	rate report.) and has been altered by lanc	l use practices.		

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 Roo	ots (C3) Saturation Visible on Aerial Imagery (C9)					
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)					
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils	(C6) 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>No</u> Depth (inches):						
Saturation Present? Yes <u>v</u> No <u>Depth</u> (inches): <u>0</u> W (includes capillary fringe)	/etland Hydrology Present? Yes <u>v</u> No					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						
Remarks:						

The hydrologic regime is seasonally saturated. The feature is located on a slope and exhibits weak to moderate lateral discharge from south to north that has been altered by the roadway and land use practices south of the wetland. Standing water is present within tire ruts along the east side of the feature. Surface saturation is present.

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1008e_w

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Iree Stratum</u> (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1	·			That Are OBL, FACW, or FAC: (A)
2	<u> </u>			Total Number of Dominant
3			. <u> </u>	Species Across All Strata: (B)
4				Percent of Dominant Species
5	<u> </u>			That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7	<u> </u>			Total % Cover of: Multiply by:
	0	= Total Cov	ver	OBL species <u>65</u> x 1 = <u>65</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species7 x 2 =14
1				FAC species x 3 =6
2.				FACU species $1 \times 4 = 4$
3.				UPL species $0 \times 5 = 0$
4				Column Totals: <u>75</u> (A) <u>89</u> (B)
5.				Prevalence Index = B/A = <u>1.19</u>
6.				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co		∠ 2 - Dominance Test is >50%
Horb Stratum (Plot size: 5)				$\underline{}$ 3 - Prevalence Index is $\leq 3.0^1$
1 Elecoborio on	20	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Eleochans sp.</u>	<u> </u>	 		Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Sciipus microcarpus</u>				
3. <u>Phalaris arundinacea</u>		<u> </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Cicuta maculata</u>		<u> </u>		be present, unless disturbed or problematic.
5. <u>Carex stipata</u>	5	<u> N </u>	OBL	Definitions of Vegetation Strata:
6. Lycopus americanus	2	<u> N </u>	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Juncus effusus</u>	2	<u> N </u>	OBL	at breast height (DBH), regardless of height.
8. <u>Verbena hastata</u>	2	<u> N </u>	<u>FACW</u>	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Carex pellita</u>	1	<u>N</u>	OBL	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Equisetum arvense</u>	1	N	FAC	Herb – All herbaceous (non-woody) plants, regardless
11. Ranunculus acris	1	N	FAC	of size, and woody plants less than 3.28 ft tall.
12. <u>Lotus corniculatus</u>	1	N	<u>FACU</u>	Woody vines – All woody vines greater than 3.28 ft in
	75	= Total Cov	ver	height.
Woody Vine Stratum (Plot size: 30)				
1.				
2				
3				Hudronhutio
о	<u></u>			Vegetation
		- Total Car		Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	<u> </u>			
The vegetation is representative of a free	esh (we	t) mead	ow dom	inated by red-tinged bulrush and
Eleocharis sp. There is abundant remn	ant bion	, nass thr	ouahou	t the feature. Vegetation is limited near

tire ruts resulting from equipment use within the hay field.

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth <u>Matrix Redox Features</u>										
(inches)	Color (moist)	%	<u>Color (</u>	moist)	%	Type	Loc	Texture	Remarks	
0-3	<u>7.5YR 2.5/1</u>	100			0	·		CL		
3-13	<u>7.5YR 2.5/1</u>	95	5YR	4/6	5	C	M	CL		
13-18	<u>7.5YR 4/4</u>	95	5YR	4/6	5	С	M	LFS		
						·				
						·				
						·				
						·				
						·				
						·				
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	l (A1) ninadan (A2)		Polyv	alue Belov	v Surface	(S8) (LR F	₹ R ,	 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 		
Black H	pipedon (A2) istic (A3)		Thin [CA 149B) Dark Surfa	ce (S9) (I	RR R. MI	RA 149B			
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 N	Matrix (F2	2)		Polyvalue Below Surface (S8) (LRR K, L)		
Deplete	d Below Dark Surface	e (A11)	Deple	ted Matrix	(F3)			Thin Da	ark Surface (S9) (LRR K, L)	
Thick Da	ark Surface (A12)		Redo	x Dark Sur	face (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)	
Sandy N	Mucky Mineral (S1)		Deple	ted Dark S	Surface (F	-7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)	
Sandy C	Beyed Matrix (S4)		Redo	x Depressi	ions (F8)			Mesic :	Spodic (1A6) (MLRA 144A, 145, 149B)	
Sanuy F	Matrix (S6)							Very Shallow Dark Surface (TF12)		
Dark Su	Inface (S7) (LRR R, M	ILRA 1491	3)					Other (Explain in Remarks)		
³ Indicators a	f hydrophytic ycactot	ion and w	tland bude		t ha proc	ont unloss	dicturbed	or problematic		
Restrictive	Layer (if observed):			ology mus	r ne hiest					
Type:	<i>,</i>									
Depth (inches):						Hydric Soil Present? Yes <u>~</u> No				
Remarks:										
Soils are clay loam above loamy fine sand with redox occurring below 3 inches. Soils meet the F6										
indicator for hydric soils.										
	-									



wasb1008e_w_E



wasb1008e_w_NW

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

WETLAND IDENTIFICATION							
Evaluator(s):							
KDF/SAM							
Date of visit(s):							
2020-05-30							
Ecological Landsca	ape:						
Lake Superior Clay Plair							
Watershed:							
LSTZ, Marengo River							
WWI Class:							
N/A							
Wetland Type(s):							
PEM - Fresh (wet) meadow							
, ,	,						
Wetland Size:	Wetland Area Impacted						
0.4108	0.4108						
Vegetation:							
Plant Community Description(s):							
Vegetation is representative of a fresh (wet) meadow							
dominated by small-fruited bulrush and Eleocharis sp.							
There is abundant remnant biomass throughout the							
feature. Vegetation is limited in areas due to tire ruts							
resulting from land use practices for a hay field.							
	Evaluator(s): KDF/SAM Date of visit(s): 2020-05-30 Ecological Landsca Lake Superior Clay Plair Watershed: LS12, Marengo River Wetland Size: 0.4108 Vegetation Size: 0.4108 Vegetation: Plant Community D Vegetation is repres dominated by small- There is abundant re feature. Vegetation i resulting from land u						

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	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	Ν	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 >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	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	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
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	Ν	N	Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Y	Y	Water flow through wetland is NOT channelized
3	Ν	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	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	Ν	Ν	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	Y	Y	Stormwater or surface water from agricultural land is major hydrology source
8	Y	Y	Discharge to surface water
9	Ν	Ν	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	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

FA-2: There is minimal standing water present within areas of compacted soil that may provide temporary habitat for frogs and toads. ST-3, WQ-5: Portions of the emergent wetland are densely vegetated, barring the lowest areas impacted by tire ruts. WQ-8: The feature exhibits weak to moderate lateral discharge moving north.

> 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	Deer / tracks observed nearby				
	Y	Avians / tree and shrub cover present along the margin of the wetland				
	Y	Frogs and toads				

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 ranking	S4	S3	S2	S1-S2 (S2 high quality)
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)
Eleocharis sp.*			PEM	Rare
Phalaris arundinacea*			PEM	Rare
Carex stipata*			PEM	Rare
Cicuta maculata*			PEM	Rare
Scirpus microcarpus			PEM	Rare
Cornus racemosa			PEM	Barren
Equisetum arvense			PEM	Barren
Juncus effusus			PEM	Barren
Lycopus americanus			PEM	Barren
Poa pratensis			PEM	Barren
Alopecurus pratensis			PEM	Barren
Barbarea vulgaris			PEM	Barren
Carex pellita			PEM	Barren
Lotus corniculatus			PEM	Barren
Lysimachia ciliata			PEM	Barren
Populus tremuloides			PEM	Barren
Ranunculus acris			PEM	Barren
Salix petiolaris			PEM	Barren
Taraxacum officinale			PEM	Barren
Trifolium pratense			PEM	Barren
Verbena hastata			PEM	Barren

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

There is moderate overall diversity within the feature with native and non-native species represented. The feature is highly disturbed by land use practices within the surrounding hay field.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells,
					impounded water, increased runoff
					Point source or stormwater discharge
Х	Х		М	С	Polluted runoff
					Pond construction
					Agriculture – row crops
Х	Х		Н	С	Agriculture – hay
					Agriculture – pasture
					Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
x	x		н	С	Removal of herbaceous stratum – mowing,
	~			<u> </u>	grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
					Unprescribed fire
					Human trails – unpaved
					Ruman trais – paveu
	V		N.4	110	Cover of non-notive and/or investive anapies
X	Χ		IVI		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
					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 within and adjacent to a hay field and is highly disturbed from the land use. Vegetation is disturbed when hayed, and the feature likely receives polluted runoff from the field. There are non-native and invasive species present within and surrounding 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 feature is located within a hay field and vegetation is disturbed. There is moderate diversity within the feature, including native and non-native species.
Human Use Values	The feature is located on private land and is unlikely to be used for recreation purposes.
Wildlife Habitat	Low diversity of habitats present within the feature may provide minimal habitat for avians and deer.
Fish and Aquatic Life Habitat	There is minimal standing water present within the lowest areas of the feature impacted by equipment use. Standing water present may potentially provide minimal habitat for frogs and toads.
Shoreline Protection	N/A
Flood and Stormwater Storage	Portions of the wetland are densely vegetated, but the slope likely prevents substantial stormwater storage.
Water Quality Protection	See above. The feature is located within a hay field and runoff from agriculture is a major hydrologic source.
Groundwater Processes	The feature exhibits weak to moderate discharge hydrology.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: <u>Ashland</u>	Sampling	Date: <u>2020-05-30</u>
Applicant/Owner: Enbridge		_ State: Wisconsin Samplir	ng Point: <u>wasb1008_</u> u
Investigator(s): <u>SAM/KDF</u>	Section, Township, Range: <u>S</u>	<u>ec 08 T045N R003V</u>	V
Landform (hillslope, terrace, etc.): Side Slope	Local relief (concave, convex, no	ne): <u>None</u>	_ Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): Morthcentral Forests Lat: 46.3867	7 <u>08</u> Long: <u>-9(</u>	0.760289	Datum: <u>WGS84</u>
Soil Map Unit Name: Kellogg-Allendale-Ashwabay con	<u>nplex, 2 to 6 percent slop</u>	DES NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes 🖌 No	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significant	ntly disturbed? Are "Norma	I Circumstances" present? Y	′es 🔽 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, e	explain any answers in Remai	rks.)
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point locatio	ons, transects, importa	ant features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No 🖌	Is the Sampled Area within a Wetland? Yes No 🗸
Wetland Hydrology Present?	Yes	No 🖌	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proce Open field, sloping down	Jures here or in to the nor	n a separate report.) rth. The field is	planted and appears to be hayed.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	bils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No <u>v</u> Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No 🖌 Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No _
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks [.]	
Area on a slope with no direct signs of discharge. No visua	l signs of wetland hydrology and water
table below 20 inches.	6 , 6,

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1008_u

	Absolute	Dominant	Indicator					
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Dominance Test worksheet:				
1.				Number of Dominant Species That Are OBL_EACW_or_EAC: 0 (A)				
2								
2			·	Total Number of Dominant				
			·	opecies Acioss All Strata (D)				
4			·	Percent of Dominant Species That Are OBL EACW or EAC: 0 (A/B)				
5		·		$\begin{array}{c} \text{That Are OBL, FACW, of FAC.} \\ \hline \\ \hline \\ \\ \hline \\ \\ \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ $				
6			·	Prevalence Index worksheet:				
7				Total % Cover of: Multiply by:				
	0	= Total Co	ver	OBL species x 1 =				
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>5</u> x 2 = <u>10</u>				
1				FAC species x 3 =12				
··			·	FACU species <u>30</u> x 4 = <u>120</u>				
2			·	UPL species <u>30</u> x 5 = <u>150</u>				
3			· <u> </u>	Column Totals: <u>69</u> (A) <u>292</u> (B)				
4				Dravalance Index = D/A = -4.22				
5				$\frac{1}{2} = \frac{1}{2} = \frac{1}$				
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. Bromus inermis	20	Y	UPL	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)				
2 Agropyron sp	15	Y		Problematic Hydrophytic Vegetation ¹ (Explain)				
3 Trifolium pratense	10	v	FACU					
Leucanthemum vulgare	<u> 10 </u> 5	 N		¹ Indicators of hydric soil and wetland hydrology must				
5. Daucus carota	5	 N		be present, unless disturbed of problematic.				
6 Elymus of repens	5	<u> </u>	FACU	Definitions of Vegetation Strata:				
7 Poa pratensis	5	 N	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter				
8 Plantago lanceolata	5	 N	FACU					
9 Phalaris arundinacea	5	 N	FACW	and greater than or equal to 3.28 ft (1 m) tall.				
10 Lotus corniculatus	5	N	FACU	Horb All horbaccours (non woody) plants, regardless				
11 Equisetum arvense	2	 N	FAC	of size, and woody plants less than 3.28 ft tall.				
12 Ranunculus acris	2	<u> </u>	FAC	Woody vines – All woody vines greater than 3.28 ft in				
12. <u>Nananealas dens</u>	<u> </u>			height.				
			ver					
Woody Vine Stratum (Plot size: <u>30</u>)								
1								
2								
3				Hydrophytic				
4.				Vegetation				
	0	= Total Co	ver	Present? fesNo				
Remarks: (Include photo numbers here or on a separate s	sheet.)			1				
Planted field with a mix of planted grass	Planted field with a mix of planted grasses including a cultivated Agropyron species and heavy							
composite presence. Upland includes several facultative species such as field thistle and tall								
buttercup.								

Profile Desc	ription: (I	Describe t	o the dep	th needed	to docun	nent the i	ndicator	or confirm	the absence o	of indicato	rs.)		
Depth		Matrix		Redox		x Feature	s						
(inches)	Color (moist)	%	Color (r	noist)	<u>%</u>	Type ¹	Loc ²	Texture		Remarks		
0-8	5YR	3/3	100			0			SIL				
8-17	5YR	4/6	50			0			LVFS				
8-17	5YR	3/3	50			0			SIL				
17-20	5YR	4/4	75	5YR	4/6	25	С	М	LVFS				
			<u> </u>										
		<u> </u>				·							
						·							
						. <u> </u>			·				
·		<u> </u>				·							
		<u> </u>				·			<u> </u>				
						·							
						. <u> </u>							
¹ Type: C=C	oncentratio	n, D=Depl	etion, RM	Reduced I	Matrix, MS	S=Masked	I Sand Gra	ains.	² Location:	PL=Pore	Lining, M=Ma	trix.	
Hydric Soil	Indicators								Indicators for	or Probler	natic Hydric	Soils ³ :	
Histosol	(A1) singdon (A)	2)		Polyva	alue Belov	w Surface	(S8) (LRF	RR,	2 cm Mu	uck (A10) (_RA 149B)	i -
Black Hi	stic (A3)	<u><</u>)		MLRA 149B) Thin Dark Surface (S0) (LPD P. MLPA 149B)					 Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) 			R)	
Hydroge	en Sulfide (/	44)		Loamy Mucky Mineral (F1) (LRR K, L)								,	
Stratified	d Layers (A	.5)		Loamy Gleyed Matrix (F2)									
Depleted	d Below Da	rk Surface	e (A11)	Depleted Matrix (F3)					Thin Dark Surface (S9) (LRR K, L)				
Thick Da	ark Surface	(A12)		Redox Dark Surface (F6)					Iron-Mai	nganese N	lasses (F12)	(LRR K, L,	R)
Sandy N	lucky Mine	ral (S1)		Deple	Contracts	Surface (F	•7)		Piedmoi Mosic S	nt Floodpla nodia (TA6	ain Soils (F19 3) (MI DA 1 44) (MLRA 14	19B)
Sandy B	edox (S5)	IX (34)			Depress				Red Par	ent Materi	al (F21)	A, 145, 143	9D)
Stripped	Matrix (S6	5)							Very Sh	allow Dark	Surface (TF	12)	
Dark Surface (S7) (LRR R, MLRA 149B)							Other (E	Explain in F	Remarks)	,			
31 11 1													
"Indicators of Restrictive	t hydrophyt	ic vegetati	on and we	etland hydro	blogy mus	t be prese	ent, unless	s disturbed	or problematic.				
Type [.]		53ci veu).											
Depth (in	ches).								Hydric Soil P	Present?	Yes	No 🖌	,
Remarks:									-			·	
Soils der	ives fro	m red l	bedroc	k, fragn	nent ob	oserve	d nearl	oy. Doe	es not meet	t the hy	dric soil	indicato	or
for Red F	Parent N	Materia	I.	<i>,</i> 0				,		,			



wasb1008_u_S



wasb1008_u_SW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland Sampling Date: 2020-05-30
Applicant/Owner: <u>Enbridge</u>	State: Wisconsin Sampling Point: wasb1009s_w
Investigator(s): <u>KDF/SAM</u>	Section, Township, Range: <u>sec 08 T045N R003W</u>
Landform (hillslope, terrace, etc.): Side Slope	ocal relief (concave, convex, none): <u>None</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Morthcentral Forests Lat: 46.38614	4Long: <u>-90.759730</u> Datum: <u>WGS84</u>
Soil Map Unit Name: <u>Kellogg-Allendale-Ashwabay comp</u>	Diex, 2 to 6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	rear? Yes 🔽 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u> Ves</u> No	Is the Sampled Area within a Wetland? Yes Y No
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report The feature is a shrub-dominated component field. The feature is highly disturbed. There is wetland.	ort.) t of a wetland complex and is located adjacent to a hay garbage debris present within the southern part of the

HYDROLOGY

Wetland Hydrology Indicato	rs:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum	of one is required; che	Surface Soil Cracks (B6)	
Surface Water (A1)		_ Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)		_ Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)		_ Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1)		_ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)		Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)		_ Recent Iron Reduction in Tilled Sc	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5)		_ Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on 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 No 🖌	Depth (inches):	
Water Table Present?	Yes 🖌 No 🔄	Depth (inches): <u>4</u>	
Saturation Present? (includes capillary fringe)	Yes 🖌 No 🔄	Wetland Hydrology Present? Yes <u>v</u> No	
Describe Recorded Data (stre	am gauge, monitoring	well, aerial photos, previous inspec	tions), if available:

Remarks:

The overall feature is located on a slope. The hydrologic regime is seasonally saturated with weak to moderate, lateral discharge hydrology moving from south to north. The hydrology of the area is disturbed. Iron is apparent within the high water table as observed through the soil pit. The feature is associated with sasb1005i.

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1009s_w

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>50</u>)	<u>% Cover</u>	<u>Species</u> ?		Number of Dominant Species
1. <u>Betula papyritera</u>	5	<u> </u>	FACU	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>67</u> (A/B)
6				Provalence Index worksheet:
7.				Total % Cover of: Multiply by:
	5	= Total Cov	/er	$\frac{1}{10000000000000000000000000000000000$
Copling/Chrub Stratum (Distaire) 15				EACW species $137 \times 2 = 274$
(Plot Size. 10)	50	V		FAC species $1 \times 3 = 3$
	<u></u>	<u> </u>	FACW	FACU species $12 \times 4 = 48$
2. <u>Ostrya virginiana</u>	5	<u> N </u>	FACU	UPL species $0 \times 5 = 0$
3. <u>Salix petiolaris</u>	5	<u> N </u>	<u>FACW</u>	Column Totals: 150 (A) 325 (B)
4				
5				Prevalence Index = $B/A = 2.1666666666666666666666666666666666666$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	60	= Total Cov		∠ 2 - Dominance Test is >50%
	00			$_$ 3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>5</u>)	75	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Onoclea sensibilis</u>		<u> Y </u>	<u>FACW</u>	data in Remarks or on a separate sheet)
2. <u>Phalaris arundinacea</u>	5	<u> N </u>	<u>FACW</u>	Problematic Hydrophytic Vegetation' (Explain)
3. <u>Salix petiolaris</u>	2	N	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Carex gracillima</u>	2	N	FACU	be present, unless disturbed or problematic.
5. <u>Equisetum arvense</u>	1	N	FAC	Definitions of Vegetation Strata:
6.				
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8		· <u> </u>		at bleast height (bbri), regardless of height.
0				Sapling/shrub – Woody plants less than 3 in. DBH
9			·······	
10				Herb – All herbaceous (non-woody) plants, regardless
11			. <u> </u>	
12				Woody vines – All woody vines greater than 3.28 ft in height
	85	= Total Cov	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1.				
2				
2				Underschad's
				Vegetation
4				Present? Yes <u>v</u> No
	0	= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate	sheet.) hruh-car	r domin	ated by	pussy willow with around cover
dominated by sensitive fern. Scattered	aramina	nid cove	ar is nreg	sent throughout
	grannin			

SOIL

Profile Desc	cription: (Descri	be to the dep	oth needed	to docur	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix	(Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
	<u>7.5YR 3/1</u>	100			0			SL	
11-18	<u>7.5YR 3/2</u>	<u>90</u>	5YR	4/6	10	C	M	SL	
					·				
					·				
	-				·				
					·				
					·				
					·	. <u> </u>			
									·
¹ Type: C=C	oncentration, D=D	epletion, RM	=Reduced	Matrix, MS	S=Masked	I Sand Gra	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) (LRF	R,	2 cm N	/luck (A10) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)		ML	RA 149B))			Coast	Prairie Redox (A16) (LRR K, L, R)
Black H	istic (A3)		Thin [Dark Surfa	ice (S9) (L	RR R, MI	LRA 149B)) 5 cm N	Aucky Peat or Peat (S3) (LRR K, L, R)
Hydroge Stratifie	d Lavers (A5)		Loam	y Mucky N v Gloved I	/IINEral (F Matrix (E2	1) (LRR K	, L)	Dark S	UITACE (S7) (LRR K, L)
Otratilie	d Below Dark Sur	ace (A11)	Deple	ted Matrix	(F3))		Thin D	ark Surface (S9) (LRR K. L)
Thick Da	ark Surface (A12)		Redox	x Dark Su	rface (F6)			Iron-M	anganese Masses (F12) (LRR K, L, R)
Sandy N	Aucky Mineral (S1)	Deple	ted Dark S	Surface (F	7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy C	Bleyed Matrix (S4)		Redo	x Depress	ions (F8)			Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)							Red Pa	arent Material (F21)
Stripped	I Matrix (S6)		2)					Very S	hallow Dark Surface (TF12)
		, WILKA 1451)						
³ Indicators o	f hydrophytic vege	etation and we	etland hydro	ology mus	t be prese	ent, unless	s disturbed	or problematic	2.
Restrictive	Layer (if observe	d):	-	••					
Туре:									
Depth (in	ches):							Hydric Soil	Present? Yes <u><</u> No
Remarks:									
Soils are	sandy loam	n through	out. So	ils do r	not mee	et a hy	dric soi	l indicator	but are assumed hydric
based or	the presen	ce of hvo	Irophyti	c vege	tation	and we	etland h	vdroloav.	,
		00 01 Hje		e rege				ly al elegy.	





wasb1009s_w_SE

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/C	County: Ashland Sampling Date: 2020-05-30
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wasb1009e_w</u>
Investigator(s): KDF/SAM Secti	on, Township, Range: <u>sec 08 T045N R003W</u>
Landform (hillslope, terrace, etc.): Side Slope Local rel	lief (concave, convex, none): None Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.386098	Long: -90.759835 Datum: WGS84
Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex,	2 to 6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	∕es ✔ No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly distu	rbed? Are "Normal Circumstances" present? Yes ✔ No
Are Vegetation . Soil . or Hydrology naturally problem	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No	Is the Sampled Area
Hydric Soil Present? Yes <u>✓</u> No	
Wetland Hydrology Present? Yes <u>v</u> No	If yes, optional Wetland Site ID:
The feature is located within a hav field and is high	nly disturbed. It is a part of a wetland complex
which includes a shrub component	ing alocal boar it is a part of a moliaria complex
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) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Oc	lor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospher	res on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduce	d Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction	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 Rel	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 <u>v</u> No Depth (inches): <u>12</u>	
Saturation Present? Yes <u>v</u> No <u>Depth</u> (inches): <u>12</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>v</u> No
Saturation Present? Yes _ No Depth (inches): <u>12</u> (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, presented by the stream gauge) Describe Recorded Data (stream gauge, monitoring well, aerial photos, presented by the stream gauge)	Wetland Hydrology Present? Yes ✓ No No evious inspections), if available:
Saturation Present? Yes V No Depth (inches): <u>12</u> (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, presented by the stream gauge)	Wetland Hydrology Present? Yes ✓ No evious inspections), if available:

The hydrologic regime is seasonally saturated with weak to moderate, lateral discharge hydrology moving south to north. The hydrology is disturbed by land use practices and the road south of the feature.

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1009e_w

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Iree Stratum</u> (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1			·	That Are OBL, FACW, or FAC: (A)
2			·	Total Number of Dominant
3			·	Species Across All Strata: <u>Z</u> (B)
4				Percent of Dominant Species
5				
6			·	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species4 x 2 =8
1				FAC species x 3 =2
2				FACU species $5 \times 4 = 20$
3.				UPL species $1 \times 5 = 5$
4.				Column Totals: <u>67</u> (A) <u>98</u> (B)
5				Prevalence Index = $B/A = 1.462686567164179$
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)				\sim 3 - Prevalence Index is $\leq 3.0^1$
1 Carex stinata	25	V	OBI	4 - Morphological Adaptations ¹ (Provide supporting
2 Scirpus microcarpus	25	Y		Problematic Hydrophytic Vegetation ¹ (Explain)
2. Agropuron gristatum	<u> </u>	<u> </u>		
	<u> </u>			¹ Indicators of hydric soil and wetland hydrology must
4. <u>Lycopus americanus</u>				be present, unless disturbed or problematic.
5. <u>Eutnamia graminiolia</u>		<u> </u>	FAC	Definitions of Vegetation Strata:
6. <u>Ranunculus acris</u>	2	<u> </u>	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Phalaris arundinacea</u>		<u> N </u>	FACW	at breast height (DBH), regardless of height.
8. <u>Lotus corniculatus</u>	2	<u> N</u>	<u>FACU</u>	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Salix petiolaris</u>	1	<u> N</u>	FACW	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Juncus effusus</u>	1	<u> N </u>	OBL	Herb – All herbaceous (non-woody) plants, regardless
11. <u>Poa pratensis</u>	1	<u>N</u>	<u>FACU</u>	of size, and woody plants less than 3.28 ft tall.
12. <i>Lysimachia ciliata</i>	1	N	FACW	Woody vines – All woody vines greater than 3.28 ft in
	69	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: 30)				
1.				
2				
3			·	Hudronhusia
0				Vegetation
		= Total Car		Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	sheet)		vei	
The vegetation is representative of a free	esh (we	t) mead	ow whic	ch is graminoid-dominated. Species
include red-tinged bulrush and Carex s	tipata.	-		

SOIL

Profile Dese	cription: (D	escribe	to the de	oth needed	to docun	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Depth Matrix Redox Features									
(inches)	Color (r	noist)	%	Color (n	noist)	%	Type ¹	Loc ²	Texture	Remarks
0-14	<u>10YR</u>	3/2	80	5YR	4/6	20	_C_	M	SICL	
14-20	<u>7.5YR</u>	4/4	60	<u>7.5YR</u>	4/6	40	С	Μ	LVFS	
						·				
						·				
						·				
						·				
						·				
			etion RM	=Reduced N	Aatrix MG	S=Maskor		aine		PI = Pore Lining M=Matrix
Hydric Soil	Indicators:							anis.	Indicators	for Problematic Hydric Soils ³ :
Histoso	(A1)			Polvva	lue Belov	v Surface	(S8) (LRF	R.	2 cm M	Auck (A10) (LRR K. L. MLRA 149B)
Histic E	pipedon (A2)		MLF	RA 149B))	()(,	Coast	Prairie Redox (A16) (LRR K, L, R)
Black H	istic (A3)			Thin D	ark Surfa	ice (S9) (L	.RR R, MI	_RA 149B)) 5 cm N	Aucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A	4)		Loamy	Mucky N	/lineral (F	1) (LRR K	, L)	Dark S	Surface (S7) (LRR K, L)
Stratifie	d Layers (At	5)	(Loamy	Gleyed I	Matrix (F2)		Polyva	lue Below Surface (S8) (LRR K, L)
Deplete	d Below Dar ark Surface	K Surface	e (A11)	Deplet	ed Matrix	(F3) faco (E6)			I nin D	ark Sufface (S9) (LRR K, L)
Sandy M	Ank Sunace Aucky Miner	(A12) al (S1)		Denlet	ed Dark Su	Surface (F	7)		Piedm	ont Floodplain Soils (F19) (MI RA 149B)
Sandy C	Gleved Matri	x (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	irface (S7) (I	LRR R, N	ILRA 149	B)					Other ((Explain in Remarks)
³ Indiantora a	fhudrophuti	o voqotot	ion and w	otland budra		the proof	ant unload	diaturbad	or problematic	
Restrictive	l aver (if ob	served).	ion and w		logy mus	t be prese	ent, uniess	usuibeu		
Type	Luyer (ii ob	Servey.								
Denth (in									Hydric Soil	Present? Yes 🗸 No
Depth (In	cnes):									
Remarks:		Vloop		o vorv fi			m with	rodov	throughou	it the sail profile
Suis ale	Silly Cla	iy iuan	1 8000	e very in	ne sai	iuy iua	III WILII	Teuux	inoughou	at the soli prome.



wasb1009e_w_N



wasb1009e_w_S

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):			
wasb1009	2020-05-30			
Location:	Ecological Landscape:			
PLSS: sec 08 T045N R003W	Lake Superior Clay Diain			
	Lake Superior Clay Plain			
Lat: 46.386144 Long: -90.759730	Watershed:			
• •	LS12, Marengo River			
County: Ashland Town/City/Village: Ashland town				
, , , , , , , , , , , , , , , , ,				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes. Udorthents,	Wetland Type(s): PSS/PEM - Shrub-Carr/Fresh (wet) meadow complex			
ravines and escarpments, 25 to 60 percent slopes.				
Field Verified:				
Series not verified. In the shrub component soils were a	Watland Size:	Wetland Area Impacted		
sandy loam throughout, and in the emergent component soils	1 0143	1 0143		
were a silty clay loam over loamy very fine sand, with a high	Vogotation:	1.0140		
reduction observed.	Diant Community D	α_{α}		
Hydrology.	Vegetation within the shi	ub component is representative of a		
The overall feature is located on a slope. The hydrologic regime is seasonally saturated with	shrub-Carr dominated by	pussy willow with around cover dominated		
weak to moderate, lateral discharge hydrology moving from south to north. The hydrology of	by sensitive fern. Scattered graminoid cover is present within the feature. The vegetation within the emergent component is			
within the high water table of the shrub component, as observed through the soil pit. The				
complex is associated with sasb1005i.	representative of a graminoid-dominated fresh wet meadow,			
	including small-fruited bu	illiush and awi-fruited 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: Adjacent to residential property
2	Ν	N	Used for educational or scientific purposes
3	Y	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	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	Ν	N	3 or more strata present (>10% cover)
3	Ν	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	Ν	Y	100 m buffer – natural land cover <a>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
5	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	Ν	Y	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	Ν	N	Ephemeral pond with water present >45 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	Y	Y	Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable
2	N	N	Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
	IN	11	water levels or high flows – if no, not applicable
3	N	N	Densely rooted emergent or woody vegetation
SI			Storm and Floodwater Storage
1	Y	Y	Basin wetland, constructed outlet, has through-flow or is adjacent to a stream
2	Y	Y	Water flow through wetland is NOT channelized
3	Y	Y	Dense, persistent vegetation
4	N	N	Evidence of flashy hydrology
5	Y	Y	Point or non-point source inflow
6	N	N	Impervious surfaces cover >10% of land surface within the watershed
/	N	N	Within a watershed with $\leq 10\%$ wetland
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
1		Ň	Provides substantial storage of storm and floodwater based on providus section
2	IN N	Y	Provides substantial storage of storm and hoodwater based on previous section
2	N X	IN X	Mater flew through wetland in NOT channelized
3	ř V	ř V	Vogetated wetland associated with a lake or stream
4	ř V	Ý V	Dense, persistent vegetation
6	Y N	Y N	Signs of excess putrients, such as algae blooms, beauty macrophyte growth
7			Signs of excess numerics, such as algae blooms, neavy macrophyle growin
8	I V	ř V	Discharge to surface water
0	T N	T N	Natural land cover in 100m buffer area < 50%
	IN	IN	Groundwater Processes
4	N I	N I	Springe, soons or indicators of groundwater present
	N	N	springs, seeps or indicators or groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	N	vvetiand remains saturated for an extended time period with no additional water inputs
4	N	N	vvetiano solis are organic
5	I N	I N	vetiand is within a weilnead protection area

HU-3: The feature is located near a public road and is visible to the public, though it is located on private land. WH-6: The feature is a wetland complex associated with a stream. SP-1: The feature connects to an intermittent stream.

ST-5: The feature receives runoff from a nearby road.

WQ-7: The feature is located within and adjacent to a hay field. WQ-8: Discharges to the associated intermittent stream.

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

Observed	Potential	Species/Habitat/Comments
	Y	Deer / tracks observed nearby
Y	Y	Butterflies and bumblebees
	Y	Small mammals, birds

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

Observed	Potential	Species/Habitat
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)
Onoclea sensibilis*			PSS	Patchy
Scirpus microcarpus*			PEM	Rare
Carex stipata*			PEM	Rare
Salix discolor*			PSS	Rare
Ostrya virginiana			PSS	Rare
Phalaris arundinacea			PSS, PEM	Rare
Salix petiolaris			PSS, PEM	Rare
Agropyron cristatum			PEM	Barren
Betula papyrifera			PSS	Barren
Carex gracillima			PSS	Barren
Equisetum arvense			PSS	Barren
Euthamia graminifolia			PEM	Barren
Juncus effusus			PEM	Barren
Lotus corniculatus			PEM	Barren
Lycopus americanus			PEM	Barren
Lysimachia ciliata			PEM	Barren
Poa pratensis			PEM	Barren
Ranunculus acris			PEM	Barren

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

The wetland has relatively low floristic integrity. A number of invasive species are present in the feature, and a low diversity of native species comprise the majority of the feature.

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

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

**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 within and adjacent to a hay field and is highly disturbed from the land use. Vegetation within the emergent component is disturbed when hayed, and the entire complex likely receives polluted runoff from the field. There are non-native and invasive species present within and surrounding the feature. The nearby road and ditch, as well as land use practice, disturb the hydrology of the wetland.

SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE			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		v			
Water Quality Protection			~		
Groundwater Processes		~			

FUNCTION	RATIONALE
Floristic Integrity	The feature is located within and adjacent to a hay field and vegetation is disturbed. There is moderate diversity within the feature, including native and non-native species.
Human Use Values	The feature is located on private land and is unlikely to be used for recreation purposes, however it is very close to a residential property and may be used by these residents.
Wildlife Habitat	The tree and shrub cover present within the shrub component of the wetland provide habitat for avians. Evidence of deer using the area was observed.
Fish and Aquatic Life Habitat	N/A
Shoreline Protection	The feature is associated with an intermittent stream with significant bank erosion.
Flood and Stormwater Storage	The wetland is relatively densely vegetated and receives runoff from the nearby roadway.
Water Quality Protection	See above. A significant hydrologic source is from the hay field runoff. The feature discharges to an intermittent stream.
Groundwater Processes	The feature exhibits weak to moderate discharge hydrology that has been altered by the nearby roadway and ditches.

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/Cou	nty: Ashland Sampling Date: 2020-05-30
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasb1009 u
Investigator(s): SAM/KDF Section	Township Range: Sec 08 T045N R003W
Landform (hillolong, tarrage, etc.): Talf	(concerve convex none): $Convex$
Local teners Local teners	
Subregion (LRR or MLRA): Lat: Lat:Lat: Lat:Lat: Lat:Lat:Lat:Lat:Lat:Lat:Lat:Lat:Lat:Lat:Lat:Lat:Lat:Lat:Lat:Lat:Lat:Lat:Lat:	Long: <u>-90.760153</u> Datum: <u>VVG584</u>
Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 t	<u>o 6 percent slopes</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 significantly disturbed	I? Are "Normal Circumstances" present? Yes ✔
Are Vegetation, Soil, or Hydrology naturally problematic	? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sample	ing point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is Hydric Soil Present? Yes No W Wetland Hydrology Present? Yes No If	the Sampled Area ithin a Wetland? Yes No
Remarks: (Explain alternative procedures here or in a separate report.)	
Upland that is slightly convex in relation to the existin	ig wetland features to the east and west, but
field that is hayed.	orm. Sample point recorded in what is likely a
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B	39) 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 of	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction ir	1 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 Remar	ks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Surface Water Present? Yes No 🔽 Depth (inches):	
Water Table Present? Yes <u>No V</u> Depth (inches):	<u> </u>
Saturation Present? Yes <u>Ves</u> Depth (inches): <u>Ves</u> (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previo	us inspections), if available:
Remarks:	
Water table not observed within 20" below the soil su	Irface. All indicators of wetland hydrology are
lacking.	

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1009_u

Trop Stratum (Plot size: 30)	Absolute	Dominan Species?	t Indicator	Dominance Test worksheet:	
		<u>opecies</u> :	Status	Number of Dominant Species	
2				That are OBL, FACW, of FAC:() (A)	
3				Total Number of Dominant Species Across All Strata: 4 (B)	
۵					
5				That Are OBL, FACW, or FAC: (A/B)	
7				Prevalence Index worksheet:	
··		- Total Ca		Iotal % Cover of: Multiply by:	
Capling (Shruh Stratum (Distaire) 15			Jvei	$\frac{OBL species}{D} = \frac{D}{x^2 - D}$	
Saping/Shiub Stratum (Piot size. 15)				FAC species $5 \times 3 = 15$	
1				FACU species <u>50</u> x 4 = <u>200</u>	
2				UPL species <u>15</u> x 5 = <u>75</u>	
3				Column Totals: <u>85</u> (A) <u>320</u> (B)	
4				Prevalence Index = B/A = <u>3.764705882352941</u>	
				Hydrophytic Vegetation Indicators:	
7				1 - Rapid Test for Hydrophytic Vegetation	
/		Tatal Oa		2 - Dominance Test is >50%	
E N			over	3 - Prevalence Index is ≤3.0 ¹	
<u>Herb Stratum</u> (Plot size: <u>5</u>)	15	Y	LIPI	4 - Morphological Adaptations ¹ (Provide supporting	
2 Plantago lanceolata	15	Y	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)	
3 Rumey acetosella	10	v	FACU		
A Solidago gigantoa	10	 N		¹ Indicators of hydric soil and wetland hydrology must	
Trifolium protonso	10			be present, unless disturbed or problematic.	
5. <u>Thiolium pratense</u>	<u> </u>	 		Definitions of Vegetation Strata:	
6. <u>Eligeron singosus</u>	 		<u>FACU</u>	Tree – Woody plants 3 in. (7.6 cm) or more in diameter	
7. <u>Dichantheitum sp.</u>	 			at breast height (DBH), regardless of height.	
8. <u>Prialaris arundinacea</u>	<u> </u>			- Sapling/shrub – Woody plants less than 3 in. DBH	
9. <u>Dactylis giomerata</u>	<u> </u>		FACU	and greater than of equal to 5.26 it (111) tail.	
10. <u>Elymus repens</u>	<u> </u>	<u> </u>	FACU	Herb – All herbaceous (non-woody) plants, regardless	
11. <u>Agropyron cristatum</u>		<u> </u>			
12. <u>Equisetum arvense</u>	5	<u> N</u>	FAC	Woody vines – All woody vines greater than 3.28 ft in height.	
	95	= 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.)	uding o	y avad a	loiov. English plantain, giant	
addepred and common shoop sorrel a		th a fou	v aramin	alisy, English plantain, glant	
wheatarass			v yrannin		
micatylass.					

SOIL

Profile Desc	ription: (Describe t	o the depth	needed to document the indicator or confirm	the absence of indicators.)	
Depth (inchos)	Matrix Color (moist)	0/	Redox Features	Toyturo Bomarke	
<u>0-14</u>	7.5YR 2.5/2	100		SII	
1/1-20	5VR 3/1	100			
14-20	<u> </u>				
		<u> </u>			
				· · · · · · · · · · _ /	
¹ Type: C=Co	oncentration, D=Depl	etion, RM=R	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:			Indicators for Problematic Hydric Soils ³ :	
Histosol	(A1) Dipedon (A2)	—	Polyvalue Below Surface (S8) (LRR R, MI PA 149B)	2 cm Muck (A10) (LRR K, L, MLRA 14 Coast Prairie Redox (A16) (LRR K L	9B) B)
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)	
Stratified	l Layers (A5)	. (A 1 1)	Loamy Gleyed Matrix (F2)	Polyvalue Below Surface (S8) (LRR K,	L)
Depleted Thick Da	ark Surface (A12)	(ATT)	_ Depleted Matrix (F3) 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) (MLR	A 149B)
Sandy G	Bleyed Matrix (S4)		_ Redox Depressions (F8)	Mesic Spodic (TA6) (MLRA 144A, 145	, 149B)
Sandy R	Redox (S5)			Red Parent Material (F21)	
Dark Su	rface (S7) (LRR R, M	ILRA 149B)		Other (Explain in Remarks)	
		,		<u> </u>	
³ Indicators of	f hydrophytic vegetat	ion and wetla	and hydrology must be present, unless disturbed o	or problematic.	
Type:	Layer (il observed):				
Dopth (in	abos):		_	Hvdric Soil Present? Yes No	~
Remarks:					
No hvdri	c soil indicator	s preser	nt.		
- , -					



wasb1009_u_SW



wasb1009_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	_ City/County: <u>Ashland</u>	Sampling Date: <u>2020-05-30</u>
Applicant/Owner: Enbridge	Sta	te: <u>Wisconsin</u> Sampling Point: <u>wasb1010e_w</u>
Investigator(s): <u>SAM/KDF</u>	_ Section, Township, Range: <u>Sec 0</u>	8 T045N R003W
Landform (hillslope, terrace, etc.): Depression	_ocal relief (concave, convex, none): (Concave Slope (%): 0-2%
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.3854</u>	89 Long: <u>-90.75</u>	9433 Datum: WGS84
Soil Map Unit Name: Kellogg-Allendale-Ashwabay com	plex, 2 to 6 percent slopes	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🖌 No (If no,	explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Normal Circu	umstances" present? Yes <u>r</u> No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain	n 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 <u> </u>	Is the Sampled Area within a Wetland? Yes <u>✓</u> No
Wetland Hydrology Present?	Yes 🖌 No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced Roadside linear wetland d	ures here or in a separate report.) litch feature.	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1010e_w

Trac Stratum (Plataiza: 30)	Absolute	Dominar	nt Indicator	Dominance Test worksheet:
	% Cover	Species	<u>status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6.				Dravalance in dev werkelsest.
7				Tetal % Cover of Multiply by
		Tatal O		
			over	OBL species 5 $x^2 = 5$
Sapling/Shrub Stratum (Plot size: 15)				FACW species $\underline{40}$ $x^2 = \underline{80}$
1				FAC species $2 \times 3 = 6$
2				$\frac{1}{10} = \frac{1}{10} $
3	<u> </u>		<u> </u>	$\begin{array}{c} \text{OPL species} \underline{0} x \text{ s} = \underline{0} \\ \text{Column Totals} 47 (A) 01 (B) \end{array}$
4.				Column rotals. 47 (A) 91 (B)
5				Prevalence Index = B/A = 1.9361702127659575
0				Hydrophytic Vegetation Indicators:
6				1 - Ranid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
	0	= Total C	over	$\frac{1}{2}$ 2 - Dominance reacts - 50%
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Salix petiolaris</u>	15	Y	FACW	data in Remarks or on a separate sheet)
2. Salix lucida	10	Y	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Phalaris arundinacea	10	V	FACW	
4. Onocloa sonsibilis	<u> </u>	 N		¹ Indicators of hydric soil and wetland hydrology must
	 			be present, unless disturbed or problematic.
5. JUNCUS ETTUSUS		<u> </u>		Definitions of Vegetation Strata:
6. <u>Equisetum arvense</u>	2	<u> N </u>	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10.				Herb – All 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
12				height.
	4/	= Total C	over	
Woody Vine Stratum (Plot size: 30)				
1				
2				
3				Hydrophytic
4.				Vegetation
	0	= Total C	over	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	sheet)		0001	
Willows are obviously mowed; ditch inu	indated	and la	cking veg	getation with exception of the the
perimeter of the feature.			0 0	

(inches) Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks		Matrix	Redo	x Features			,
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soils not evaluated due to the potential for buried utilities. Soils assumed hydric based on the hydrology and dominant vegetation.	Sandy R Stripped Dark Sur Indicators of Restrictive L Type: Depth (inc Remarks: Soils not Ndrology	Matrix (S6) face (S7) (LRR R, MLRA hydrophytic vegetation an ayer (if observed): ches): evaluated due to y and dominant ve	149B) d wetland hydrology mus the potential for egetation.	buried uti	unless disturbed	or problematic. Hydric Soil Present? assumed hydric	Yes <u></u> № based on the
boils not evaluated due to the potential for buried utilities. Soils assumed hydric based on the hydrology and dominant vegetation.	Sandy R Stripped Dark Sur Indicators of Restrictive L Type: Depth (inc Remarks: Soils not Ndrology	Matrix (S6) face (S7) (LRR R, MLRA hydrophytic vegetation an ayer (if observed): ches): evaluated due to y and dominant ve	149B) d wetland hydrology mus the potential for egetation.	t be present,	unless disturbed	or problematic. Hydric Soil Present? assumed hydric	Yes <u></u> No <u></u> based on the
hydrology and dominant vegetation.	Sandy R Stripped Dark Sur Restrictive L Type: Depth (inc Remarks: Soils not Nydrology	Matrix (S6) face (S7) (LRR R, MLRA hydrophytic vegetation an ayer (if observed): ches): evaluated due to y and dominant ve	149B) d wetland hydrology mus the potential for egetation.	buried uti	unless disturbed	or problematic. Hydric Soil Present? assumed hydric	Yes <u>,</u> № based on the
by by and dominant vegetation.	Sandy R Stripped Dark Sur Indicators of Cestrictive L Type: Depth (inc Cemarks: Soils not Nydrology	Matrix (S6) face (S7) (LRR R, MLRA hydrophytic vegetation an ayer (if observed): ches): evaluated due to y and dominant ve	149B) d wetland hydrology mus the potential for egetation.	t be present,	unless disturbed lities. Soils	or problematic. Hydric Soil Present? assumed hydric	Yes <u>~</u> No <u></u> based on the
by by and dominant vegetation.	Sandy R Stripped Dark Sur Indicators of Cestrictive L Type: Depth (inc Cemarks: Soils not Nydrology	Matrix (S6) face (S7) (LRR R, MLRA f hydrophytic vegetation an cayer (if observed): thes): evaluated due to y and dominant ve	149B) d wetland hydrology mus the potential for egetation.	buried uti	unless disturbed lities. Soils	or problematic. Hydric Soil Present? assumed hydric	Yes <u></u> № based on the
by by and dominant vegetation.	Sandy R Stripped Dark Sur Indicators of testrictive L Type: Depth (inc temarks: Soils not	Addix (SS) Matrix (S6) face (S7) (LRR R, MLRA hydrophytic vegetation an ayer (if observed): ches): evaluated due to y and dominant ve	149B) d wetland hydrology mus the potential for egetation.	buried uti	unless disturbed lities. Soils	or problematic. Hydric Soil Present? assumed hydric	Yes _



wasb1010e_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):		
wasb1010	2020-05-30		
Location:	Ecological Landsca	ape:	
PLSS: sec 08 T045N R003W	Lake Superior Clay Plair		
	Lake Superior Olay I fair	1	
Lat: <u>46.385483</u> Long: <u>-90.759439</u>	Watershed:		
	LS12, Marengo River		
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u>			
SITE DESCRIPTION	1		
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes	Wetland Type(s):		
	PEM - Fresh (wet) meadow		
Field Verified:			
Series not verified. Soils were not sampled due to	Wetland Size:	Wetland Area Impacted	
the roadside ditch wetland location, and thus the	0.0181	0.0181	
potential for underground utilities.	Vegetation:		
	Plant Community D	Description(s):	
Hydrology:	The vegetation is	representative of a fresh (wet)	
The feature is located within a disturbed roadside ditch. The hydrologic	meadow dominat	ed meadow willow saplings and	
receives runoff from the adjacent gravel roadway. At the time of survey.	white meadowsw	eet, surrounded by reed canary	
there is 2-4 inches of standing water present within the ditch.	grass and fern sp		
	grade and rolli op		

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	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	N	Supports or provides habitat for endangered, threatened or special concern species
7	Ν	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Ν	N	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 >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	N	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present > 45 days
10	Y	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	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	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	Ν	N	Water flow through wetland is NOT channelized
3	Ν	Y	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	Y	Provides substantial storage of storm and floodwater based on previous section
2	Y	Y	Basin wetland or constricted outlet
3	Ν	N	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	Ν	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	Y	Stormwater or surface water from agricultural land is major hydrology source
8	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	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

HU-3: The feature is a roadside ditch visible to the public from the adjacent roadway. WH-10, FA-2: There is standing water within the ditch at the time of survey that provides habitat for frogs and toads, though the water receives polluted runoff and exhibits a surface sheen. Tadpoles were observed within the water.

ST-2, WQ-3: The feature is located within a linear basin.

ST-3, WQ-5: Vegetation is dense where there is not standing water.

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

Observed	Potential	Species/Habitat/Comments
	Y	Frogs and toads/ aquatic habitat
	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
Y	Y	Tadpoles

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
Salix petiolaris*			PEM	Rare
Spiraea alba			PEM	Rare
Onoclea sensibilis			PEM	Barren
Salix lucida			PEM	Barren
Equisetum arvense			PEM	Barren
Fragaria virginiana			PEM	Barren
Juncus effusus			PEM	Barren
Rhamnus cathartica			PEM	Barren
Vitis riparia			PEM	Barren

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

The plant community comprises a disturbed roadside ditch feature and includes native and invasive species. There is low overall diversity within the feature.

SECTION 3: Condition Assessment of Wetland Assessment A	Area (AA) and Buffer (100 m)
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Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
Х	Х		Н	С	Drainage – tiles, ditches
					Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
Х	Х		Н	С	Polluted runoff
					Pond construction
					Agriculture – row crops
	Х		Н	С	Agriculture – hay
					Agriculture – pasture
Х	Х		Н	С	Roads or railroad
Х	Х		M	С	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	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		M	С	Cover of non-native and/or invasive species
	Х		M	С	Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

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

**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 a disturbed roadside ditch predominately impacted by the adjacent roadway and associated runoff. Water within the feature appears polluted, resulting in a surface sheen. Invasive species are present within the wetland and the surrounding area. There is an above-ground utility corridor running directly above the feature from east to west that likely resulting in the removal of tall woody vegetation, resulting in abundant woody debris within the wetland. The ditch is located next to a shed, and garbage debris is littered throughout. There is also a hay field northwest of the feature but is downslope and unlikely to impact the ditch itself.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The vegetation is disturbed and includes a dominant invasive species. There is low overall diversity within the feature that is further limited by lack of vegetation within the lowest area of the feature with standing water.
Human Use Values	Though visible to the public from the road, the feature would not be used for recreation or scientific purposes.
Wildlife Habitat	Only one stratum is represented within the feature, but standing water is provides spawning habitat for frogs and toads, as evidenced by tadpoles within the feature.
Fish and Aquatic Life Habitat	Standing water provides habitat for observed tadpole and aquatic invertebrates, though the water appears to be polluted.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a closed basin that retains runoff from the roadway.
Water Quality Protection	See above. The feature is not associated with a waterbody.
Groundwater Processes	The feature exhibits reharge hydrology. No indicators of groundwater were observed.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary trenching, soil storage, and backfilling.	Low
Secondary Impacts (including impacts which are indirectly attributable to the project)	Vegetation 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 F	<u> roject</u>	City/County: Ashl	and s	ampling Date: <u>2020-05-30</u>
Applicant/Owner: Enbridge			State: Wisconsin	Sampling Point: wasb1010_u
Investigator(s): <u>SAM/KDF</u>		_ Section, Township,	Range: <u>sec 08 T045N F</u>	R003W
Landform (hillslope, terrace, etc.): Rise	<u>. </u>	ocal relief (concave, c	onvex, none): <u>Convex</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentra	Forests Lat: 46.3855	13 ւ	.ong: <u>-90.759404</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Kellogg-Allend	<u>dale-Ashwabay com</u>	<u>plex, 2 to 6 perc</u>	ent slopes NWI classificati	on:
Are climatic / hydrologic conditions on the	e site typical for this time of	year?Yes 🖌 No		narks.)
Are Vegetation, Soil, or H	ydrology significant	ly disturbed? A	re "Normal Circumstances" pres	sent? Yes 🖌 No
Are Vegetation, Soil, or H	ydrology naturally p	problematic? (If	needed, explain any answers i	n Remarks.)
SUMMARY OF FINDINGS - Att	ach site man showir	a sampling poin	t locations transacts i	mnortant features etc
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes <u> </u>	Is the Samp within a Wet	led Area land? Yes	No
Wetland Hydrology Present?	Yes No 🖌	_ If yes, option	al Wetland Site ID:	
Remarks: (Explain alternative procedur	es here or in a separate rep	oort.)	et Not delineated of	watland based on
the lack of true wetland by	ra leiephone inte i	unning easi/we	est. Not delineated as	s welland based on
	liology.			
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicator	s (minimum of two required)
Primary Indicators (minimum of one is r	equired; check all that apply	()	Surface Soil Cra	acks (B6)
Surface Water (A1)	Water-Staine	d Leaves (B9)	Drainage Patter	ms (B10)
High Water Table (A2)	Aquatic Faun	a (B13)	Moss Trim Line	s (B16)
Saturation (A3)	Marl Deposite	s (B15)	Dry-Season Wa	ater Table (C2)
Water Marks (B1)	Hydrogen Su	lfide Odor (C1)	Crayfish Burrow	/s (C8)

____ Oxidized Rhizospheres on Living Roots (C3) ____ Saturation Visible on Aerial Imagery (C9)

____ Stunted or Stressed Plants (D1)

No 🖌

____ Geomorphic Position (D2)

Shallow Aquitard (D3)
 Microtopographic Relief (D4)

FAC-Neutral Test (D5)

Wetland Hydrology Present? Yes

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

Yes _____ No ____ Depth (inches): _____

Yes _____ No 🖌 Depth (inches): _____

Yes _____ No ____ Depth (inches): ___

Remarks:

Sediment Deposits (B2)

____ Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

Drift Deposits (B3)

___ Iron Deposits (B5)

Field Observations: Surface Water Present?

Water Table Present?

Saturation Present?

____ Algal Mat or Crust (B4)

Berm feature that is elevated roughly two feet above the adjacent ditch wetland feature. Wetland hydrology unlikely.

Presence of Reduced Iron (C4)

____ Recent Iron Reduction in Tilled Soils (C6)

____ Thin Muck Surface (C7)

____ Other (Explain in Remarks)

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1010_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	t Indicator Status	Dominance Test worksheet:
1)				Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
2		_		Tatal 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				Prevalence Index worksheet:
7			·	Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>85</u> x 2 = <u>170</u>
1				FAC species <u>5</u> x 3 = <u>15</u>
2				FACU species x 4 =8
2			·	UPL species x 5 =
3			·	Column Totals: <u>92</u> (A) <u>193</u> (B)
4 5.			·	Prevalence Index = B/A = 2.097826086956522
6			·	Hydrophytic Vegetation Indicators:
7				 1 - Rapid Test for Hydrophytic Vegetation
/·			·	2 - Dominance Test is >50%
	0	= Total Co	ver	\sim 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>	50	<u> </u>	<u>FACW</u>	data in Remarks or on a separate sheet)
2. <u>Onoclea sensibilis</u>	25	Y	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Solidago gigantea</u>	5	N	FACW	
4. <u>Cornus alba</u>	5	N	FACW	be present, unless disturbed or problematic.
5. Populus tremuloides	5	N	FAC	Definitions of Vegetation Strate:
6 Poa pratensis	2	N	FACU	Demittions of vegetation Strata:
7 Physityphing	<u> </u>	N	1700	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8		<u> </u>		at breast neight (DBH), regardless of neight.
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
	94	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1				
2			- <u> </u>	
2			·	
3			·	Hydrophytic Vegetation
4			·	Present? Yes <u>v</u> No
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)	e with	eoneitive	forn
Denni leature is dominated by reed can	ary gras		SCHOLING	

color (moist) % Color (moist) % Type' Loc' Texture Remarks	Inches Color (moist) % Color (moist) % Type Loc ² Texture Remarks Image: Color (moist) % Color (moist) % Type Loc ² Texture Remarks Image: Color (moist) % Color (moist) % Type Loc ² Texture Remarks Image: Color (moist) % Color (moist) % Texture Remarks Image: Color (moist) Milex Hight (Mathematic Hydro (Matrix, MS=Masked Sand Grains. ¹ Location: PL=Pore Lining, M=Matrix. Milex Hight (Color (Matrix) Polyvalue Below Surface (Sa) (LRR R, Image: Color (Matrix) Indicators for Problematic Hydric Soils ¹ : Histosol (A1) Polyvalue Below Surface (S9) (LRR R, MLRA 149B) Coastor Prioblematic Hydric Soils ¹ : Histosol (A1) Polyvalue Below Surface (S9) (LRR R, L, R) Coastor Prioblematic Hydric Soils ¹ : Hydrogen Sulfide (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Somd Wucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S1) Depleted Dark Surface (F7) Pledmont Floodplain Soils (F12) (MLRA 144A, 145, 149 Sandy Gleyed Matrix (S4)<	Indees Color (moist) % Color Ype ¹ Loc ² Texture Remarks Image: Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks Image: Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks Image: Color (moist) % Color (moist) % Type ¹ Image: Color (moist) % Image: Color (moist) % Image: Color (moist) % Image: Color (moist) Im	Inches Color (molst) % Type Loc ² Texture Remarks Image: Second	(inches)		Redo	x Features			
rpe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. rdric Soil Indicators: Indicators for Problematic Hydric Soils ² : Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Histo Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR K, L) Histo Juffed (A4) Loamy Mucky Mineral (F1) (LRR K, L) Lopeleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Dark Surface (A12) Redox Dark Surface (F6) Thin Dark Surface (F7) Piedemont Floodplain Soils (F19) (LRR K, L) Sandy Redox (S5) Redox Dark Surface (F7) Stratified Layers (A5) Depleted Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. strictive Layer (If observed): Type: Type: Type:	ype: C-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. rdric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1) Polyvalue Below Surface (S8) (LRR R, L, R) Histosol (A1) Polyvalue Below Surface (S8) (LRR R, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Strattfied Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Matrix (S4) Depleted Dark Surface (F7) Thin Dark Surface (S4) Under Depleted Dark Surface (S7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Sandy Redox (S5) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Gleyed Matrix (S4) Dark Surface (S7) (LRR K, L) Redox Depressions (F8) Dark Surface (S7) (LRR R, MLRA 149B) Were Shalow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Stripted Matrix (S6) Other (Explain in Remarks) Sandy Gleyed Matrix (S4) Redox Depresent, unless disturbed or problematic. strictive Layer (if observed): <	ype: C-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ¹ Location: PL=Pore Lining, M=Matrix. million in the intervention of the interventinterventinterventintery intervention of the intervention of the i	Ype: C:rConcentration, D:rDepletion, RM-Reduced Matrix, MS=Masked Sand Grains Location: PL-Pore Lining, M=Matrix Indicators for Problematic Hydric Solis¹: Som Muck (A10) (LRR K, L, IRR K, L R, HAR 1498) Som Muck (A10) (LRR K, L, IRK K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thirb Dark Surface (A11) Depleted Dark Surface (F7) Polynamose Masses (F12) (LRR K, L, R K, L) Som Mucky Mineral (F1) Redox Depressions (F6) Tion Dark Surface (S12) (LRR K, L, I Som Mucky Mineral (F3) Depleted Matrix (S4) Depleted Matrix (S4) Redox Depressions (F6) Michael (F2) (LRR K, L, R M, LR 1498) Offer (Explain in Remarks) Third Dark Surface (F7) Problematic Layer (If Observed): Type: Depleted Matrix (S6) Deplet (inches):		Color (moist) %	6 Color (moist)	<u>%</u> T	ype ¹ Loc ²	Texture	Remarks
	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. yrdric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Hitscopie (A2) MLRA 149B) Histic Epipedon (A2) MLRA 149B) Statified Layers (A5) Loarny Gleyed Matrix (F3) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (F7) Piedwarts Surface (F7) Sandy Mcky Mineral (S1) Depleted Matrix (F3) Sandy Redox (S5) Redox Depressions (F8) Sittiped Matrix (S4) Redox Depressions (F8) Sandy Mecky (S5) Straffed Layer (A2) Depleted Selow Carks Meacy Depressions (F8) Sandy Mcky Mineral (S1) Depleted Park Surface (F7) Depleted Selow Carks Redox Depressions (F8) Sandy Meckor (S5) Sendy Macka (S5) Striped Matrix (S4) Redox Depressions (F8) Bed rem Material (F21) Very Shallow Dark Surface (T72) Depleted Selow Carks Herdmort Secord (T6) (MLRA 1448, 145, 143) Sandy Mcky Redox (S5) Redox Depressions (F8) Striped Matrix (S4) Redox D	ype: C-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ¹ Location: PL=Pore Lining, M=Matrix. ype: C-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ¹ Location: PL=Pore Lining, M=Matrix. ydric Soil Indicators: Indicators for Problematic Hydric Soils ¹ : Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) Indicators for Problematic Hydric Soils ¹ : Histosol (A1) Domy Mucky Mineral (F1) (LRR K, L) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Stratified Layers (A5) Loamy Micky Mineral (F1) (LRR K, L) Depleted Matrix (F2) Stratified Layers (A5) Loamy Sieged Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Depleted Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Stratified Layers (S4) Redox Depressions (F8) Hesic Spodic (TA6) (MLRA 144A, 145, 1430, 1431, 1432, 1431, 1432, 1431, 1432, 1431, 1432, 1432, 1432, 1432, 1431, 1432, 14	Ype: C=Concentration, D=Depletion, RN=Reduced Matrix, MS=Masked Sand Grains. ¹ Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Soils*: Indicators Science (A1) Heits: Eppedon (A2) MRA 14980 Huth: Eppedon (A2) Black Husis (A3) Thin Dark Surface (S3) (LRR R, NLRA 1498) Hot Expected (A1) Statilied Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S6) Polyvalue Below Surface (S7) (LRR K, L, NL Statilied Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Polyvalue Matrix (F3) Thin Dark Surface (S9) (LRR K, L, NL Polyvalue Selow Surface (S9) (LRR K, L, NL Depleted Dark Surface (F12) Bandy Gleyed Matrix (S4) Redox Depressions (F8) Hormont Floodiani Soils (F19) (MLR A 149 Sandy Gleyed Matrix (S4) Statified Layers (A5) Depleted Dark Surface (F7) Predmont Floodiani Soils (F19) (MLR A 149, 145, 149) Sandy Gleyed Matrix (S4) Statified Layers (F10) LRR K, L, R Media Vatrice (T12) Redox Depressions (F8) Statified Layer (frobserved): Vers Surface (T12) Polytalue Below Surface (T12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain In Remarks) Indicators Soils are likely spoil aderial renoved from the adjacent ditch wetland.		·				·	
	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ¹ Location: PL=Pore Lining, M=Matrix. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ¹ Location: PL=Pore Lining, M=Matrix. Histo: Figure Matrix Indicators Indicators Histo: Figure Matrix Indicators Coast Praine Redox (A10) (LRR K, L, R) Black Histic (A3)	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ¹ Location. PL=Pore Lining, M=Matrix. ydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histic Epiceton (A2) Histic Epic	ype: C=Concentration, D=Depletion, Rki=Reduced Matrix, MS=Masked Sand Grains. ¹ Location: PL=Pore Lining, M=Matrix. ytric Soil Indicators: Indicators for Problematic Hydric Soils': Helatool (A1) Polyvalue Below Surface (S8) (LRR R, Hydragen Sufface (A1)) Polyvalue Below Surface (S8) (LRR R, Hydragen Sufface (A1)) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Coast Prairs Reduced (A16) (LRR K, L, R) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Standree Layers (A5) Loamy Nucky Mineral (F1) Depleted Matrix (F2) Thin Dark Surface (F7) Polyvalue Below Surface (S8) (LRR K, L) Sandy Medox (S4) Loamy Surface (F6) Tinn Dark Surface (F7) Sandy Cleyed Matrix (S4) Redox Depressions (F8) Meak Anterial (F1) (MLR A 144A, 145, 1494 Sandy Cleyed Matrix (S6) Wesic Spoid: (C16) (MLRA 144A, 145, 1494 Sandy Redox (S5) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) No Indicators (S1) Depleted Dark Surface (F7) Pielemont Floodplain Soils (F19) (MLRA 144A, 145, 1494 Sandy Redox (S5) Heat (F1) (MLRA 144A, 145, 1494 Sandy Redox (S1) Depleted Back (F1) (MLRA 144A, 145, 1494 Simped Matrix (S6) Depresent Material (F2)							
	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. rdric Soil Indicators: Indicators for Problematic Hydric Soils ¹ : Histosol (A1) Polyvalue Below Surface (S8) (LRR R, L) Histosol (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Polyvalue Below Dark Surface (S9) (LRR K, L) Depleted Matrix (F2) Thick Dark Surface (A11) Depleted Matrix (F2) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Redox (S5) Stratpeed Dark Surface (F7) Shipped Matrix (S4) Redox Depressions (F8) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) udicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. striftive Layer (if observed): Type: Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes No Yes	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. *Location: PL=Pore Lining, M=Matrix. ydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Indicators for Problematic Hydric Soils ³ : Histos (A1) Polyvalue Below Surface (S8) (LRR R, Hydrogen Suffade (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Som Muck y Peat or Peat (S3) (LRR K, L, R) Depleted Below Dark Surface (S9) (LRR K, L) Dark Surface (S7) (LRR K, L) Statified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (F6) Thin Dark Surface (F6) Standy Gleyed Matrix (F3) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Strictive Layer (if observed): Very Shallow Dark Surface (T12) Dark Surface (S7) (LRR R, MLRA 149B) Very Shallow Dark Surface (T12) Dark Surface (S7) (LRR R, MLRA 149B) Weick Sopotic (TA6) (MLRA 144A, 145, 149E) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Meeick Sopotic (TA6) (MLRA 144A, 145, 149E) Strictive Layer (if observed): Trype: Depleted Dark Surface (T12) Very Shallow Dark Surface (T12	ype:							
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Soils are likely spoil naterial removed from the adjacent ditch wetland. Soil Activation of the adjace		·					
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ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. rdric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) 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) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F12) (MLRA 144A, 145, 143) Sandy Redox (S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 143) Sandy Redox (S5) Other (Explain in Remarks) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer (if observed): Type: Type: Thin Park Surface (S7) (LRR R) Strictive Layer (if observed):	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. ydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Indicators for Problematic Hydric Soils ³ : Histosol (A1) Polyvalue Below Surface (S8) (LRR R, LSP) Coast Prairie Redox (A10) (LRR K, L, RL, A149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) S cm Mucky Peat or Peat (S3) (LRR K, L, R) Black Histic (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Solis (F19) (MLRA 144 Sandy Redox (S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 1444, 145, 149 Sandy Redox (S5) Other (Explain in Remarks) Other (Explain in Remarks) idicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Polymatic. strictive Layer (If observed): Yes No v Type:	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Indicators for Problematic Hydric Soils ³ :	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. *Location: P=Pore Lining, M=Matrix, MS=Masked Sand Grains. ydric Soil Indicators: Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Soils*: Histos (L1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Coast Prainfe Redox (A16) (LRR K, L, R) Black Histis (C3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Coast Prainfe Redox (A16) (LRR K, L, R) Dark Surface (A1) Loamy Gieyed Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, L Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 1449, 145, 149) Sandy Redox (S5) Sandy Redox (S5) Bereest Material (F21) Wery Shallow Dark Surface (TF12) Shriped Matrix (S4) Redox Depressions (F8) Wery Shallow Dark Surface (TF12) Derk Surface (S7) (LR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Extirctive Layer (if observed): Tripe Type:							
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ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. idric 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) Histosol (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, I) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, 448 Sandy Redox (S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 1444, 145, 148 Sandy Redox (S5) Other (Explain in Remarks) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer (if observed): Type: Type: Thin Remarks) Thin Remarks)	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. ype: CSOII Indicators Indicators for Problematic Hydric Soils ³ : Indicators for Problematic Hydric Soils ³ :	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. ydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : - Histo (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) - Biack Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) - Biack Histic (A3) Thin Dark Surface (S9) (LRR K, L) - Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) - Stratified Layers (A5) Loamy Gleyed Matrix (F2) - Thick Dark Surface (A11) Depleted Matrix (F3) - Thick Dark Surface (A12) Redox Dark Surface (F6) - Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) - Sandy Gleyed Matrix (S4) Redox Depressions (F8) - Sandy Redox (S5) Redox Depressions (F8) - Strifte Layers (If observed): Very Shallow Dark Surface (TF12) - Dark Surface (S7) (LRR , MLRA 149B) Other (Explain in Remarks) udicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. strictive Layer (If observed): Yes Type: Poeth (inches):	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. ydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Indicators for Problematic Hydric Soils ³ : Histos Epledon (A2) MLRA 149B) Coast Praine Redox (A16) (LRR K, L, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Gleyed Matrix (F1) Depleted Below Surface (S9) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Sandy Micky Mineral (S1) Depleted Dark Surface (F0) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Sandy Redox (S5) Stripped Matrix (S4) Redox Depressions (F8) Sandy Redox (S5)		·					
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. rdic Soil Indicators: Indicators for Problematic Hydric Soils ³ : - Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 149B) 2 cm Muck (A10) (LRR K, L, MLRA 149B) - Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) - Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) - Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) - Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (F6) - Thick Dark Surface (A12) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144, 145, 148 - Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144, 145, 148 - Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) - Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Other (Explain in Remarks)	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. ydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Indicators for Problematic Hydric Soils ³ : Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A10) (LRR K, L, MLRA 149B) 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 Mucky Mineral (F2) Polyvalue Below Surface (S8) (LRR K, L) Stratified Layers (A5) Loamy Gleyeed Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, F Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 1445, 149 Sandy Redox (S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 1445, 145, 149 Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Yes No Type:	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. ydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : - Histo Soil (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) - 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) - Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) - Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (F6) - Thick Dark Surface (A12) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149 - Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144, 145, 149) - Sandy Redox (S5)	Type: C=Concentration. D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils?: Introde Matrix (A2) Introde Matrix (A3) Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Hutc Epipedon (A2) Introde Matrix (A3) Coast Prairie Redox (A16) (LRR K, L, R) Black Histosi (A3) Chin Dark Surface (S9) (LRR K, L) Dark Surface (S7) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (S7) (LRR K, L) Depleted Below Dark Surface (A12) Depleted Dark Surface (F6) Trin Dark Surface (S1) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Pledmont Floodplain Soils (F19) (MLRA 1449) Sandy Redox (S5) Redox Dark Surface (F7) Pledmont Floodplain Soils (F19) (MLRA 1449) Sandy Redox (S5) Redox Depressions (F8) Mesic Sopotic (TA6) (MLRA 1445, 149) Sandy Redox (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Problematic. Problematic. estrictive Layer (if observed): Type: Puptic Soil Present? Yes No vegetation and wetland hydrology must be present, unless disturbed or problematic. estrictive Layer (if observed): Puptic Soil Present? Yes No vegetation and wetland hydrology to the pote		·					
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. idric 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) - Histo 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, I) - Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) - Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) - Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, - Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144, 145, 143) - Sandy Redox (S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 143) - Stripped Matrix (S6) Other (Explain in Remarks) - Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) - dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Other (Explain in Remarks)	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. ydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Indicators for Problematic Hydric Soils ³ :	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. ydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : _ Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MCoast Prairie Redox (A16) (LRR K, L, R) _ Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Coation: PL=Pore Lining, M=Matrix, MS=Masked Sand Grains. Yife: Soil Indicators: Indic		·					
Histosol (A1)	Histosol (A1) Polyvalue Below Surface (S8) (LRR R,	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 (A10) (LRR K, L, R] Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) S cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S0) (LRR K, L) Stratified Layers (A5) 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 149, 145, 149] Sandy Redox (S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149] Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Mosc Spoil Present? Yes No strictive Layer (if observed): Type: No Yes Type: Depth (inches): No Yes Depth (inches): Hydric Soil Present? Yes No <td< td=""><td>Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) 2 cm Muck (A10) (LRR K, L, RA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Muck Peat or Peat (S3) (LRR K, L, R Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L) Sandy Gleyed Matrix (S4) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 143B) Sandy Gleyed Matrix (S6) Stripped Matrix (S6) Red Parent Material (F21) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) nndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. estrictive Layer (if observed): Type: Type: Muck Soil Present? Yes No _ djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely spoil naterial removed from the adjacent ditch wetland.</td><td>ype: C=C</td><td>Concentration, D=Depletion</td><td>, RM=Reduced Matrix, M</td><td>S=Masked Sa</td><td>nd Grains.</td><td>²Location: PL=Por</td><td>e Lining, M=Matrix.</td></td<>	Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) 2 cm Muck (A10) (LRR K, L, RA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Muck Peat or Peat (S3) (LRR K, L, R Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L) Sandy Gleyed Matrix (S4) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 143B) Sandy Gleyed Matrix (S6) Stripped Matrix (S6) Red Parent Material (F21) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) nndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. estrictive Layer (if observed): Type: Type: Muck Soil Present? Yes No _ djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely spoil naterial removed from the adjacent ditch wetland.	ype: C=C	Concentration, D=Depletion	, RM=Reduced Matrix, M	S=Masked Sa	nd Grains.	² Location: PL=Por	e Lining, M=Matrix.
Instant (Internet) Instant (Internet) Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) WLRA 149B) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	Instant (Inf) Information (Inf) Inform	Instact (VIII) Image: Construction of the observed of the observ	Histic Epipedon (A2) MLRA 149B) Coast Praine Redox (A16) (LRR K, L, R Black Histic (A3) Thin Dark Surface (S9) (LRR K, 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 (S3) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L, D Thick Dark Surface (A12) Redox Dark Surface (F6) Trin Dark Surface (F12) (LRR K, L, G) Sandy Mucky Mineral (S1) Depleted Matrix (F3) Trin Dark Surface (F12) (LRR K, L, G) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Predmont Floodplain Solis (F19) (MLRA 144, 145, 1491 Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Predmont Floodplain Solis (F19) (MLRA 144, 145, 1491 Sandy Mucky Mineral (S1) Depleted Matrix (S6) Wests Spocia (TA6) (MLRA 144A, 145, 1491 Sandy Mucky Mineral (S1) Depleted Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Predivery Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Predivery Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Uter Soil Present? Yes No Very Shalow Darke (Yes No Very Shallow Dark Surface (Yes No Ve	Histoso		Polyvalue Belo	w Surface (S8		2 cm Muck (A10) (I RR K. I., MI RA 149B)
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, I Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144A, 145, 144) Sandy Redox (S5) Redox Depressions (F8) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Trype: Type: Type: Type: Very Shallow Dark Surface (TF12)	Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, F Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144A, 145, 149 Sandy Redox (S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149 Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)	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)	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 Surface (S7) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, F Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144A, 145, 149] Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spocia (TA6) (MLRA 144A, 145, 149] Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) ndicators of hydrophylic vegetation and wetland hydrology must be present, unless disturbed or problematic. estrictive Layer (if observed): Type:	Histic E	pipedon (A2)	MLRA 149B)) (ERR R,	Coast Prairie Re	dox (A16) (LRR K, L, R)
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Statilied Layers (A3)	Statilied Layers (KS)	Loanty Gleyel Matrix (F2) Loanty Gleyel Matrix (F2) Loanty Gleyel Matrix (F3) Loanty Gleyel Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, F Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149I Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. strictive Layer (if observed): Type: Depth (inches): Media and unable to dig due to the potential for buried utilities. Soils are likely spoil aterial removed from the adjacent ditch wetland.	Channed Layers (Ko) Lotaniy Gleyed Matrix (2) Lotaniy Gleyed Matrix (2) Lotaniy Gleyed Matrix (7) Thio Dark Surface (A11) Depleted Matrix (F3) Inon-Manganese Masses (F12) (LRR K, L, F Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144 Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Other (Explain in Remarks) ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. estrictive Layer (if observed): Type: Deplet (inches): Medic Soil Present? Yes No // emarks: djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely spoil haterial removed from the adjacent ditch wetland.	_ Hydroge Stratifio	en Sulfide (A4)	Loamy Mucky I	Mineral (F1) (L	.RR K, L)	Dark Surface (S	7) (LRR K, L)
Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, Piedmont Floodplain Soils (F19) (MLRA 14 Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144 Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 144 Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Other (Explain in Remarks) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. strictive Layer (if observed): Type: Type:	Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, F Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 145 Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149 Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Idicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Present? Yes No Yes Type: Depth (inches): Yes No Yes marks: Yes No Yes	Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, F Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Sandy Redox (S5) Mesic Spodic (TA6) (MLRA 144A, 145, 149i) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)	Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, F Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Sandy Face (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)	Deplete	ed Below Dark Surface (A1	 Depleted Matrix 	x (F3)		Thin Dark Surfac	ce (S9) (LRR K, L)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 14 Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 144 Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. strictive Layer (if observed): Type:		Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149		Thick D	ark Surface (A12)	Redox Dark Su	irface (F6)		Iron-Manganese	Masses (F12) (LRR K, L,
Sandy Gleyed Matrix (S4)		Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spool: (TA6) (MLRA 144A, 145, 149) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	Sandy Geyed Matrix (S4) Redox Depressions (F3) Mesic spool: (TA6) (MiRA 1444, 143, 143, 143, 143, 143, 143, 143	_ Sandy N	Mucky Mineral (S1)	Depleted Dark	Surface (F7)		Piedmont Flood	blain Soils (F19) (MLRA 14
Stripped Matrix (S6)	Stripped Matrix (S6)	 Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer (if observed): Type: Depth (inches): Yes Mo Marks: djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely spoil aterial removed from the adjacent ditch wetland. 	Stripped Matrix (S6)	_ Sandy C	Redox (S5)	Redox Depress	SIONS (F8)		Red Parent Mate	A6) (MLRA 144A, 145, 143 erial (F21)
_ Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. strictive Layer (if observed): Type:	_ Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) adicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. astrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No✓ emarks:	Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) adicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. astrictive Layer (if observed): Type: Depth (inches): Depth (inches): marks: djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely spoil aterial removed from the adjacent ditch wetland.	Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 	Stripped	d Matrix (S6)				Very Shallow Da	irk Surface (TF12)
dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. strictive Layer (if observed): Type:	adicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. estrictive Layer (if observed): Type: Depth (inches): No _ ✓ emarks:		ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. estrictive Layer (if observed):	_ Dark Su	urface (S7) (LRR R, MLRA	149B)			Other (Explain in	n Remarks)
Type:	Appendix Sector Appendix Sector Type:	estrictive Layer (if observed): Type:	estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No emarks: djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely spoil naterial removed from the adjacent ditch wetland.	Indicators of	of hydrophytic vegetation a	nd wetland hydrology mus	st be present,	unless disturbed	or problematic.	
Туре:	Type:	Type:	Type:	estrictive	Layer (if observed):					
	Depth (inches): Hydric Soil Present? Yes No ✓ emarks:	Depth (inches): Hydric Soil Present? Yes No ✓ emarks: djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely spoil aterial removed from the adjacent ditch wetland. Soils are likely spoil	Depth (inches): Hydric Soil Present? Yes No emarks: djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely spoil naterial removed from the adjacent ditch wetland.	Туре:						
Depth (inches): No	emarks:	emarks: djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely spoil aterial removed from the adjacent ditch wetland.	djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely spoil naterial removed from the adjacent ditch wetland.	Depth (in	nches):				Hydric Soil Present?	'YesNo∕
marks:		djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely spoil aterial removed from the adjacent ditch wetland.	djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely spoil naterial removed from the adjacent ditch wetland.	emarks:					· · · · · · ·	
djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely spoil	djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely spoil	aterial removed from the adjacent ditch wetland.	naterial removed from the adjacent ditch wetland.	diacent	t to roadside and	unable to dig due	to the po	tential for t	ouried utilities. So	oils are likely spoil
	aterial removed from the adjacent ditch wetland.				removed from the	e adjacent ditch w	etland.			
djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely	djacent to roadside and unable to dig due to the potential for buried utilities. Soils are likely a terial removed from the adjacent ditch wetland.			diacen	t to roadside and removed from the	unable to dig due e adjacent ditch w	to the po vetland.	tential for b	ouried utilities. So	oils are likely
aterial removed from the adjacent ditch wetland.				aterial						
aterial removed from the adjacent ditch wetland.				naterial						
aterial removed from the adjacent ditch wetland.				naterial						
aterial removed from the adjacent ditch wetland.				naterial						
aterial removed from the adjacent ditch wetland.				naterial						
aterial removed from the adjacent ditch wetland.				naterial						
aterial removed from the adjacent ditch wetland.				naterial						
aterial removed from the adjacent ditch wetland.				naterial						
aterial removed from the adjacent ditch wetland.				naterial						



wasb1010_u_E



wasb1010_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: As	hland	Sampling Date: <u>2020-05-30</u>	
Applicant/Owner: Enbridge		State:	Wisconsin Sampling Point: wasb1011f_w	
Investigator(s): KDF/SAM	Section, Townshi	p, Range: Sec 08	T045N R003W	
Landform (hillslope, terrace, etc.): Toeslope	Local relief (concave	. convex. none): No	ne Slope (%): 3-7%	
Subregion (I BB or MI BA). Northcentral Forests Lat.	46 386392	Long: -90 7582	99 Datum: WGS84	
Soil Man Unit Name: I Idorthants, ravines and		rcent slopes NW		
Are alimetia / hydrologia conditions on the site tunical fo	r this time of year? Yea	No. (If no. ov	nlein in Demotive)	
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circums	stances" present? Yes <u>v</u> No	
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain ar	ny answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site m	ap showing sampling po	int locations, tra	nsects, important features, etc.	
Hydrophytic Vegetation Present? Yes	No. Is the Sar	npled Area		
Hydrophylle vogetation recont i rec	No within a V	Vetland? Ye	es 🖌 No	
Wetland Hydrology Present? Yes	No If yes, opt	onal Wetland Site ID:		
Remarks: (Explain alternative procedures here or in a	separate report.)	••• • •		
The forested seep is located within a	ravine along an inter	mittent stream.	Upland species are	
present within the feature growing or	n rotted stumps and de	owned woody o	debris.	
HYDROLOGY				
Wetland Hydrology Indicators:		Seconda	ary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check	all that apply)	Sur	face Soil Cracks (B6)	
Surface Water (A1)	Water-Stained Leaves (B9)	Dra	inage Patterns (B10)	
✓ High Water Table (A2)	Water Table (A2) Aquatic Fauna (B13)			
_v Saturation (A3)	ion (A3) Marl Deposits (B15)			
Water Marks (B1)	Water Marks (B1) Hydrogen Sulfide Odor (C1)			
Sediment Deposits (B2)	Oxidized Rhizospheres on Living	Roots (C3) Sat	uration Visible on Aerial Imagery (C9)	
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stu	nted or Stressed Plants (D1)	
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled S	oils (C6) <u>v</u> Geo	omorphic Position (D2)	
Iron Deposits (B5)	its (B5) Thin Muck Surface (C7) Shallow Aquitare			
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Mic	rotopographic Relief (D4)	
Sparsely Vegetated Concave Surface (B8)		FA0	C-Neutral Test (D5)	
Field Observations:				
Surface Water Present? Yes <u>No</u>	Depth (inches):			
Water Table Present? Yes <u>v</u> No	Depth (inches): 0			
Saturation Present? Yes <u>v</u> No <u>v</u> (includes capillary fringe)	Depth (inches): 0	Wetland Hydrolog	y Present? Yes <u>~</u> No	
Describe Recorded Data (stream gauge, monitoring w	ell, aerial photos, previous inspe	ctions), if available:		
Pomarka:				
The hydrologic regime is saturated w	vith strong discharge h	vdroloav. The	feature exhibits a high	
water table and saturation to the sur	face and discharges to	an intermitter	nt stream	
	abo and alconargeo t			

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1011f_w

	Absolute	Dominan	t 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>Betula allegnaniensis</u>	40	<u> </u>	FAC	That Are OBL, FACW, or FAC: (A)
2. <u>I suga canadensis</u>	20	<u> </u>	FACU	Total Number of Dominant
3. <u>Thuja occidentalis</u>	20	<u> Y </u>	FACW	Species Across All Strata:6_ (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:
	80	= Total Co	ver	OBL species <u>10</u> x 1 = <u>10</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =54
1. <u>Fraxinus nigra</u>	5	Y	FACW	FAC species <u>59</u> x 3 = <u>177</u>
2				FACU species <u>55</u> $x 4 = 220$
3				UPL species $0 \times 5 = 0$
4.				Column Totals: 151 (A) 461 (B)
5.				Prevalence Index = B/A = <u>3.052980132450331</u>
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
	5	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹
1 Taxus canadensis	30	Y	FACU	4 - Morphological Adaptations ¹ (Provide supporting
2 Equisetum scirpoides	<u> </u>	<u> </u>	<u>ΕΔC</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Piboo trioto	10	 		
3. <u>Nibes lliste</u>	<u></u>	I		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Gymnocarpium dryopiens</u>	 	<u> </u>		be present, unless disturbed or problematic.
5. <u>Aurynum angustum</u>				Definitions of Vegetation Strata:
6. <u>Equisetum nyemale</u>				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Fraxinus pennsylvanica</u>	2	<u> </u>	FACW	at breast height (DBH), regardless of height.
8. <u>Arisaema triphyllum</u>	2	<u> </u>	FAC	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Trillium grandiflorum</u>	2	<u> N</u>	·	and greater than or equal to 3.28 ft (1 m) tall.
10			·	Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tail.
12			<u> </u>	Woody vines – All woody vines greater than 3.28 ft in height
	68	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4				Vegetation
	0	= Total Co	ver	Present? Yes v No
Remarks: (Include photo numbers here or on a separate	sheet.)			I
I he vegetation at the sample plot is re	presenta	ative of	a foreste	ed seep dominated by yellow birch
with eastern white cedar and hemlock	abundar	nt throu	ghout. T	here is patchy ground cover
dominated by tern species, Canada ye	w, and h	norsetai	II specie	s. Overall, the feature is dominated by
nemiock and black ash.				

Profile Desc	ription: (Desc	ribe to the c	lepth needed to docu	ment the in	dicator o	or confirm	the absence of ind	licators.)
Depth (inches)	Mat Color (mois	trix st) %	Redo Color (moist)	<u>ox Features</u> %	Type ¹	Loc ²	Texture	Remarks
0-12	10YR 2	/1 100)	0				
10 10	<u>5VD</u> 2	/2 100	<u> </u>		·			
12-18	<u> 31R 3</u>	<u>/ 100</u>)				VFSL	
	-				·			
					·			
					·		·	
					·	<u> </u>		
					·	<u> </u>		
						_		
¹ Tvpe: C=Co	oncentration. D	=Depletion. F	M=Reduced Matrix. M	S=Masked	Sand Gra	ins.	² Location: PL=	Pore Lining, M=Matrix,
Hydric Soil	Indicators:						Indicators for Pr	oblematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Belo	w Surface (S8) (LRR	R,	2 cm Muck (/	A10) (LRR K, L, MLRA 149B)
Histic Ep	oipedon (A2)		MLRA 149B	5) 2000 (EQ) (L		DA 440D)	Coast Prairie	Redox (A16) (LRR K, L, R)
Hydroge	en Sulfide (A4)		Loamy Mucky	Mineral (F1)		L)	Dark Surface	e (S7) (LRR K, L)
Stratified	d Layers (A5)		Loamy Gleyed	Matrix (F2)		,	Polyvalue Be	elow Surface (S8) (LRR K, L)
Depleted	d Below Dark S	urface (A11)	Depleted Matri	x (F3)			Thin Dark Su	Inface (S9) (LRR K, L)
I NICK Da	ark Sufface (A1 Aucky Mineral (9	2) S1)	Redox Dark St	Ifface (F6) Surface (F7	()		Iron-Mangan Piedmont Elo	ese Masses (F12) (LRR K, L, R)
Sandy G	Gleyed Matrix (S	54)	Redox Depres	sions (F8))		Mesic Spodie	c (TA6) (MLRA 144A, 145, 149B)
Sandy R	Redox (S5)	,					Red Parent M	Material (F21)
Stripped	Matrix (S6)	/					Very Shallow	/ Dark Surface (TF12)
Dark Su	rface (S7) (LRF	R, MLRA 1	49B)				Other (Expla	in in Remarks)
³ Indicators of	f hydrophytic ve	egetation and	wetland hydrology mu	st be preser	nt, unless	disturbed	or problematic.	
Restrictive I	Layer (if obser	ved):						
Туре:								
Depth (inc	ches):						Hydric Soil Prese	ent? Yes 🖌 No
Remarks:					4 4 1	A O a m	d AO in dia atau	e fer hudrie esile
Solis are	muck ove	r very lin	le sandy loam.	Solis me	et the	AZ and	a A3 Indicator	s for hydric solls.



wasb1011f_w_S



wasb1011f_w_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: As	shland	Sampling	Date: 2020-06-01
Applicant/Owner: Enbridge		State:	Wisconsin Sampli	ng Point: <u>wasb1011e_w</u>
Investigator(s): <u>KDF/SAM</u>	Section, Townsh	iip, Range: <u>sec 08</u> [–]	<u> 7045N R003</u>	N
Landform (hillslope, terrace, etc.): <u>Side Slope</u> Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46</u> Soil Map Unit Name: <u>Kellogg-Allendale-Ashwaba</u> Are climatic / hydrologic conditions on the site typical for this Are Vegetation, Soil, or Hydrology r SUMMARY OF FINDINGS – Attach site man	Local relief (concave 3.386312 ay complex, 2 to 6 per s time of year? Yes <u>v</u> ignificantly disturbed? aturally problematic?	e, convex, none): <u>Cor</u> Long: <u>-90.75898</u> <u>cent slopes</u> NWI No (If no, exp Are "Normal Circumst (If needed, explain an	1CAVE 39 classification: plain in Remarks.) ances" present? `` y answers in Rema	Slope (%): <u>0-2%</u> Datum: <u>WGS84</u> Yes <u>v</u> No arks.)
Hydrophytic Vegetation Present? Yes _ N Hydric Soil Present? Yes _ N Wetland Hydrology Present? Yes _ N	o Is the Sam o within a V o If yes, option	mpled Area Netland? Ye tional Wetland Site ID:	s No	
Remarks: (Explain alternative procedures here or in a sep The feature is a part of a wetland comp component includes a roadside ditch ar channelized. The feature is highly distu	barate report.) lex with forested and nd extends north al rbed and garbage	nd emergent co ong a gradual s debris and spoil	mponents. T lope that be ls are commo	he emergent comes more on throughout.
HYDROLOGY				
Wetland Hydrology Indicators:		Seconda	ry Indicators (minir	num of two required)
Primary Indicators (minimum of one is required; check all t	hat apply)	Surfa	ace Soil Cracks (B	6)
Surface Water (A1) Wat	er-Stained Leaves (B9)	Drai	nage Patterns (B10))
High Water Table (A2)	atic Fauna (B13)	Mos	s Trim Lines (B16)	

~	Saturation (A3)	N	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)	F	Presence of Reduced Iron (C4)	 Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)	5	Pecent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)

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 Imager	(B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surfa	e (B8)	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes	No 🖌 Depth (inches):	
Water Table Present? Yes _	No Depth (inches): <u>12</u>	
Saturation Present? Yes <u>v</u> (includes capillary fringe)	_ No Depth (inches): <u>6</u> Wetlan	d Hydrology Present? Yes <u>v</u> No

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

Remarks:

The feature is located along a gradual slope. The hydrologic regime is seasonally saturated with weak discharge hydrology moving south to north. Discharge is modified by the roadway and ditch south of the feature. Water flow is channelized outside of the ditch and terminates in a V-shape near an ephemeral stream but does not connect to the stream. Soil saturation and a high water table were observed.

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1011e_w

Trop Stratum (Blat size: 30)	Absolute	Dominant Species2	Indicator	Dominance Test worksheet:
(Plot size: <u>50</u>)	% Cover	<u>Species</u> ?	Status	Number of Dominant Species
			·	That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3			·	Species Across All Strata: $\underline{}$ (B)
4				Percent of Dominant Species
5				That Ale OBL, FACW, of FAC(A'B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>66</u> x 2 = <u>132</u>
1. Salix bebbiana	10	Y	FACW	FAC species x 3 =6
2				FACU species x 4 =0
3				UPL species x 5 =
3			·	Column Totals: <u>68</u> (A) <u>138</u> (B)
4			·	Prevalence Index = B/A = 2.0294117647058822
5			·	Hydronhytia Vagatatian Indiastora
6			·	1 Panid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
	10	= Total Co	ver	2^{-2} 2 - Dominance rest is $>30\%$
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>Phalaris arundinacea</u>	5	N	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Equisetum hvemale	2	Ν	FAC	
4. Equisetum pratense	 1	N	FACW	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic
5.				Definitions of Vegetation Strata
6.				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			·	Sapling/shrub – Woody plants less than 3 in. DBH
9			·	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
	58	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)		10101-00		
1			·	
2		·		
3				Hydrophytic
4				vegetation Present? Yes v No
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

The vegetation within the sample plot is representative of fresh (wet) meadow dominated by fern species, predominantly sensitive fern, and reed canary grass. There is shrub cover of Bebb's willow present long the margins of the wetland. Outside of the sample plot within the roadside ditch, meadow willow is common and reed canary grass becomes more prevalent.

SOIL

Profile Description: (Describe to the de	oth needed to docun	nent the ir	ndicator	or confirm	the absence of i	indicators	6.)	
Depth Matrix Redox Features								
(inches) Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	<u> </u>
<u>0-8</u> <u>7.5YR 3/2</u> <u>100</u>		_2_			SL			
<u>8-10</u> 7.5YR 3/2 95	<u>7.5YR 4/6</u>	_5	C	M	SL			
<u>10-18 5YR 3/2 85</u>	<u>5YR 4/6</u>	15	С	Μ	SL			
								
			·					
¹ Type: C=Concentration, D=Depletion, RM	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location: P	L=Pore Li	ning, M=Matr	ix.
Hydric Soil Indicators:					Indicators for	Problem	atic Hydric S	oils':
Histosol (A1)	Polyvalue Belov	v Surface ((S8) (LRF	RR,	2 cm Mucl	k (A10) (L irio Rodov	RR K, L, MLI	RA 149B)
Black Histic (A3)	Thin Dark Surfa	ce (S9) (L	RR R. MI	RA 149B)	5 cm Mucl	Coast Prairie Redox (A16) (LRR K, L, R)		
Hydrogen Sulfide (A4)	Loamy Mucky M	lineral (F1) (LRR K	, L)	Dark Surfa	ace (S7) (I	LRR K, L)	, _, _,,
Stratified Layers (A5)	Loamy Gleyed N	Matrix (F2)			Polyvalue	Below Su	rface (S8) (L	RR K, L)
Depleted Below Dark Surface (A11)	Depleted Matrix	(F3)			Thin Dark	Surface (S9) (LRR K, I	
Sandy Mucky Mineral (S1)	Redox Dark Sur	Tace (F6) Surface (F	7)		Iron-Mang Piedmont	anese ivia Floodolair	ISSES (F12) (L 1 Soils (F19)	MI RA 149R)
Sandy Gleyed Matrix (S4)	Redox Depressi	ions (F8)	.,		Mesic Spc	dic (TA6)	(MLRA 144A	, 145, 149B)
Sandy Redox (S5)					Red Parer	nt Material	(F21)	
Stripped Matrix (S6)					Very Shall	low Dark S	Surface (TF12	2)
Dark Surface (S7) (LRR R, MLRA 149	B)				Other (Exp	olain in Re	emarks)	
³ Indicators of hydrophytic vegetation and w	etland hydrology mus	t be prese	nt, unless	disturbed	or problematic.			
Restrictive Layer (if observed):								
Туре:								
Depth (inches):					Hydric Soil Pre	esent?	Yes 🖌	No
Remarks:								
Soils are sandy loam through	out with redox	occurr	ing at	8 inche	es.			



wasb1011e_w_N



wasb1011e_w_S

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):			
wasb1011	2020-05-30			
Location:	Ecological Landsca	Ecological Landscape:		
PLSS: sec 08 T045N R003W	Lake Superior Clay Plair			
		•		
Lat: <u>46.386392</u> Long: <u>-90.758299</u>	Watershed:			
	LS12, Marengo River			
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u>				
SITE DESCRIPTION	1			
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Udorthents, ravines and escarpments, 25 to 60 percent slopes.	Wetland Type(s): PFO/PEM - Hardwood swamp/Fresh (wet) meadow			
Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes.				
Field Verified:				
Series not verified. In the forested component soils were a	Wetland Size:	Wetland Area Impacted		
thick muck over. Very fine sandy loam. In the emergent	0.9365	0.9365		
component, soils were a sandy loam that became more	Vegetation:			
	Plant Community D	Description(s):		
Hydrology:	The vegetation within the forested component of the wetland is representative of a forested seep			
The hydrologic regime within the forested component of the wetland is saturated with strong discharge hydrology. The feature exhibits a high water table and soil saturation to the surface and discharges to an	dominated by fern species and Car within the emergent component of	hada yew with graminoids scattered throughout. The vegetation		
intermittent stream. The emergent component of the wetland includes a roadside ditch that extends north along a gradual slope. The hydrologic regime is seasonally saturated with weak discharge hydrology	Within the emergent component of the wetland is representative or tresh (wet) meadow dominated by fern species, predominately sensitive fern, and reed canary grass. There is shrub cover of Bebb's willow present long the margins of the wetland outside of the roadside ditch, and within the roadside ditch, meadow willow and reed canary grass become more prevalent.			
moving south to north. Discharge is modified by the roadway and ditch south of the feature. Water flow is channelized outside of the ditch and terminates in a V-shape near an entermental stream but does not				
connect to the stream. Soil saturation and a high water table were observed.				

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	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	Ν	Y	Supports or provides habitat for endangered, threatened or special concern species
7	Ν	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	Y	Y	3 or more strata present (>10% cover)
3	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	Y	Y	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	Ν	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	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	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	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	Y	Y	Along shoreline of a stream, lake, pond or open water area (≥1 acre) - if no, not applicable
2	N	Ν	Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
2	V	X	Dependent reversion fright hows – If ho, hot applicable
S ST	Ý	Y	Storm and Eloodwater Storage
1	V	V	Basin wetland, constricted outlet, has through flow or is adjacent to a stream
2	T N	T N	Water flow through wetland is NOT channelized
2	IN N		
4	IN N	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
ŴQ			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	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	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	Ý	Ý	Wetland soils are organic
5	Ň	Ň	Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

WH-6: The feature is a wetland complex, including forested and emergent components, as well as a stream running through the feature.

HU-6: The forested component is relatively undisturbed with a high aesthetic.

ST-3, SP-1: The complex is associated with an intermittent stream that runs through the forested component.

GW-1: The complex includes a large forested seep that remains saturated year-round. GW-4: Soils were muck within the forested component.

SP-3: Densely rooted trees are present along the stream within the forested component that help to prevent major erosion.

ST-2, WQ-3: The forested component of the wetland complex is not channelized, but the emergent component is broad within the roadside ditch and becomes channelized as it extends further

north toward an ephemeral stream, though the wetland is not connected to the ephemeral mentioned.

ST-3, WQ-5: Portions of the emergent component are densely vegetated, especially within the roadside ditch.

FA-4: Vegetation within the roadside ditch is likely temporarily inundated in the spring.

WH-10, FA-2: There is potential for standing water within the roadside ditch that would provide temporary habitat for frogs and toads or aquatic invertebrates. Year-round saturation within the forested seep may provide additional habitat for amphibians. The intermittent stream may also provide habitat for amphibians or 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	Y	Red squirrels / observed in the trees within the forested seep
Y	Y	Avians
Y	Y	Deer / tracks observed
	Y	Amphibians - frogs, toads, salamanders
Y	Y	Rabbits / young observed in woody debris nearby, adult observed
Y	Y	Black-capped chickadees / observed in the willows

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 / aquatic habitat within associated stream

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	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
Tsuga canadensis*			PFO	Interrupted
Betula alleghaniensis			PFO	Rare
Onoclea sensibilis*			PEM	Rare
Phalaris arundinacea*			PEM	Rare
Thuja occidentalis			PFO	Rare
Salix bebbiana			PEM	Rare
Salix petiolaris			PEM	Rare
Athyrium filix-femina			PFO, PEM	Barren
Carex gracillima			PEM	Barren
Carex scabrata			PFO	Barren
Equisetum hyemale			PFO, PEM	Barren
Gymnocarpium dryopteris			PFO	Barren
Taxus canadensis			PFO	Barren
Arisaema triphyllum			PFO	Barren
Carex pallescens			PEM	Barren
Carex pallescens			PEM	Barren
Chamerion angustifolium			PEM	Barren
Dryopteris carthusiana			PFO	Barren
Equisetum arvense			PEM	Barren
Equisetum pratense			PEM	Barren
Equisetum scirpoides			PFO	Barren
Equisetum sylvaticum			PEM	Barren
Fragaria virginiana			PEM	Barren
Lysimachia ciliata			PEM	Barren
Mitchella repens			PFO	Barren
Osmunda claytoniana			PEM	Barren
Parthenocissus inserta			PEM	Barren

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

Overall within the wetland complex, there is relatively high diversity. The vegetation within the forested component of the wetland is relatively undisturbed and comprised of native species. The emergent component of the wetland is disturbed and vegetation includes native and non-native species. One individual of Carex pallescens was observed in the feature.

Additional species: Phegopteris connectilis (Plant Communities: PFO, Abundance: Barren), Populus balsamifera (Plant Communities: PEM, Abundance: Barren), Ribes triste (Plant Communities: PFO, Abundance: Barren), Ribes triste (Plant Communities: PFO, Abundance: Barren), Solidago flexicaulis (Plant Communities: PFO, Abundance: Barren), Trillium grandiflorum (Plant Communities: PFO, Abundance: Barren), Vitis riparia (Plant Communities: PEM, Abundance: Barren)

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
Х	Х		Н	С	Drainage – tiles, ditches
					Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
Х	Х		М	C	Polluted runoff
					Pond construction
					Agriculture – row crops
	Х		L	C	Agriculture – hay
					Agriculture – pasture
	Х		Н	C	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	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		М	C	Cover of non-native and/or invasive species
	Х		L	C	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):
Х	Х		М	С	Garbage debris and spoils
Х			L	С	Erosion

* 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 forested component of the wetland is relatively undisturbed but experiences some erosion. The emergent component of the wetland is highly disturbed and the hydrology is likely modified by the roadway associated ditch to the south. There is garbage debris and spoils are scattered throughout the wetland, and invasive species are also present. There is a shed west of the feature that is likely the origin of the debris.
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	Overall within the wetland complex, there is high diversity. The forested component is comprised of native species, but the emergent component is disturbed and includes native and invasive species.
Human Use Values	The feature is located on private land and is not accessible to the public. The forested component has high aesthetic value, but the emergent component is disturbed with spoils and garbage debris scattered throughout. Only the emergent component is visible to the public from the road.
Wildlife Habitat	The feature provides diverse habitats, including tree and shrub cover for avians and potential for amphibians. Small mammals and evidence of deer were observed within the feature.
Fish and Aquatic Life Habitat	There is an intermittent stream that runs through the feature that provides aquatic habitat for amphibians and aquatic invertebrates.
Shoreline Protection	There are densely rooted trees along the shoreline that help to prevent excessive erosion.
Flood and Stormwater Storage	The complex is associated with an intermittent stream. There roadside ditch provides the most substantial storage of flood and stormwater, it the majority of the feature is located on a slope.
Water Quality Protection	See above. Runoff from the roadway is collected within the emergent component within the roadside ditch and eventually discharges to the stream via the forested component.
Groundwater Processes	The feature exhibits weak discharge within the emergent component of the wetland to strong discharge within the forested component that remains saturated throughout the year. Soils are organic within the forested component of 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

Project/Site: Line 5 Relocation Project C	ity/County: <u>Ashland</u> Sampling Date: <u>2020-05-30</u>
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wasb1011_u</u>
Investigator(s): <u>SAM/KDF</u> S	ection, Township, Range: <u>sec 08 T045N R003W</u>
Landform (hillslope, terrace, etc.): Side Slope	I relief (concave, convex, none): <u>Concave</u> Slope (%): <u>26-60%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.386440</u>	Long: <u>-90.758484</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Udorthents, ravines and escarpments	. 25 to 60 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year	? Yes 🖌 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly d	isturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally prob	lematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing s	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Watand Hydrology Present? Yos No	Is the Sampled Area within a Wetland? Yes No
Remarks: (Explain alternative procedures here or in a separate report. On a steep slope above a small intermittent tribu with hemlock, basswood, and sugar maple.) utary/forested seep. In a concave forested setting
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)

Frinary indicators (minimum		eu, chec	k ali tilat apply)		
Surface Water (A1)			Water-Stained Leaves (B9)		Drainage Patterns (B10)
High Water Table (A2)			Aquatic Fauna (B13)		Moss Trim Lines (B16)
Saturation (A3)			Marl Deposits (B15)	Dry-Season Water Table (C2)	
Water Marks (B1)			Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
Sediment Deposits (B2)			Oxidized Rhizospheres on Living	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 Ae	rial Imagery (B7	7)	Other (Explain in Remarks)		Microtopographic Relief (D4)
Sparsely Vegetated Con	icave Surface (E	38)			FAC-Neutral Test (D5)
Field Observations:					
Surface Water Present?	Yes N	No 🖌	Depth (inches):		
Water Table Present?	Yes 1	No 🖌	Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes 1	No 🖌	Depth (inches):	Wetland H	lydrology Present? Yes No
Saturation Present? (includes capillary fringe) Describe Recorded Data (str	Yes I eam gauge, mo	No 🖌	Depth (inches):	Wetland H	lydrology Present? Yes No _ ✓ ilable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (str Remarks: No signs of seepage	Yes I eam gauge, mo e which is	No <u>r</u>	Depth (inches):	Wetland H tions), if avai	Iydrology Present? Yes <u>No v</u> ilable: Issociated wetland.
Valer Fable Fresent? Saturation Present? (includes capillary fringe) Describe Recorded Data (str Remarks: No signs of seepage	Yes r eam gauge, mo e which is	No <u>r</u>	Depth (inches):	Wetland H tions), if avai	Iydrology Present? Yes <u>No v</u> ilable: ssociated wetland.
Saturation Present? (includes capillary fringe) Describe Recorded Data (str Remarks: No signs of seepage	Yes r ream gauge, mo e which is	No voitoring voi	Depth (inches):	Wetland H tions), if avai	Iydrology Present? Yes <u>No</u> ilable: Issociated wetland.
Saturation Present? (includes capillary fringe) Describe Recorded Data (str Remarks: No signs of seepage	Yes I ream gauge, mo e which is	nitoring v	Depth (inches):	Wetland H tions), if avai	Iydrology Present? Yes <u>No</u> ilable: Issociated wetland.
Saturation Present? (includes capillary fringe) Describe Recorded Data (str Remarks: No signs of seepage	Yes r ream gauge, mo e which is	no vinitoring v	Depth (inches):	Wetland H tions), if avai	Iydrology Present? Yes <u>No</u> ilable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (str Remarks: No signs of seepage	Yes r ream gauge, mo e which is	nitoring v	Depth (inches):	Wetland H tions), if avai	Iydrology Present? Yes No _∠ ilable: ssociated wetland.
Saturation Present? (includes capillary fringe) Describe Recorded Data (str Remarks: No signs of seepage	Yes f ream gauge, mo e which is	nitoring v	Depth (inches):	Wetland H tions), if avai	Iydrology Present? Yes <u>No</u> ilable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (str Remarks: No signs of seepage	Yes r ream gauge, mo e which is	nitoring v	Depth (inches):	Wetland H tions), if avai	Iydrology Present? Yes No _ ✓ ilable: Issociated wetland.
Remarks: No signs of seepage	Yes r ream gauge, mo e which is	nitoring v	Depth (inches):	Wetland H tions), if avai	Iydrology Present? Yes No _ ✓ ilable: Issociated wetland.

Sampling Point: wasb1011_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 Tsuga canadensis	40	Y	FACU	Number of Dominant Species That Are OBL EACIVL or EAC: 3 (A)
2 Pinus strobus	25	Y	FACU	$\begin{array}{c} \text{Inal Ale OBL, FACW, OF FAC.} \\ \underline{} \\ \underline{} \\ \underline{} \\ (A) \end{array}$
3 Betula alleghaniensis	25	 	FAC	Total Number of Dominant Species Across All Strata: 8 (B)
4 Tilia amoricana	<u> </u>	 		
	10	 N		That Are OBL, FACW, or FAC: 38 (A/B)
			<u>FACU</u>	
0				Prevalence Index worksheet:
7	405		·	Total % Cover of: Multiply by:
	125	= Total Cov	/er	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)	_			FACW species $0 \times 2 = 0$
1. <u>Ostrya virginiana</u>	5	<u> Y </u>	<u>FACU</u>	FAC species 40 x 3 - 120
2			·	$\frac{1100}{100} \times 4 = \frac{400}{100}$
3				Column Totals: 155 (A) 580 (B)
4				
5				Prevalence Index = $B/A = 3.7419354838709675$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	5	= Total Cov	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is $\leq 3.0^{\circ}$
1. Carex pedunculata	10	Y	FAC	data in Remarks or on a separate sheet)
2. Equisetum hvemale	5	Y	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Taxus canadensis	5	N	FACU	
4 Carex arctata	<u> </u>	<u>N</u>		¹ Indicators of hydric soil and wetland hydrology must
5 Majanthemum racemosum	<u> </u>	 N	FACU	
5. Trillium grandiflarum	<u> </u>	 	1700	Definitions of Vegetation Strata:
		IN		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
/		·		at breast height (DBH), regardless of height.
ő				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				Weedwainee Allweedwainee greater than 2.29 ft in
12				height.
	32	= Total Cov	/er	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4				Present? Yes No ✓
	0	= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)	nd dooi		nacion on otaen alence
Forested community with a mix of conin	erous a	na aecio	Juous s	pecies on sleep slopes.
L				

Profile Desc	ription: (D	escribe	to the dept	h needed to document the indicator or confirm	the absence of	indicators.)	
Depth (inches)	Color (r	Matrix	0/	Redox Features	Tautura	Demerica	
		<u>ກດເຮເ)</u> ວ/ງ	100			Remarks	
<u> </u>	<u>7.31K</u>				L		
<u>13-18</u>	<u>5YR</u>	3/4	100		<u> </u>		
			·			_	
			·				
			·				
			·				
			·				
			·			_	
¹ Type: C=Co	oncentration	i, D=Dep	letion, RM=	Reduced Matrix, MS=Masked Sand Grains.	² Location: P	L=Pore Lining, M=Matrix	κ.
Hydric Soil	Indicators:				Indicators for	Problematic Hydric So	oils°:
Histosol	(A1) Dipodon (A2)	`		Polyvalue Below Surface (S8) (LRR R, ML BA 140B)	2 cm Muc	k (A10) (LRR K, L, MLR virio Rodox (A16) (I PR k	A 149B)
Black Hi	stic (A3))		Thin Dark Surface (S9) (LRR R. MLRA 149B)	5 cm Muc	kv Peat or Peat (S3) (LF	R K. L. R)
Hydroge	n Sulfide (A	4)		Loamy Mucky Mineral (F1) (LRR K, L)	Dark Surfa	ace (S7) (LRR K, L)	,
Stratified	Layers (A5	5)		Loamy Gleyed Matrix (F2)	Polyvalue	Below Surface (S8) (LR	.R K, L)
Depleted	d Below Dar	k Surface	e (A11)	Depleted Matrix (F3)	Thin Dark	Surface (S9) (LRR K, L)
Sandy M	lucky Miner	(A12) al (S1)		Depleted Dark Surface (F7)	Piedmont	Floodplain Soils (F19) (MLRA 149B)
Sandy G	Bleyed Matri	x (S4)		Redox Depressions (F8)	Mesic Spo	odic (TA6) (MLRA 144A ,	, 145, 149B)
Sandy R	ledox (S5)				Red Pare	nt Material (F21)	
Stripped	Matrix (S6)			X	Very Shal	low Dark Surface (TF12))
Dark Su	пасе (57) (ILKA 1498)	Other (Ex	plain in Remarks)	
³ Indicators of	f hydrophytic	c vegetat	ion and we	tland hydrology must be present, unless disturbed o	or problematic.		
Restrictive I	_ayer (if ob	served):					
Туре:							
Depth (ind	ches):				Hydric Soil Pro	esent? Yes	No 🖌
Remarks:							
No hydrie	c soil inc	dicator	's obsei	ved.			



wasb1011_u_N



wasb1011_u_S

Project/Site: Line 5 Relocation Project	City/County: Ashlan	nd sa	ampling Date: <u>2020-06-09</u>
Applicant/Owner: Enbridge		State: Wisconsin	Sampling Point: wasw034s_xw
Investigator(s): SBR/DGI	Section, Township, Rar	nge: sec 09 T045N F	R003W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, conv	(ex none) [,] Concave	Slope (%): 0-2%
Subracian (I RB or MI RA): Northcentral Forests Lat: 16.3	286367		Olippe (%): <u>0 270</u>
Soil Map Unit Name: Superior-Sedgwick comple:	x. 0 to 6 percent slope	S NWI classification	Datum. <u></u> on:
Are climatic / hydrologic conditions on the site typical for this ti	ime of vear? Yes 🖌 No	(If no, explain in Rem	arks)
Are Vegetetion Coil or Lludrology	nificantly disturbed?	Normal Circumstances" proc	anto.)
	Are the the the the		
Are Vegetation, Soil, or Hydrology nat	urally problematic? (If ne	eded, explain any answers i	n Remarks.)
SUMMARY OF FINDINGS – Attach site map sh	nowing sampling point lo	ocations, transects, in	nportant features, etc.
Hydrophytic Vegetation Present? Yes _ ✓ No Hydric Soil Present? Yes _ ✓ No Wetland Hydrology Present? Yes _ ✓ No	Is the Sampled within a Wetlan If yes, optional V	Area Id? Yes _ ✓ Vetland Site ID:	No
understory is dominated by sensitive ferr part of a larger complex which includes v	i, meadow horsetail, a vet meadow.	and reed canary gra	ass. The wetland is
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicator	s (minimum of two required)
Primary Indicators (minimum of one is required; check all that	at apply)	Surface Soil Cra	acks (B6)
Surface Water (A1) Water-	Stained Leaves (B9)	Drainage Patter	ns (B10)
High Water Table (A2) Aquati	c Fauna (B13)	Moss Trim Lines	s (B16)
Saturation (A3) Marl D	eposits (B15)	Dry-Season Wa	ter Table (C2)
Water Marks (B1) Hydrog	Jen Sulfide Odor (C1)	Crayfish Burrow	/s (C8)
Sediment Deposits (B2) Oxidizi	ed Rhizospheres on Living Roots	s (C3) Saturation Visib	le on Aerial Imagery (C9)
Drift Deposits (B3) Preser	the of Reduced Iron (C4)	Stunted or Stres	ssed Plants (D1)
Algal Mat or Crust (B4) Recen	t Iron Reduction in Tilled Solis (C	-6) <u>·</u> Geomorphic Po	sition (D2)
ITOIL Deposits (B5) Thirt W	(Explain in Romarks)	Shallow Aquitar	u (D3) ic Poliof (D4)
Sparsely Vegetated Concave Surface (B8)		Νιοιοιοροσιαρή	et (D5)
Field Observations:			31 (20)
Surface Water Present? Yes No 🖌 Depth) (inches):		
Water Table Present? Yes No v Deptr	(inches):		
Saturation Present? Yes No 🖌 Deptr	1 (inches): We	tland Hydrology Present?	Yes 🖌 No
Describe Recorded Data (stream gauge, monitoring well, ae	rial photos, previous inspections), if available:	
		,,	
Remarks:			

Sampling Point: wasw034s_xw

	Absolute	Dominant	Indicator	Dominance Test worksheet
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1. <u>Betula papyrifera</u>	5	<u> Y </u>	<u>FACU</u>	That Are OBL, FACW, or FAC: (A)
2			·	Total Number of Dominant
3				Species Across All Strata:5_ (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 80 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	5	= Total Cov	ver	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>128</u> x 2 = <u>256</u>
1 Salix discolor	20	Y	FACW	FAC species <u>5</u> x 3 = <u>15</u>
2 Salix petiolaris	10	Ý	FACW	FACU species <u>11</u> x 4 = <u>44</u>
3 Abies belsemee	<u> </u>	 N	FAC	UPL species x 5 =
3. <u>Ables balsamea</u>	 			Column Totals: <u>144</u> (A) <u>315</u> (B)
		IN	FACW	Prevalence Index = $B/A = 2.1875$
5			······	
6				And the second s
7				2 - Dominance Test is >50%
	40	= Total Cov	ver	\sim 3 - Prevalence Index is <3.0 ¹
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Onoclea sensibilis</u>	40	Y	FACW	data in Remarks or on a separate sheet)
2. <u>Equisetum pratense</u>	35	<u> </u>	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Phalaris arundinacea</u>	15	N	FACW	
4. <u>Carex gracillima</u>	3	N	FACU	be present, unless disturbed or problematic.
5. Fragaria virginiana	3	N	FACU	Definitions of Vegetation Strata
6. Solidago gigantea	3	Ν	FACW	
7.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height
8.				
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb. All herbasseus (nen weedu) plante, 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		Tatal Oa		height.
			ver	
Woody Vine Stratum (Plot size: 30)				
1				
2				
3			<u> </u>	Hydrophytic
4				Present? Yes <u>v</u> No
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)	footuro	Othor	areas have more cover by read eacery
arase		reature		areas have more cover by reeu callary
yiass.				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix			Redox	K Features	S ,				
(inches)	Color (moist)	%	Color (n	noist)	%	Type ¹	Loc ²	Texture	Remarks	
0-10	<u>7.5YR 3/1</u>	98	<u>7.5YR</u>	4/6	2	C	M	FSL		
10-20	<u>7.5YR 3/1</u>	90	<u>7.5YR</u>	3/4	10	C	M	FS		
		·								
		·								
		·								
		·								
1		·								
Type: C=C	oncentration, D=Dep	letion, RM	=Reduced N	Aatrix, MS	S=Masked	Sand Gra	ains.	Location ²	: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :	
Histosol	(A1)		Polyva	lue Belov	v Surface	(S8) (I RE	R.	2 cm M	Auck (A10) (I RR K, I - MI RA 149B)	
Histic E	pipedon (A2)		MLF	RA 149B)	Currace	(00) (111	,	Coast	Prairie Redox (A16) (LRR K, L, R)	
Black H	istic (A3)		Thin D	ark Surfa	ce (S9) (L	.RR R, MI	RA 149B)	5 cm N	Mucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A4)		Loamy	Mucky M	lineral (F1) (LRR K	, L)	Dark S	Surface (S7) (LRR K, L)	
Stratifie	d Layers (A5) d Bolow Dark Surfac		Loamy	Gleyed I	Vatrix (F2)		Polyva	alue Below Surface (S8) (LRR K, L)	
Thick Da	ark Surface (A12)	= (ATT)	∠ Redox	Dark Sur	(FS) face (F6)			Iron-M	anganese Masses (F12) (LRR K. L. R)	
Sandy N	/lucky Mineral (S1)		Deplet	ed Dark S	Surface (F	7)		Piedm	ont Floodplain Soils (F19) (MLRA 149B)	
Sandy C	Gleyed Matrix (S4)		Redox	Depressi	ions (F8)			Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)	
Sandy F	Redox (S5)							Red Pa	arent Material (F21)	
Stripped	I Matrix (S6)		2)					Very Shallow Dark Surface (TF12)		
			-)							
³ Indicators o	f hydrophytic vegetat	ion and we	etland hydro	logy mus	t be prese	ent, unless	disturbed	or problematio	C.	
Restrictive	Layer (if observed):									
Туре:										
Depth (in	ches):							Hydric Soil	Present? Yes <u>v</u> No	
Remarks:										
A sandy	soil with redox	k prese	nt.							



wasw034s_xw_N



wasw034s_xw_S

Project/Site: Line 5 Relocation Proiect	City/County: As	nland	Sampling Date: 2020-06-09
Applicant/Owner: Enbridge	· ·	St	ate: Wisconsin Sampling Point: wasw034f_xw
Investigator(s): SBR/DGL	Section. Townshir	. Range: Sec	09 T045N R003W
Landform (hillslope terrace etc.): Depression	Local relief (concave	convex none).	$Concave \qquad Slope (%): 0-2\%$
Subragian (I BD as MI DA), Northcentral Forests Lat. 46.2	95740		
Lat: 40.3	00/42	Long: <u>-90.70</u>	Datum: VVG384
Soil Map Unit Name: <u>Kellogg-Allendale-Ashwabay</u>	$\underline{\text{complex}}, 2 \text{ to 6 per}$	<u>cent siopes</u>	NWI classification:
Are climatic / hydrologic conditions on the site typical for this tir	me of year? Yes <u>·</u>	No (If no	o, explain in Remarks.)
Are Vegetation, Soil, or Hydrology sign	ificantly disturbed?	Are "Normal Circ	cumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology natu	urally problematic?	(If needed, expla	in any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh	owing sampling poi	nt locations,	transects, important features, etc.
Hydrophytic Vegetation Present? Yes V No _ Hydric Soil Present? Yes V No _	Is the Sam within a W	pled Area etland?	Yes∕ No
Wetland Hydrology Present? Yes <u>v</u> No	If yes, optio	onal Wetland Site	e ID:
nerbaceous layer is dominated by reed ca	anary grass and s	ensitive fer	n.
HYDROLOGY			
Wetland Hydrology Indicators:		Sec	ondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that	t apply)		Surface Soil Cracks (B6)
Surface Water (A1)	Stained Leaves (B9)		Drainage Patterns (B10)
High Water Table (A2) Aquation	: Fauna (B13)		Moss Trim Lines (B16)
Saturation (A3) Marl De	eposits (B15)		Dry-Season Water Table (C2)
Water Marks (B1) Hydrog	en Sulfide Odor (C1)		Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidize	ed Rhizospheres on Living	Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presen	ce of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent	Iron Reduction in Tilled So	oils (C6) <u>~</u>	Geomorphic Position (D2)
Iron Deposits (B5) Thin Mu	uck Surface (C7)		Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (I	Explain in Remarks)		Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		<u>~</u>	FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present? Yes <u>No V</u> Depth	(inches):		
Water Table Present? Yes <u>v</u> No Depth	(inches): <u>12</u>		
Saturation Present? Yes <u>v</u> No <u>Depth</u> (includes capillary fringe)	(inches): <u>10</u>	Wetland Hydro	ology Present? Yes <u>~</u> No
Describe Recorded Data (stream gauge, monitoring well, aeri	ial photos, previous inspec	tions), if available	e:
Remarks:			
The hydrologic regime is saturated. A wa	ter table was obse	erved at 12	inches with saturation
occurring at 10.			

Sampling Point: wasw034f_xw

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan Species?	t Indicator	Dominance Test worksheet:
1 Betula alleghaniensis	<u></u> 25	V	FAC	Number of Dominant Species
2 Populus tromulaidos	<u> </u>	 		Inat are OBL, FACW, or FAC: $\underline{5}$ (A)
2. <u>Populus tremuloides</u>	<u></u>	I N		Total Number of Dominant Species Across All Strata: 7 (B)
		IN		
4		·		Percent of Dominant Species That Are OBL, FACW, or FAC: 71 (A/B)
5		<u> </u>		
0				Prevalence Index worksheet:
1				<u>Total % Cover of:</u> <u>Multiply by:</u>
	40	= 1 otal Co	over	OBL species 5 $x_1 = 5$
Sapling/Shrub Stratum (Plot size: 15))	4 5	V		FACW species 105 $x_2 = 210$
1. <u>Salix discolor</u>		<u> </u>	<u>FACW</u>	FACU species $10 \times 4 = 40$
2. <u>Lonicera ci morrowii</u>	5	<u> Y </u>	<u>FACU</u>	UPL species $0 \times 5 = 0$
3. <u>Corylus cornuta</u>	5	<u> </u>	FACU	Column Totals: <u>165</u> (A) <u>390</u> (B)
4		· . <u></u>		
5		·		$Prevalence index = B/A = \2.30$
6		<u></u>		Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	25	= Total Co	over	\sim 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Phalaris arundinacea</u>	35	<u> </u>	FACW	data in Remarks or on a separate sheet)
2. <u>Onoclea sensibilis</u>	35	<u> </u>	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Equisetum sylvaticum</u>	15	N	FACW	¹ Indicators of hydric coil and watland hydrology must
4. <u>Carex crinita</u>	5	N	OBL	be present, unless disturbed or problematic.
5. Juncus filiformis	3	N	FACW	Definitions of Vegetation Strata:
6. Athyrium angustum	3	N	FAC	
7. <u>Rubus idaeus</u>	2	N	FAC	at breast height (DBH), regardless of height.
8. <u>Equisetum pratense</u>	2	N	FACW	Sapling/shrub – Woody plants less than 3 in DBH
9		<u> </u>		and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
	100	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30)				
1.				
2				
3				Hydrophytic
4		<u> </u>		Vegetation
	0	= Total Co	over	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	sheet.)			
The sample point is fairly representativ	e of the	wetlan	d feature	9.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth		Matrix			Redo	x Features	6					
(inches)	Color	(moist)	%	Color (r	noist)	%	Type ¹	_Loc ²	Texture	Remarks		
0-10	5YR	2.5/1	85	5YR	4/6		_C_	_M_	SIL			
<u>10-18</u>	<u>5YR</u>	2.5/1	95	5YR	4/4	5	C	M	SICL			
18-20	5YR	4/2	100			0			VFS			
									<u> </u>			
						·		· <u> </u>				
						·						
						·						
						·			·			
¹ Type: C=Co		n D=Depl	etion RM:	=Reduced I	Matrix MS	S=Masked	Sand Gr	ains	² l ocation [.] Pl =Po	re Lining M=Matr	ix	
Hydric Soil I	Indicators	:	0.001, 1.00				Cuild Ci		Indicators for Prob	lematic Hydric S	oils ³ :	
<u> </u>	(A1)			Polyva	alue Belov	w Surface	(S8) (LRF	R,	2 cm Muck (A10)) (LRR K, L, ML	RA 149B)	
Histic Ep	pipedon (A	2)		ML	RA 149B)				Coast Prairie R	edox (A16) (LRR	K, L, R)	
Black His Hydroge	stic (A3) n Sulfide (Δ4)		I nin L	ark Suna Mucky M	ICE (S9) (L /lineral (E1	KKK,MI	LRA 149B) []])	5 cm Mucky Pe	at or Peat (S3) (L	RR K, L, R)	
Stratified	l Lavers (A	(5)		Loam	v Gleved I	Matrix (F2)	, L)	Polyvalue Belov	v Surface (S8) (LI	RR K, L)	
Depleted	d Below Da	ark Surface	e (A11)	Deple	ted Matrix	(F3)	,		Thin Dark Surface (S9) (LRR K, L)			
Thick Da	ark Surface	e (A12)		Redox	d Dark Su	rface (F6)			Iron-Manganese	Iron-Manganese Masses (F12) (LRR K, L, R)		
Sandy M	lucky Mine	eral (S1)		Deple	ted Dark S	Surface (F	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)			
Sandy G	leyed Mat	rix (S4)		Redox	Depress	ions (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
Sanuy R	Matrix (Sf	5)							Red Parent Material (F21) Very Shallow Dark Surface (TE12)			
Dark Sur	rface (S7)	, (LRR R, M	LRA 1498	B)					Other (Explain in Remarks)			
2												
[°] Indicators of	f hydrophy	tic vegetati	on and we	etland hydro	ology mus	t be prese	ent, unless	s disturbed	or problematic.			
Tupo	_ayer (if o	bserved):										
Type									Hydric Soil Present	2 Vas V	No	
Depth (inc	cnes):								Tryunc Son Tresent	: 1 03 <u> </u>		
A dark si	ltv soil	over ve	orv fine	sand								
	119 3011			Suna.								



wasw034f_xw_N



wasw034f_xw_S

Project/Site: Line 5 Relocation Project	City/County: Ashland Sampling Date: 2020-06-09
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasw034e xw
Investigator(s): SBR/DGI	Section Townshin Range: Sec 09 T045N R003W
Landform (hillslong, torrace, etc.): Depression	
Northcentral Forests	$\underline{\text{Concave}} \text{ Supe (%). } \underline{\text{Concave}} $
Subregion (LRR or MLRA): Lat: Lat:	<u>386614</u> Long: <u>-90.752697</u> Datum: <u>VVG584</u>
Soil Map Unit Name: <u>Superior-Sedgwick comple</u>	X, 0 to 6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this t	ime of year? Yes <u>v</u> No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology sig	nificantly disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology nat	urally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sl	nowing sampling point locations, transects, important features, etc.
Liveranduction Descent 2 Mag. 14 No.	Is the Sampled Area
Hydrophylic Vegetation Present? Yes V	within a Wetland? Yes <u>v</u> No
Wetland Hydrology Present? Yes V No	If ves, ontional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a sepa	rate report.)
The wetland is a wet meadow and part o	f a complex with a shrub-carr. The wet meadow component
is dominated by reed canary grass and s	ensitive fern
······································	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that	at apply) Surface Soil Cracks (B6)
Surface Water (A1) Water	-Stained Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquati	c Fauna (B13) Moss Trim Lines (B16)
Saturation (A3) Marl D	Peposits (B15) Dry-Season Water Table (C2)
Water Marks (B1) Hydro	gen Sulfide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidiz	ed Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Preset	nce of Reduced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recen	t Iron Reduction in Tilled Soils (C6)
Iron Deposits (B5) Thin M	1uck 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	ו (inches):
Water Table Present? Yes No Depth	ו (inches):
Saturation Present? Yes <u>No</u> Depth (includes capillary fringe)	n (inches): Wetland Hydrology Present? Yes _ v _ No
Describe Recorded Data (stream gauge, monitoring well, ae	rial photos, previous inspections), if available:
The hydrologic regime is saturated.	

Sampling Point: <u>wasw034e_xw</u>

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	t Indicator Status	Dominance Test worksheet:
1		<u>-Species :</u>		Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6			<u> </u>	Prevalence Index worksheet:
7	<u> </u>		<u> </u>	Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15)				FACW species 90 x 2 = 180
1				FAC species x 3 =
··			·	FACU species <u>10</u> x 4 = <u>40</u>
Z			- <u> </u>	UPL species x 5 =
3			<u> </u>	Column Totals: <u>100</u> (A) <u>220</u> (B)
4				Prevalence Index = $B/A = 2.2$
5			·	Hydronhytic Vegetation Indicators:
0				
7				\sim 2 - Dominance Test is >50%
	0	= Total Co	ver	\sim 3 - Prevalence Index is $\leq 30^{1}$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Onoclea sensibilis</u>	40	<u> </u>	FACW	data in Remarks or on a separate sheet)
2. <u>Phalaris arundinacea</u>	40	<u> </u>	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Poa pratensis</u>	10	N	FACU	
4. <u>Equisetum pratense</u>	5	N	FACW	be present, unless disturbed or problematic.
5. <u>Solidago gigantea</u>	5	N	FACW	Definitions of Vegetation Strata:
6	<u> </u>		<u> </u>	
7.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8.				Continue of the Maadu 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
	100	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1			<u> </u>	
2				
3				Hydrophytic
4			·	Present? Yes <u>v</u> No
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)	wotland	d footure	
		wenand		5.

Profile Desc	cription: (Describe	o the dep	oth needed	to docur	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth	Matrix		Redox Features			- 2	- ·	5		
(inches)		<u>%</u>							Remarks	
	<u>5YR 2.5/1</u>	85	<u>51R</u>	3/4	15	<u> </u>	<u>M</u>	FSL		
10-20	<u>5YR 4/3</u>	85	5YR	4/6	15	C	M	FS		
		·								
. <u> </u>		. <u> </u>								
·		·			·	······				
. <u> </u>		<u> </u>								
1 T				Matrix MA	- <u> </u>	Canal Ca		21	DI-Dava Lining, M-Matrix	
Hydric Soil	oncentration, D=Depi Indicators:	etion, Rivi	=Reduced I	Matrix, Mi	S=IVIasked	Sand Gra	ains.	Location:	for Problematic Hydric Soils ³ :	
Histosol	(A1)		Polvva	alue Belov	w Surface	(S8) (LR F	R.	2 cm M	luck (A10) (LRR K. L. MLRA 149B)	
Histic E	pipedon (A2)		<u> </u>	RA 149B))	()(,	Coast F	Prairie Redox (A16) (LRR K, L, R)	
Black Hi	istic (A3)		Thin D	Dark Surfa	ace (S9) (L	RR R, MI	LRA 149B)	5 cm M	lucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A4)		Loam	y Mucky N	Mineral (F1) (LRR K	, L)	Dark S	urface (S7) (LRR K, L)	
Stratified	u Layers (A5) d Below Dark Surface	(A11)	Loam	y Gleyed ted Matrix	Matrix (FZ)			Polyval Thin Da	ark Surface (S9) (LRR K, L)	
Thick Da	ark Surface (A12)	, (, (, , , , , , , , , , , , , , , , ,	Redox	k Dark Su	rface (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)	
Sandy N	/ucky Mineral (S1)		Deple	ted Dark	Surface (F	7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)	
Sandy G	Gleyed Matrix (S4)		Redox	Contraction Depress	sions (F8)			Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)	
Sandy F	Redox (S5)							Red Pa	arent Material (F21)	
Stripped Dark Su	n Matrix (So) Inface (S7) (I RR R M	I RA 149	3)					Very Shallow Dark Surface (TF12) Other (Explain in Remarks)		
			-)							
³ Indicators o	f hydrophytic vegetat	on and w	etland hydro	ology mus	st be prese	nt, unless	s disturbed	or problematic		
Restrictive	Layer (if observed):									
Туре:										
Depth (in	ches):							Hydric Soil	Present? Yes <u><</u> No	
Remarks:										
A sandy	soil with redox	obsei	ved thro	Sughou	ut the p	rofile.				



wasw034e_xw_S

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

WETLAND IDENTIFICATION						
Project name:	Evaluator(s):					
Line 5 Relocation Project	SBR/DGL					
File #:	Date of visit(s):					
wasw034_x	2020-06-09					
Location:	Ecological Landsca	ipe:				
PLSS: sec 09 T045N R003W	Superior Coastal Plain					
Lat: <u>46.386365</u> Long: <u>-90.752550</u>	Watershed:					
Occurring Askland Trans (O'the Ville and Askland town	LSTZ, Marengo River					
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u>						
SITE DESCRIPTION	I					
Soils:	WWI Class:					
Mapped Type(s):	Т3/5К					
Superior-Sedgwick complex, 0 to 6 percent slopes. Cornucopia silt loam, 6 to 15 percent slopes. Cornucopia silt loam, 15 to 45 percent slopes. Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes.	Wetland Type(s): PFO/PSS/PEM - Hardwood swamp/Shrub-carr/Fresh wet					
Field Verified:	meadow					
The soils were not field verified. In the forested component,	Wetland Size:	Wetland Area Impacted				
soils were a silty loam over silty clay loam over very fine sand,	1.4917	1.4917				
and in the shrub and emergent components soils were a fine	Vegetation:					
sandy loam over the sand.	Plant Community Description(s):					
Hydrology:	The wetland is a hardwood swamp/shrub-carr/fresh wet meadow complex. In the					
The hydrologic regime is saturated, and surface	with red maple also present; shrubs are occasional, and the herbaceous layer is					
water is the main source of hydrology.	dominated by reed canary grass and sensitive fern. The shrub-carr component is dominated by willow species in the shrub layer and by sensitive fern, meadow horsetail, and reed canary in the herbaceous layer. The wet meadow is dominated by					
	reed canary grass and sensitiv	e 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: Hunting (utility corridor)
2	Ν	Ν	Used for educational or scientific purposes
3	Ν	Ν	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	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	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	Y	Y	Wetland is connected or contiguous with perennial stream or lake
2	N	Ň	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aguatic species within aguatic 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	Y	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	Ý	Ý	Water flow through wetland is NOT channelized
3	Ý	Ý	Dense, persistent vegetation
4	N	Ň	Evidence of flashy hydrology
5	Ν	Y	Point or non-point source inflow
6	Ν	N	Impervious surfaces cover >10% of land surface within the watershed
7	Ν	N	Within a watershed with <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	Ν	N	Basin wetland or constricted outlet
3	Y	Y	Water flow through wetland is NOT channelized
4	Y	Y	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	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	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-6: The wetland is a hardwood swamp/shrub-carr/fresh wet meadow complex and has upland interspersion. SP-1: The western edge of the feature abuts Billy Creek, and sandy soils may provide the potential for erosion. ST-2/WQ-3: The wetland is not channelized. ST-3/WQ-5: The wetland has dense persistent vegetation.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Avian
	Y	Deer
	Y	Small mammals
	Y	Herpetofauna

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

Observed	Potential	Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 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)
Onoclea sensibilis*			PFO/PSS/PEM	Patchy
Phalaris arundinacea*			PFO/PSS/PEM	Patchy
Betula alleghaniensis*			PFO	Rare
Equisetum pratense*			PSS/PEM	Rare
Poa pratensis			PEM	Rare
Populus tremuloides*			PFO/PEM	Rare
Salix discolor			PSS/PFO	Rare
Acer rubrum			PFO	Rare
Betula papyrifera			PSS	Rare
Carex gracillima			PEM	Rare
Corylus cornuta			PFO	Rare
Salix bebbiana			PSS	Rare
Salix petiolaris			PSS	Rare
Carex intumescens			PEM	Barren
Fragaria virginiana			PEM	Barren
Solidago gigantea			PEM	Barren
Abies balsamea			PEM	Barren
Fraxinus nigra			PEM	Barren
Lonicera cf. morrowii			PFO	Barren
Pyrola sp.			PEM	Barren
Ranunculus acris			PEM	Barren
Rubus idaeus			PFO	Barren
Solidago canadensis			PSS/PEM	Barren
Ulmus americana			PEM	Barren
Athyrium filix-femina			PFO	Barren
Carex crinita			PFO	Barren
Equisetum pratense			PFO	Barren
Equisetum sylvaticum			PFO	Barren

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

The florisitc integrity is average based on the presence of invasives but a good assemblage of native species present throughout the wetland complex.

Additional species: Juncus filiformis (Plant Communities: PFO, Abundance: Barren)

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

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

**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 large portion of the wetland is located along a mowed utility corridor, and is disturbed by the associated stressors. Woody vegetation in this area has been partially cleared, and is maintained to some degree in the corridor. Invasive species are present throughout. A road is nearby, as is some residential land use.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The wetland has dense vegetation at multiple stratum and helps the wetland to function.
Human Use Values	The wetland is isolated and on private land.
Wildlife Habitat	The wetland offers a variety of cover options, vegetation, and habitat interspersion. The adjacent perennial stream also contributes to habitat potential.
Fish and Aquatic Life Habitat	The wetland does not seem to hold standing water for long periods of time.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is a somewhat shallow depressional feature, is densely vegetated, and is adjacent to Billy Creek, although only a small portion of the wetland interacts with this waterbody.
Water Quality Protection	The wetland is shallow and densely vegetated. Some overflow likely occurs in this feature, but it does have the potential for water storage.
Groundwater Processes	The wetland does not seem to influence groundwater processes. Very limited floodplain hydrology may be present on the western edge of the feature, but in this survey area this is not observed.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary trenching, soil storage, and backfilling.	Low
Secondary Impacts (including impacts which are indirectly attributable to the project)	Vegetation 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: Ashland Sampling Date: 2020-06-09
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasw034s_xu
Investigator(s): <u>SBR/DGL</u>	Section, Township, Range: <u>sec 09 T045N R003W</u>
Landform (hillslope, terrace, etc.): Side Slope	cal relief (concave, convex, none): <u>None</u> Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.386175	9 Long: <u>-90.752344</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Superior-Sedgwick complex, 0 to	6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year	ar? Yes 🔽 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally pro	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 🗸	Is the Sampled Area
Hydric Soil Present? Yes No 🗸	within a Wetland? Yes No 🖌
Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate repor	rt.) from the wetland feature. The unland is dominated by
bracken fern, common milkweed, and ox-eve d	laisv
HYDROLOGY	

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

Sampling Point: wasw034s_xu

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan Species?	nt Indicator Status	Dominance Test worksheet:
1. Populus tromulaidas	10	<u> </u>		Number of Dominant Species
		<u> </u>		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:
	10	= Total Co	over	$\frac{1}{OBI} \text{ species } 0 \qquad \text{x1} = 0$
Sanling/Shrub Stratum (Plot size: 15)				FACW species 10 $x^2 = 20$
				FAC species $10 \times 3 = 30$
1				FACU species 55 $x 4 = 220$
2				UPL species $20 \times 5 = 100$
3				Column Totals: 95 (A) 370 (B)
4				
5				Prevalence Index = B/A = <u>3.89</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
··		- Total Co		2 - Dominance Test is >50%
				3 - Prevalence Index is $≤3.0^1$
Herb Stratum (Plot size: <u>5</u>)	05	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Pteridium aquilinum</u>	25	<u> Y </u>	FACU	data in Remarks or on a separate sheet)
2. <u>Carex gracillima</u>	15	<u> </u>	<u>FACU</u>	Problematic Hydrophytic Vegetation' (Explain)
3. <u>Solidago canadensis</u>	15	N	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must
4. Symphyotrichum sp	15	Y		be present, unless disturbed or problematic.
5. Asclepias syriaca	10	N	UPL	Definitions of Vegetation Strata:
6. Leucanthemum vulgare	10	Ν	UPL	Deminions of Vegetation of data.
7 Phalaris arundinacea	5	N	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
 Fauisotum pratonso 	<u> </u>	N		at breast height (bbh), regardless of height.
			1701	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
	100	= Total Co	over	neight.
Woody Vine Stratum (Plot size: 30)				
1.				
2				
3				Underschutig
				Vegetation
4				Present? Yes No 🗸
	<u> </u>	= Total Co	over	
The sample point is representative of the	sneet.) ne unlar	nd area		

Profile Desc	ription: (Describe	to the dep	th needed	to docur	nent the i	ndicator	or confirm	the absence of	of indicators.)	
Depth	Matrix			Redo	x Features	s 1	. 2			
(inches)	Color (moist)	%	Color (I	noist)	%	Туре	Loc	Texture	Remarks	
0-10	<u>5YR 2.5/2</u>	100			0			FSL		
10-20	<u>5YR 3/3</u>	90	5YR	3/4	10	С	M	FS		
					·	<u> </u>				
						. <u> </u>				
					·					
					·	<u> </u>				
¹ Type: C=Ce	oncentration, D=Dep	oletion, RM	=Reduced	Matrix, MS	S=Masked	Sand Gra	ains.	² Location:	PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:							Indicators f	for Problematic Hydric Soils':	
Histosol	(A1) Dipodop (A2)		Polyva		w Surface	(S8) (LR F	R,	2 cm M	uck (A10) (LRR K, L, MLRA 149B)	
Black Hi	stic (A3)		τhin Γ	CA 1490, Dark Surfa) ace (S9) (L	RR R. MI	LRA 149B)	Coasi r 5 cm M	ucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A4)		Loam	y Mucky N	Mineral (F1) (LRR K	, L)	Dark St	urface (S7) (LRR K, L)	
Stratified	d Layers (A5)		Loam	y Gleyed	Matrix (F2))		Polyval	ue Below Surface (S8) (LRR K, L)	
Depleted	d Below Dark Surfac	ce (A11)	Deple	ted Matrix	(F3)			Thin Da	ark Surface (S9) (LRR K, L)	
Thick Da	ark Surface (A12) Aucky Mineral (S1)		Redox	(Dark Su ted Dark (fface (F6) Surface (F	7)		Iron-Ma Piedmo	Inganese Masses (F12) (LRR K, L, R)	
Sandy N	Gleved Matrix (S4)		Deple Redox	C Depress	ions (F8)	,,		Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)	
Sandy F	Redox (S5)							Red Pa	rent Material (F21)	
Stripped	Matrix (S6)							Very Shallow Dark Surface (TF12)		
Dark Su	rface (S7) (LRR R, I	MLRA 149	3)					Other (I	Explain in Remarks)	
³ Indicators o	f hydrophytic yegeta	ution and w	atland hydr		et ha nrasa	nt unles	e disturbed	or problematic		
Restrictive	Laver (if observed)	:		blogy mus		int, unicot	Sustandea			
Type:										
Depth (in	ches).							Hydric Soil I	Present? Yes No 🗸	
Remarks:										
A sandy	soil with redo	x obser	ved bel	ow 10	inches	_				
						-				



wasw034s_xu_N



 $wasw034s_xu_S$

Project/Site: Line 5 Relocation Project	ity/County: Ashland Sampling Date: 2020-06-09
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wasw034f_xu</u>
Investigator(s): SBR/DGL	Section, Township, Range: <u>sec 09 T045N R003W</u>
Landform (hillslope, terrace, etc.): Talf	al relief (concave, convex, none): None Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat. 46.385812	Long: -90,754574 Datum: WGS84
Soil Map Unit Name: Kellogg-Allendale-Ashwabay comple	2 to 6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year	r_2 Vas \checkmark No. (If no explain in Remarks)
Are Vignetetion Coll or Llydrology cignificantly d	
Are Vegetation, Soll, or Hydrology significantly of	
Are vegetation, Soli, or Hydrology naturally proc	iematic? (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 No 🖌	within a Wetland? Yes No 🗸
Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report) ies and unland herbaceous species. Although the
vegetation meets hydronhytic criteria, the hydro	logy and soils are more representative of an unland
	logy and sons are more representative of an upland.
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 Lo	eaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (E	313) Moss Trim Lines (B16)
Saturation (A3) Mari Deposits (B	15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Suma	Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizos	Sheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Dhit Deposits (B3) Presence of Red	uced from (C4) Stuffied of Stressed Plants (D1)
Iron Doposite (B5)	co (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imageny (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? Ves No 🖌 Depth (inches):	
Saturation Present? Yes No 🖌 Depth (inches):	Wetland Hydrology Present? Yes No 🖌
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos	, previous inspections), if available:
Remarks:	
No indicators of wetland hydrology were observ	ed.

Sampling Point: wasw034f_xu

Tree Stratum (Plot size: 30)	Absolute % Cover	e Dominar	t Indicator	Dominance Test worksheet:
1 Populus tremuloides	<u></u> 15	V		Number of Dominant Species
2 Dinus strobus	10	 N		That Are OBL, FACW, or FAC: <u>4</u> (A)
2. <u>Filius silopus</u> 3. Betula alleghaniensis	10	N		Total Number of Dominant
3. <u>Detula allegriamensis</u>	10	 N		
4. <u>Acer rubrum</u>	10	N		Percent of Dominant Species That Are OBL_EACW_or_EAC ² 67 (A/B)
5. <u>Fraxinus americana</u>		_ <u>_ IN</u>		
6. <u>Ables balsamea</u>	10	_ <u> </u>	FAC	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	65	_ = Total Co	over	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)	_			FACW species $0 \times 2 = 0$
1. <u>Abies balsamea</u>	5_	<u> </u>	FAC	FAC species $30 \times 3 = 130$
2				UPL species $0 \times 5 = 0$
3				Column Totals: 120 (A) 430 (B)
4				
5				Prevalence Index = B/A = 3.5833333333333333333333333333333333333
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)				3 - Prevalence Index is $\leq 3.0^{\circ}$
1. Pteridium aquilinum	30	Y	FACU	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
2. Fraxinus americana	10	N	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Solidago canadensis	10	Y	FACU	
Hieracium aurantiacum	<u> </u>	 N		¹ Indicators of hydric soil and wetland hydrology must
5. Carex arctata	<u> </u>	N		
				Definitions of Vegetation Strata:
0				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 of size, and woody plants less than 3 28 ft tall
11				
12				Woody vines – All woody vines greater than 3.28 ft in height.
	60	_ = Total Co	over	ů – – – – – – – – – – – – – – – – – – –
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 sample point is representative of the	ne upla	na. Ope	en areas	with just leaf litter are present, so

Profile Desc	cription: (Des	scribe te	o the dep	th needed to docum	nent the	indicator or	confirm	the absence of indicato	rs.)	
Depth	M	atrix		Redox	<pre>< Feature</pre>	s				
(inches)	Color (mo	oist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-14	7.5YR 🕃	3/3	100		0			LFS		
14-20	7.5YR 4	4/4	100		0			FS		
17 20	<u>1.011(</u>	<u>1/ T</u>	100			·				
							· -			
			<u> </u>			·		·		
						·				
								·		
¹ Type: C=C	oncentration.	D=Deple	etion. RM	Reduced Matrix. MS	=Maske	d Sand Grain	s.	² Location: PL=Pore	Lining. M=Ma	trix.
Hydric Soil	Indicators:		,	,			-	Indicators for Probler	natic Hydric	Soils ³ :
Histosol	(A1)			Polvvalue Belov	v Surface	(S8) (LRR R	ł.	2 cm Muck (A10) (LRR K. L. MI	RA 149B)
Histic Er	pipedon (A2)			MLRA 149B)		() (-,	Coast Prairie Redo	ox (A16) (LR	R K, L, R)
Black Hi	istic (A3)			, Thin Dark Surfa	ce (S9) (I	LRR R, MLR	A 149B)	5 cm Mucky Peat of	or Peat (S3) (I	LRR K, L, R)
Hydroge	en Sulfide (A4))		Loamy Mucky M	lineral (F	1) (LRR K, L)	Dark Surface (S7)	(LRR K, L)	
Stratified	d Layers (A5)			Loamy Gleyed M	Aatrix (F2	<u>?</u>)		Polyvalue Below S	Surface (S8) (I	LRR K, L)
Depleted	d Below Dark	Surface	(A11)	Depleted Matrix	(F3)			Thin Dark Surface	(S9) (LRR K,	, L)
Thick Da	ark Surface (A	12)		Redox Dark Sur	face (F6)	1		Iron-Manganese M	lasses (F12)	(LRR K, L, R)
Sandy M	/lucky Mineral	(S1)		Depleted Dark S	Surface (F	7)		Piedmont Floodpla	ain Soils (F19)) (MLRA 149B)
Sandy G	Bleyed Matrix ((S4)		Redox Depressi	ons (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy F	Redox (S5)							Red Parent Material (F21)		
Stripped	l Matrix (S6)							Very Shallow Dark Surface (TF12)		
Dark Su	rface (S7) (LR	RRR, M	LRA 1498	3)				Other (Explain in F	Remarks)	
³ Indicators o	f hydrophytic \	vegetatio	on and we	tland hydrology mus	t be pres	ent, unless di	isturbed o	or problematic.		
Restrictive	Layer (if obse	erved):								
Type:								Hudric Soil Procent?	Vos	No 11
Depth (in	ches):							Hyunc Son Fresent?	165	
Remarks:										
A sandy	soil with r	no rec	dox fea	atures.						



wasw034f_xu_E



wasw034f_xu_W

Project/Site: Line 5 Relocation Project	City/County: Ash	and Sa	mpling Date: 2020-06-09
Applicant/Owner: Enbridge		State: Wisconsin S	Sampling Point: wasa1070f_w
Investigator(s): SBR/DGL	Section, Township,	Range: sec 09 T045N R	003W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, o	onvex. none): Concave	Slope (%): 0-2%
Subregion (LPR or MLRA). Northcentral Forests Lat: 16 386(052	ong: -90 755243	Datum: WGS84
Sublegion (Error Merce).	norcont clones	NM/ clossification	Datum: <u>VVOOO4</u>
Soli Map Unit Name: COMUCOPIA SIIL IOAM, 15 10 45	percent slopes		1:
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes 🔽 N	o (If no, explain in Rema	ırks.)
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? A	re "Normal Circumstances" prese	ent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally	/ problematic? (I	needed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ing sampling poin	t locations, transects, in	portant features, etc.
Hydrophytic Vegetation Present? Yes 🖌 No	Is the Samp	led Area	
Hydric Soil Present? Yes V No	within a We	tland? Yes 🖌	No
Wetland Hydrology Present? Yes No	If yes, option	al Wetland Site ID:	
Remarks: (Explain alternative procedures here or in a separate re	eport.)		
vegetated but one section seems to be sligh	itly deeper with i	nore dense vegetation	۱.
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators	(minimum of two required)
Primary Indicators (minimum of one is required; check all that app	oly)	Surface Soil Crac	cks (B6)
🔽 Surface Water (A1)	ned Leaves (B9)	Drainage Pattern	s (B10)
🔄 High Water Table (A2) 🛛 🔄 Aquatic Fau	una (B13)	Moss Trim Lines	(B16)
🖌 Saturation (A3) 🦳 Marl Depos	its (B15)	Dry-Season Wate	er Table (C2)
Water Marks (B1) Hydrogen S	Sulfide Odor (C1)	Crayfish Burrows	(C8)
Sediment Deposits (B2) Oxidized RI	hizospheres on Living R	oots (C3) Saturation Visible	e on Aerial Imagery (C9)
Drift Deposits (B3) Presence o	f Reduced Iron (C4)	Stunted or Stress	ed Plants (D1)
Algal Mat or Crust (B4) Recent Iron	Reduction in Tilled Soil	s (C6) Geomorphic Pos	ition (D2)
Iron Deposits (B5) Thin Muck S	Surface (C7)	Shallow Aquitard	(D3)
Inundation Visible on Aerial Imagery (B7) Other (Expl	ain in Remarks)	<u> </u>	; Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Tes	t (D5)
Field Observations:			
Surface Water Present? Yes <u> </u>	hes): <u>0.1</u>		
Water Table Present? Yes <u>~</u> No Depth (incl	hes): 0		
Saturation Present? Yes <u>v</u> No <u>Depth</u> (includes capillary fringe)	hes): <u>()</u>	Wetland Hydrology Present?	Yes <u>/</u> No
Remarks: The hydrolgic regime is saturated. Standing water table and saturation were observed at	water is presen	t at the time of the sur	vey. A shallow

Sampling Point: wasa1070f_w

	Absolute	Dominan	t Indicator				
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	<u>Status</u>	Dominance Test worksheet:			
1. <u>Betula alleghaniensis</u>	20	Y	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)			
2. <u>Thuja occidentalis</u>	20	Y	FACW	Total Number of Dominant			
3. <u>Abies balsamea</u>	15	Y	FAC	Species Across All Strata: <u>6</u> (B)			
4. <u>Ulmus americana</u>	15	N	FACW	Percent of Dominant Species			
5. <u>Acer rubrum</u>	10	N	FAC	That Are OBL, FACW, or FAC: <u>100</u> (A/B)			
6. <u>Tsuga canadensis</u>	5	N	FACU	Prevalence Index worksheet:			
7.				Total % Cover of: Multiply by:			
	85	= Total Co	ver	$\frac{1}{1} \frac{1}{1} \frac{1}$			
Sapling/Shrub Stratum (Plot size: 15)				FACW species $40 \times 2 = 80$			
				FAC species $60 \times 3 = 180$			
1				FACU species $5 \times 4 = 20$			
2				UPL species $0 \times 5 = 0$			
3				Column Totals: <u>105</u> (A) <u>280</u> (B)			
4							
5				Prevalence index = $B/A = 2.666666666666666666666666666666666666$			
6				Hydrophytic Vegetation Indicators:			
7				1 - Rapid Test for Hydrophytic Vegetation			
	0	= Total Co	over	\sim 2 - Dominance Test is >50%			
Herb Stratum (Plot size: 5)				\sim 3 - Prevalence Index is $\leq 3.0^{\circ}$			
1. Athyrium angustum	10	Y	FAC	data in Remarks or on a separate sheet)			
2. <u>Onoclea sensibilis</u>	5	Y	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)			
3. Arisaema triphvllum	5	Y	FAC				
4.				Indicators of hydric soil and wetland hydrology must			
5				Definitions of Manufation Oferta			
6				Definitions of Vegetation Strata:			
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter			
0				at breast neight (DBH), regardless of height.			
o				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							
12		. <u></u>		Woody vines – All woody vines greater than 3.28 ft in height.			
	20	= Total Co	over				
Woody Vine Stratum (Plot size: <u>30</u>)							
1							
2							
3.				Hydrophytic			
4.				Vegetation			
	0	= Total Co	over	Present? Yes <u>v</u> No			
Remarks: (Include photo numbers here or on a separate	sheet.)						
The sample point is representative of n	nost of t	he feati	ure. One	e section has more dense vegetation of			
sedge species such as fringed sedge.							

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		Remarks		
0-20	5YR 2.5/1	100		0			MMI	loamv			
	<u> </u>							<u></u>			
					·						
					<u> </u>						
					·						
¹ Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Masked	d Sand Gr	ains.	² Locatior	n: PL=Pore Li	ining, M=Matrix		
Hydric Soil I	ndicators:						Indicators	for Problem	atic Hydric So	ils³:	
Histosol	(A1)		Polyvalue Below	Surface	(S8) (LRI	RR,	2 cm I	Muck (A10) (L	.RR K, L, MLR	4 149B)	
Histic Ep	pipedon (A2)		MLRA 149B)				Coast	Prairie Redox	x (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)							Dark Surface (S7) (LRR K, L)				
Stratified Layers (A5) Loamy Gleyed Matrix (F2)							Polyvalue Below Surface (S8) (LRR K, L)				
Depleted Below Dark Surface (A11) Depleted Matrix (F3)							Thin Dark Surface (S9) (LRR K, L)				
Inick Dark Surface (A12) Redox Dark Surface (F6)							Iron-Manganese Masses (F12) (LRR K, L, R)				
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)							Piedm	Piedmont Floodplain Soils (F19) (MLRA 149B)			
Sandy Gleyed Matrix (54) Redox Depressions (F8)							Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
Salluy Kedox (55)							Red Parent Material (F21)				
Dark Surface (S7) (I DD D MI DA 1400)							Very Shallow Dark Surface (TF12)				
		LKA 1490)					(Explain in Re	emarks)		
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, upless disturbed or problematic											
Restrictive I	aver (if observed):		liana nyarology mao	be pice				0.			
Typo:											
Type.								Duccout	Noo X	Na	
Depth (inc	ches):						Hydric Soli	Present?	res <u>v</u>	NO	
Remarks:											
A dark mucky mineral soil.											


 $wasa1070f_w_E$



wasa1070f_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):		
wasa1070	2020-06-09		
Location:	Ecological Landsca	ape:	
PLSS: sec 09 T045N R003W	Superior Coastal Plain		
Lat: 46.386113 Long: -90.755237	Watershed:		
•	LS12, Marengo River		
County: Ashland Town/City/Village: Ashland town			
, , , , , , , , , , , , , , , , ,			
SITE DESCRIPTION	•		
Soils:	WWI Class:		
Mapped Type(s):	Т3/5К		
Cornuconia silt loam 15 to 45 percent slopes	Wetland Type(s):		
	PFO - hardwood swamp		
Field Verified:		Swamp	
The soils were not field verified. Soils were a dark	Watland Size:	Watland Area Impacted	
muchu mineral throughout the profile		vvelianu Area impacieu	
mucky mineral throughout the profile.	0.0327	0.0327	
	vegetation:		
Lludrology	Plant Community L	Description(s):	
The builded and a single is a structure of Ouefange success and a	The wetland is a hard	wood swamp that has a canopy	
The hydrologic regime is saturated. Surface water and a	dominated by yellow t	Dirch, northern white cedar, and American	
potential seep are the sources of hydrology. Standing	elm. The herbaceous layer is mostly sparsely vegetated. Part		
water and a shallow water table with observed saturation	dominated by sedae species		
were observed.	aominated by sedge s	species.	
	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: Hunting
2	Ν	N	Used for educational or scientific purposes
3	Ν	N	Visually or physically accessible to public
4	Ν	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	Ν	N	Supports or provides habitat for endangered, threatened or special concern species
7	Ν	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	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	Y	Y	100 m buffer – natural land cover <a>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
5	N	N	Occurs in a Joint Venture priority township
6	N	Y	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	Ν	Y	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	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	N	Y	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	N	Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable
3	N	N	Densely rooted emergent or woody vegetation
ST			Storm and Floodwater Storage
1	Y	Y	Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Ý	Ý	Water flow through wetland is NOT channelized
3	Ň	Ň	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	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	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	Ν	Y	Stormwater or surface water from agricultural land is major hydrology source
8	Y	Y	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	Y	Y	Springs, seeps or indicators of groundwater present
2	N	Ν	Location near a groundwater divide or a headwater wetland
3	N	Y	Wetland remains saturated for an extended time period with no additional water inputs
4	Y	Y	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

WH-10/FA-2/4: The wetland has standing water present and could provide aquatic habitats. FA-1: The feature is near Billy Creek, but does not connect with this stream feature in the survey area. ST-1/WQ-1: The wetland is within a depression with one end opening up to an adjacent stream outside of the survey area. GW-1: There is a potential seep associated with the feature. GW-4: Soils are heavily organic.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Avian
	Y	Deer
	Y	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)
Betula alleghaniensis*			PFO	Rare
Thuja occidentalis*			PFO	Rare
Ulmus americana*			PFO	Rare
Abies balsamea			PFO	Rare
Acer rubrum			PFO	Rare
Carex crinita*			PFO	Rare
Carex sp.*			PFO	Rare
Onoclea sensibilis			PFO	Rare
Athyrium filix-femina			PFO	Rare
Osmunda claytoniana			PFO	Rare
Populus tremuloides			PFO	Rare
Tsuga canadensis			PFO	Rare
Arisaema triphyllum			PFO	Barren
Rubus pubescens			PFO	Barren
Equisetum sylvaticum			PFO	Barren
Impatiens capensis			PFO	Barren
Mitchella repens			PFO	Barren

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

Floristic integrity is moderate, as it has a sparse herbaceous layer and is not especially diverse, but has an intact native plant community with minimal invasive species.

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

Assessment Area (AA)	Buffer	Historic	Impact	Relative Frequency**	Stressor
7			20101	Troquonoy	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
	Х		L	С	Agriculture – hay
					Agriculture – pasture
					Roads or railroad
	Х		L	C	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	х			UC	Removal of herbaceous stratum – mowing,
			_		grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
					Unprescribed life
					Human trails – unpaved
					Romoval of large weedy debris
	v		1	C	Cover of non-native and/or invasive species
					Pesidential land use
			<u> </u>	00	Lirban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
	1				Excavation or soil grading
					Other (list below):

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is near a mowed utility corridor and a personal residence, with an agricultural field also present hearby.

SUMMARY OF FUNCTIONAL VALUES

FUNCTION	ON 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		v				

FUNCTION	RATIONALE
Floristic Integrity	No invasive species were observed in the hardwood swamp, with a typical assemblage of native species.
Human Use Values	The wetland is isolated and located on private property.
Wildlife Habitat	The wetland is part of a small forested area that, while partially surrounded by land use disturbances, can provide some habitat.
Fish and Aquatic Life Habitat	The standing water is relatively shallow, although seep hydrology means that the wetland likely frequently has standing water unless the water table is drawn down. Billy Creek is nearby.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely drains to a Billy Creek before storing much water.
Water Quality Protection	The wetland has sparse herbaceous vegetation and likely flows into the nearby stream without much filtration occurring.
Groundwater Processes	There is seep hydrology in the wetland, with thick organic soils indicating frequent saturation/high water table.

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:	Ashland	Sampling Date: <u>2020-06-09</u>
Applicant/Owner: Enbridge			_ State: <u>Wisconsin</u> Sampling Point: <u>wasa1070_u</u>
nvestigator(s): SBR/DGL Section, Township, Range: Sec 09 T045N R003W			
Landform (hillslope, terrace, etc.); Rise	Local relief (conc	ave. convex. no	ne): None Slope (%): 0-2%
Subregion (I BR or MI BA). Northcentral Forests Lat. 4	6.386027	Long -9) 755523 Datum: WGS84
Soil Man Unit Name: Cornuconia silt Ioam 15	to 45 percent slop	<u> </u>	NW/I classification
Are alimatic / hydrologic conditions on the site turical for t	tio time of year? Yea	No	
	is time of year? res	INO	
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Norma	I Circumstances' present? Yes <u>V</u> No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed,	explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling	point location	ons, transects, 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	No <u> </u>	ptional Wetlan	d Site ID:
Remarks: (Explain alternative procedures here or in a s	eparate report.)	o o ly vo a ot	ated in the understand Leaf litter
The upland is upsiope from the wettar	iu anu is very spar	sely veget	aled in the understory. Lear litter
is the dominant cover. Eastern nemiod	ck is the dominant	tree specie	es.
HYDROLOGY			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check a	ll that apply)		Surface Soil Cracks (B6)
Surface Water (A1)	ater-Stained Leaves (B9)		Drainage Patterns (B10)
High Water Table (A2)	uatic Fauna (B13)		Moss Trim Lines (B16)
Saturation (A3) Ma	arl Deposits (B15)		Dry-Season Water Table (C2)
Water Marks (B1) Hy	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) Pr	Drift Deposits (B3) Presence of Reduced Iron (C4)		
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 <u> <!-- D</u--></u>	epth (inches):	_	
Water Table Present? Yes No D	epth (inches):	—	
Saturation Present? Yes No 🖌 D	epth (inches):	Wetland	Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well	, aerial photos, previous ins	pections), if ava	ailable:
Remarks:	ore observed		

VEGETATION – Use scientific names of plants.

Sampling Point: wasa1070_u

Trop Stratum (Plot size: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1 Tsuga canadensis	<u>50</u>	V		Number of Dominant Species
2 Acer rubrum	20	 	FAC	That are OBL, FACW, of FAC: 2 (A)
3 Fravinus americana		 N		Total Number of Dominant Species Across All Strata: 4 (B)
A Populus tromulaidos	_ <u>10</u> 5	N	FAC	
Populas tremuloides Populas tremuloides	 			That Are OBL, FACW, or FAC: 50 (A/B)
			<u>FAC</u>	
7				Prevalence Index worksheet:
/		- Total Ca		Total % Cover of: Multiply by:
Capling (Christian Chapters (Distring)	90		ver	OBL species x =
<u>Saping/Shido Shatum</u> (Plot size. 15)	F	V	EAC	FAC species $35 \times 3 = 105$
		<u> </u>	<u>FAC</u>	FACU species x 4 = 380
2		·		UPL species x 5 =
3			. <u> </u>	Column Totals: <u>130</u> (A) <u>485</u> (B)
4				Prevalence Index = $B/A = 3.73$
5				Hudrenbutie Verstatien Indicatore:
6				1 - Rapid Test for Hydrophytic Vegetation
7		·		2 - Dominance Test is >50%
_	5	= Total Co	ver	3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size:)	30	V	EACU	4 - Morphological Adaptations ¹ (Provide supporting
	<u> </u>	 N	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
			TACU	
S		·		¹ Indicators of hydric soil and wetland hydrology must
4		·		be present, unless disturbed or problematic.
5		·		Definitions of Vegetation Strata:
0		·		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				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.
12				Woody vines – All woody vines greater than 3.28 ft in
	35	= Total Co	ver	height.
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.)			
I he sample point is representative of the	he uplar	nd. Cove	er is not	100% as leaf litter covers a large
area.				

SOIL

Depth (inches) Matrix Color (moist) Redox Features Color (moist) Type1 Loc2 Texture Remarks 0-12 5YR 2.5/2 100 0 SIL
Color (moist) % Type¹ Loc² Texture Remarks 0-12 5YR 2.5/2 100 0 SIL
0-12 5YR 2.5/2 100 0 SIL 12-20 5YR 4/4 100 0 LVFS
12-20 5YR 4/4 100 0 LVFS
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 Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L)
Straumed Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (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):
Type:
Depth (inches): No _
Remarks:
A reddish soil with no observed redox.



wasa1070_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	ect City/C	ounty: Ashland	Sam	pling Date: <u>2020-06-30</u>			
Applicant/Owner: Enbridge			_ State: Wisconsin Sa	ampling Point: <u>wasw033f_xw</u>			
Investigator(s): DMP/AGG	Section	on, Township, Range: S	ec 09 T045N R0	03W			
Landform (hillslope, terrace, etc.): Depress	ion Local rel	ef (concave, convex, no	ne): Concave	Slope (%): 0-2%			
Subragion (I BB or MI BA): Northcentral Fore	ests Lat: 16 380311) 755217	olope (%): <u>0 270</u>			
	- Lat. <u>40.009041</u>	Long. <u>-30</u>					
Soli Map Unit Name: <u>COMUCOPIA SIL IC</u>	bam, 6 to 15 percent	slopes		·			
Are climatic / hydrologic conditions on the site	typical for this time of year? Y	es 🖌 No	(If no, explain in Remar	ks.)			
Are Vegetation, Soil, or Hydrole	ogy significantly distur	bed? Are "Norma	I Circumstances" preser	nt? Yes 🖌 No			
Are Vegetation, Soil, or Hydrold	ogy naturally problema	atic? (If needed, e	explain any answers in F	Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? Yes	s 🖌 No	Is the Sampled Area					
Hydric Soil Present? Yes	s 🖌 No 🔄	within a Wetland?	Yes 🖌 🖌	No			
Wetland Hydrology Present? Yes	s 🖌 No	If yes, optional Wetland	d Site ID:				
Remarks: (Explain alternative procedures he	ere or in a separate report.)						
The hardwood swamp is locate	ed in two swales with	nin a forest. The	swales lead to t	he north and			
eventually form a small ephem	eral stream that flov	/s into a road cu	lvert.				
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is require	ed; check all that apply)		Surface Soil Crack	(s (B6)			
Surface Water (A1)	Water-Stained Leave	s (B9)	Drainage Patterns	(B10)			
High Water Table (A2)	Aquatic Fauna (B13)	()	Moss Trim Lines (I	B16)			
Saturation (A3)	Saturation (A3) Marl Deposits (B15)			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	l Iron (C4)	Stunted or Stresse	ed Plants (D1)			
Algal Mat or Crust (B4)	Recent Iron Reductio	n in Tilled Soils (C6)	Filled Soils (C6) Geomorphic Position (D2)				
Iron Deposits (B5)	Thin Muck Surface (0	27)	Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rer	narks)	Microtopographic	Relief (D4)			
Sparsely Vegetated Concave Surface (B	8)		FAC-Neutral Test	(D5)			
Field Observations:							
Surface Water Present? Yes N	o <u> </u> Depth (inches):						
Water Table Present? Yes <u>v</u> N	o Depth (inches): 3						
Saturation Present? Yes <u>v</u> N	o Depth (inches): 0	Wetland H	Hydrology Present?	Yes 🖌 No			
(includes capillary fringe)		den a de la companya	-1-b1				
Describe Recorded Data (stream gauge, mor	nitoring well, aerial photos, pre	vious inspections), if ava	alladie:				
Remarks:							
The hydrologic regime is sease	onally saturated. The	e water table wa	s observed 3 inc	ches below the			
soil surface.							

VEGETATION – Use scientific names of plants.

Sampling Point: wasw033f_xw

	Absolute	Dominant	Indicator					
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	Species?	Status	Dominance Test worksheet:				
1. <u>Betula alleghaniensis</u>	10	Y	FAC	That Are OBL, FACW, or FAC:3 (A)				
2. <u>Fraxinus pennsylvanica</u>	5	Y	FACW	Total Number of Dominant				
3. <u>Tilia americana</u>	5	Y	<u>FACU</u>	Species Across All Strata: (B)				
4. <u>Abies balsamea</u>	2	N	FAC	Percent of Dominant Species				
5				That Are OBL, FACW, or FAC: <u>75</u> (A/B)				
6.				Provolance Index workshoot				
7.				Total % Cover of: Multiply by:				
	22	= Total Co	ver	$\frac{1}{10000000000000000000000000000000000$				
Sapling/Shrub Stratum (Plot size: 15)		10101-00		FACW species $62 \times 2 = 124$				
<u>Saping/Sindu Stratum</u> (Filt size. 15)	2	NI		FAC species $24 \times 3 = 72$				
1. <u>Fraxinus pennsylvanica</u>				FACU species 7 x 4 = 28				
2. <u>Lonicera ci morrowii</u>	2	<u> </u>	FACU	UPL species 0 x 5 = 0				
3			·	Column Totals: <u>100</u> (A) <u>231</u> (B)				
4			·					
5			·					
6				Hydrophytic Vegetation Indicators:				
7			·	1 - Rapid Test for Hydrophytic Vegetation				
	4	= Total Co	ver	\sim 2 - Dominance Test is >50%				
Herb Stratum (Plot size: <u>5</u>)				\sim 3 - Prevalence index is $\leq 3.0^{\circ}$				
1. <u>Phalaris arundinacea</u>	50	Y	FACW	data in Remarks or on a separate sheet)				
2. <u>Equisetum hyemale</u>	10	N	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)				
3. Impatiens capensis	5	N	FACW	1				
4. Glvceria striata	5	N	OBL	Indicators of hydric soil and wetland hydrology must				
5. Carex crinita	2	N	OBI	Definitions of Manufation Oferta				
6 Ranunculus acris	2	N	FAC	Definitions of Vegetation Strata:				
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter				
0	·		·	a breast height (DDF), 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				
9								
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	74		·	height.				
	/4	= Total Co	ver					
Woody Vine Stratum (Plot size: <u>30</u>)								
1			·					
2			·					
3				Hydrophytic				
4				Present? Yes ✓ No				
	0	= Total Co	ver					
Remarks: (Include photo numbers here or on a separate sheet.)								
The vegetation at the sample plot is representative of the wetland. There are areas along the								
touch mo not are the dominant plants in	northern part of the wetland that have more cover of green ash. Reed canary grass and spotted							
touch-me-not are the dominant plants in the ground layer.								

Profile Des	cription: (Describe	to the de	pth needed	to docur	nent the i	indicator	or confirm	n the absence	of indicators.)	
Depth	Matrix			Redo	x Feature	s				
(inches)	Color (moist)	%	Color (r	noist)	%	Type ¹	Loc ²	Texture	Remarks	
0-2	<u>5YR 2.5/2</u>	100			0			<u> </u>		
2-20	5YR 4/2	98	7 5YR	Δ/Δ	2	С	М	SI		
			<u>1.011</u>							
						·		<u> </u>		
						·				
						·				
						·				
						·				
						·				
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix.								: PL=Pore Lining, M=Matrix.		
Hydric Soll	Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :								for Problematic Hydric Solis :	
HISTOSO	I (A1) ninodon (A2)				w Suпасе	(58) (LR I	κĸ,	2 cm N	/IUCK (A10) (LRR K, L, MLRA 149B) Drairia Raday (A16) (LPB K L B)	
Black H	istic (A3)		Thin D	ark Surfa) ace (S9) (I		RA 1498	$\sim 5 \text{ cm}$	Aucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A4)		Loamy	/ Mucky N	/lineral (F	1) (LRR K	, L)	, <u> </u>	Surface (S7) (LRR K, L)	
Stratifie	d Layers (A5)		Loamy	/ Gleyed	Matrix (F2	2)	. ,	Polyva	lue Below Surface (S8) (LRR K, L)	
Deplete	d Below Dark Surfac	ce (A11)	Deplet	ted Matrix	(F3)			Thin D	ark Surface (S9) (LRR K, L)	
Thick D	ark Surface (A12)		Redox	Dark Su	rface (F6)			Iron-M	anganese Masses (F12) (LRR K, L, R)	
Sandy N	Mucky Mineral (S1)		Deplet	ted Dark	Surface (F	7)		Piedm	ont Floodplain Soils (F19) (MLRA 149B)	
Sandy Gleyed Matrix (S4) Redox Depressions (F8)						Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)			
Sandy Redox (S5)				Reu P	aleni Malenai (F2T) Shallow Dark Surface (TE12)					
Dark Si	urface (S7) (I RR R	MI RA 149	B)					Other	(Explain in Remarks)	
Duik of			-)							
³ Indicators o	of hydrophytic vegeta	tion and w	etland hydro	ology mus	st be prese	ent, unless	s disturbed	or problemation	2.	
Restrictive	Layer (if observed)	:								
Туре:										
Depth (in	ches):							Hydric Soil	Present? Yes <u><</u> No	
Remarks:										
The soil	profile consis	ts of a t	thin dark	loam	over a	deplet	ted san	dy loam. I	Redox concentrations were	
observed	d throughout t	he low	er layer a	and tw	o hydr	ic indic	cators v	vere met.		
1										



wasw033f_xw_NE



wasw033f_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):			
wasw033_x	2020-06-30			
Location:	Ecological Landsca	Ecological Landscape:		
PLSS: sec 09 T045N R003W	Superior Coastal Plain			
Lat: <u>46.389336</u> Long: <u>-90.755216</u>	Watershed:			
	LS12, Marengo River			
County: <u>Ashland</u> I own/City/Village: <u>Ashland town</u>				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Cornucopia silt loam, 6 to 15 percent slopes	Wetland Type(s):			
	PFO - Hardwood swamp			
Field Verified:				
The soil profile was not verified. The soil profile	Wetland Size:	Wetland Area Impacted		
consisted of a thin dark layer over a depleted	0.2366	0.2366		
sandy loam. Depleted matrix was met.	Vegetation:			
	Plant Community Description(s):			
Hydrology:	The wetland is a hardwood swamp with a canopy dominated			
The hydrologic regime is seasonally saturated.	by green ash, while basswood and paper birch were located			
The water table was observed 3 inches below the	on the bank of the swale and provided cover to the wetland.			
soil surface	Reed canary grass, scouring rush and touch me nots are the			
	uominant piants in the			

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	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	N	N	Wetland and contiguous habitat >10 acres
2	Y	Y	3 or more strata present (>10% cover)
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	N	N	100 m buffer – natural land cover <a>>50% (south) 75% (north) intact
5	N	N	Occurs in a Joint Venture priority township
6	Y	Y	Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex, etc.)
7	Y	Y	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	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	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	N	Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating water levels or high flows – if no, not applicable
3	N	N	Densely rooted emergent or woody vegetation
ST	IN		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	N	Dense, persistent vegetation
4	N	N	Evidence of flashy hydrology
5	Y	Y	Point or non-point source inflow
6	N	Ň	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	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	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	Y	Y	Stormwater or surface water from agricultural land is major hydrology source
8	N	N	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	N	N	Springs, seeps or indicators of groundwater present
2	Ν	N	Location near a groundwater divide or a headwater wetland
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

WH-2/6. We observed wetland and upland habitats as well as trees in the canopy and shrub layers and herbaceous vegetation.

WH-7: We heard a few different bird species in the immediate area. WH-10: There was standing water within some areas of the feature during the field survey. Amphibians and aquatic insects could potential use the feature.

FA-4: The vegetation is most likely inundated during the spring after heavy rains and snow melt.

ST-2: The wetland occurs within a swale, and the water flows through the feature and eventually leads to an ephemeral stream.

ST-5: There is a hayfield located just to the west of the feature. There is also a road just to the north. Both of those landuses likely introduce non point inputs into the feature.

WQ-7: There is a hay field located just to the west of the feature and runoff water from that field leads into the 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	Red eyed veerio, savannah sparrow,
	Y	Mammals and 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
Y	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)
Abies balsamea			PFO	Barren
Acer rubrum			PFO	Barren
Athyrium filix-femina			PFO	Barren
Betula alleghaniensis			PFO	Rare
Betula papyrifera			PFO	Barren
Carex annectens			PFO	Barren
Carex crinita			PFO	Barren
Equisetum arvense			PFO	Barren
Equisetum hyemale*			PFO	Rare
Fraxinus pennsylvanica*			PFO	Rare
Glyceria grandis			PFO	Barren
Glyceria striata			PFO	Rare
Impatiens capensis			PFO	Rare
Juncus effusus			PFO	Barren
Lonicera cf morrowii			PFO	Barren
Matteuccia struthiopteris			PFO	Barren
Onoclea sensibilis			PFO	Barren
Phalaris arundinacea*			PFO	Patchy
Ranunculus acris			PFO	Barren
Solidago gigantea			PFO	Barren
Tilia americana*			PFO	Patchy

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

The floristic integrity is moderate due to fair diversity of native species, but presence of non native species.

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

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

The wetland is located near a hay field and a county road. Both of those land uses have the potential to introduce sediment and non point inputs into the feature. The wetland is being invaded by invasive and non native species.

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 invasion of non native species and fair diversity. of native species
Human Use Values	
Wildlife Habitat	There was standing water, as well as trees and herbaceous plants within the wetland. This leads us to believe the wetland has moderate significance to wildlife.
Fish and Aquatic Life Habitat	There was standing water during the field survey, however no amphibians or fish were observed.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a flow through wetland that does not have the potential to store much storm water. It is likely that the nearby hay field and road deliver non point inputs into the feature.
Water Quality Protection	The feature was not densely vegetated in some areas, and it is unlikely that it has a significant value to water 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: Ashland Sampling Date: 2020-06-30
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasw033f_xu
Investigator(s): DMP/AGG	Section, Township, Range: Sec 09 T045N R003W
Landform (hillslope, terrace, etc.): Backslope	Local relief (concave, convex, none): None Slope (%): 3-7%
Subregion (LRP or MLRA): Northcentral Forests Lat: 16 389	$262 \qquad \text{Long: -90, 755215} \qquad \text{Deture: WGS84}$
Soil Man Unit Name: Corpucopia silt loam 6 to 15 p	
And elimentia / hudrele site conditions on the site turined for this time of	
Are climatic / hydrologic conditions on the site typical for this time o	tyear? Yes <u>v</u> No (if no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signification	ntly 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 show	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No 🗸	Is the Sampled Area
Hydric Soil Present? Yes No V	within a Wetland? Yes No 🖌
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 app	ly) Surface Soil Cracks (B6)
Surface Water (A1) Water-Stair	ed Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fau	ina (B13) Moss Trim Lines (B16)
Saturation (A3) Marl Depos	its (B15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen S	ulfide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rf	hizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Algal Mat or Crust (B4) Becont Iron	Reduced Iron (C4) Stunted or Stressed Plants (D1)
Iron Denosits (B5)	Surface (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Expl	ain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No <u><</u> Depth (incl	nes):
Water Table Present? Yes No Depth (incl	nes):
Saturation Present? Yes No 🖌 Depth (incl (includes capillary fringe)	nes): Wetland Hydrology Present? Yes No _ ✓
Describe Recorded Data (stream gauge, monitoring well, aerial pl	notos, previous inspections), if available:
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: wasw033f_xu

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan Species?	t Indicator Status	Dominance Test worksheet:
1 Betula papyrifera	<u>10</u>	V	FACU	Number of Dominant Species That Are OBL EACING or EAC: 2 (A)
2 Tilia americana	10	 	FACU	111111111111111111111111111111111111
3 Pinus strobus	<u> </u>	 	FACU	Total Number of Dominant Species Across All Strata: 7 (B)
3. <u>1 mus strobus</u>		I		
4		·	·	Percent of Dominant Species That Are OBL, FACW, or FAC: 29 (A/B)
5		·	·	
0		·	·	Prevalence Index worksheet:
7			·	Total % Cover of: Multiply by:
45	25	= Total Co	ver	OBL species $()$ $x = 0$
Sapling/Shrub Stratum (Plot size: 15)				FACW species $52 \times 3 = 156$
1. <u>l'ilia americana</u>		<u> Y </u>	FACU	FACU species $31 \times 4 = 124$
2. <u>Corylus cornuta</u>	2	<u> </u>	FACU	UPL species $0 \times 5 = 0$
3. <u>Fraxinus nigra</u>	1	<u> </u>	<u>FACW</u>	Column Totals: <u>84</u> (A) <u>282</u> (B)
4			·	
5		·		Prevalence Index = $B/A = \frac{3.357142857142857}{2}$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	5	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)				3 - Prevalence Index is ≤3.0°
1. <u>Equisetum hyemale</u>	50	Y	FAC	data in Remarks or on a separate sheet)
2. Carex pedunculata	2	N	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Pvrola elliptica	2	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
·		·	·	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
9		·	·	
10		·	·	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11			·	
12		·		height.
	54	= Total Co	ver	
Woody Vine Stratum (Plot size: <u>30</u>)				
1			·	
2		·	·	
3				Hydrophytic
4		·	·	Vegetation Present? Yes No ✔
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)		ما میں م	, The evene we dive we level here e
I ne vegetation at the sample plot is rep	oresenta		the upla	nd. The surrounding upland has a
	ou. The	shiub	and grou	und layers are both sparse.

SOIL	
------	--

Profile Desc	cription: (Des	cribe t	o the dept	h needed to docur	nent the i	indicator or confirm	the absence of	of indicators.)
Depth (inches)	Ma	ntrix	0/	Redo	x Feature	$\frac{s}{1}$	Tauduma	Demedic
(incres)		<u>st)</u>	<u>%</u>	Color (moist)	<u>%</u>	Type Loc		Remarks
	<u>5YR 4</u>	/3	100		0	· · ·	FS	
4-20	<u>5YR 4</u>	./4	100		0	·	FS	
			·					
			<u> </u>					
			·		·	· · ·		
			<u> </u>			· · ·		
					- <u> </u>	· · ·		
¹ Type: C=C	oncentration D)=Deple	tion RM=	Reduced Matrix MS	S=Masker	Sand Grains	² Location	PI =Pore Lining M=Matrix
Hydric Soil	Indicators:	Dopi					Indicators f	or Problematic Hydric Soils ³ :
Histosol	(A1)			Polyvalue Belov	w Surface	(S8) (LRR R ,	2 cm Mi	uck (A10) (LRR K, L, MLRA 149B)
Histic Ep	pipedon (A2)			MLRA 149B))		Coast P	Prairie Redox (A16) (LRR K, L, R)
Black Hi	stic (A3)			Thin Dark Surfa	ice (S9) (I	_RR R, MLRA 149B)	5 cm Mi	ucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)			Loamy Mucky N	/lineral (F	1) (LRR K, L)	Dark Su	Irface (S7) (LRR K, L)
Stratified	d Layers (A5) d Bolow Dark S	Surfaco	(A11)	Loamy Gleyed Doploted Matrix		.)	Polyvall	Je Below Sufface (S8) (LRR K, L)
Thick Da	ark Surface (A1	12)	(ATT)	Depleted Math	rface (F6)		Iron-Ma	nganese Masses (F12) (I RR K. I. R)
Sandy N	/ucky Mineral (S1)		Depleted Dark	Surface (F	7)	Piedmo	nt Floodplain Soils (F19) (MLRA 149B)
Sandy G	Bleyed Matrix (S4)		Redox Depress	ions (F8)	,	Mesic S	podic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)						Red Pa	rent Material (F21)
Stripped	l Matrix (S6)						Very Sh	allow Dark Surface (TF12)
Dark Su	rface (S7) (LRI	RR, M	LRA 149B)			Other (E	Explain in Remarks)
³ Indicators o	f bydrophytic y	ogotati	on and wo	land hydrology mus	t ha proce	ant unloss disturbed	or problematic	
Restrictive	aver (if obser	rved).		liand hydrology mus	t be prese		or problematic.	
Type								
Denth (in).						Hydric Soil F	Present? Yes No 🗸
Depth (In	cnes):							
Remarks:	profile oor	voioto	of o re	ddiab brown	fine of	nd No hydria	a ail indiad	store wore obcorved
The Soli	prome cor	151515	onale		line se	and. No flydric	Soli muica	nors were observed.



wasw033f_xu_NW



wasw033f_xu_SE

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: wasb1012e_w
Investigator(s): <u>KDF/SAM</u>	Section, Township, Range: <u>sec 16 T045N R003W</u>
Landform (hillslope, terrace, etc.): Depression Lo	boal relief (concave, convex, none): <u>None</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): <u>Montheentral Polesus</u> Lat: <u>46.37774</u>	4Long: <u>-90.738237</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Pence sandy loam, 6 to 15 perce	ent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🔽 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	/ 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 No Hydric Soil Present? Yes No	Is the Sampled Area 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 feature is located within an old frisbee gol	ort.) f course and has been excavated for sand and gravel.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; chee	Surface Soil Cracks (B6)	
Primary Indicators (minimum of one is required; cheat ✓ Surface Water (A1) ✓ High Water Table (A2) ✓ Saturation (A3) ✓ Water Marks (B1) ✓ Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	 <u>ck all that apply</u> Water-Stained Leaves (B9) Aquatic Fauna (B13) Marl Deposits (B15) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living I Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Thin Muck Surface (C7) Other (Explain in Remarks) 	 Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) oils (C6) Geomorphic Position (D2) Shallow Aquitard (D3) 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): 2	
Saturation Present? Yes <u>v</u> No <u>(includes capillary fringe)</u>	_ Depth (inches): 0	Wetland Hydrology Present? Yes <u>v</u> No
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspec	tions), if available:
Remarks: The hydrologic regime is seasonally within a portion of the basin and a h heavy precipitation occurred just pr	y saturated with recharg high water table and sur ior to the time of survey.	ge hydrology. Surface water is present face saturation were observed, though

VEGETATION – Use scientific names of plants.

Sampling Point: wasb1012e_w

Image: Indianal (Notation in the problem of Dominant Species (Provide Stratum) (Plot size:	Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan Species?	t Indicator	Dominance Test worksheet:
2	1.	<u>/// Cover</u>			Number of Dominant Species That Are OBL FACW or FAC: 2 (A)
Total Number of Dominant 3	2				
4 Percent of Dominant Species	3				Total Number of Dominant Species Across All Strata: 3 (B)
s	4				Percent of Dominant Species
6	5				That Are OBL, FACW, or FAC: <u>67</u> (A/B)
7.	6				Prevalence Index worksheet:
	7			·	Total % Cover of: Multiply by:
SapinorShub Stratum (Plot size:1		0	= Total Co	ver	OBL species x 1 =
1.	Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =0
2	1				FAC species x 3 =6
2	2				FACU species x 4 =
3	2			·	UPL species x 5 =
4	3			·	Column Totals: <u>4</u> (A) <u>8</u> (B)
9.	4			<u> </u>	Prevalence Index = $B/A = 2.00$
6	5				
7.	6			. <u> </u>	Hydrophytic Vegetation Indicators:
	7				1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:5) 1. Euthamia graminifolia 2 Y FAC 2. Cf. Agrostis 2 Y FAC - Problematic Hydrophytic Vegetation ¹ (Provide supporting data in Remarks or on a separate sheet) - Problematic Hydrophytic Vegetation ¹ (Explain) 3. Scirpus cyperinus 2 Y OBL - - Problematic Hydrophytic Vegetation ¹ (Explain) 4. Centaurea stoebe 1 N Definitions of Vegetation Strata: - - 5. Rumex orbiculatus 1 N Definitions of Vegetation Strata: - 7. - 1 N Definitions of Vegetation Strata: - - 8. - - - - - - - - 9. -		0	= Total Co	ver	\sim 2 - Dominance Test is >50%
Leuthania graminifolia 2 Y FAC Ci. Agrostis 2 Y OBL Ci. Agrostis 2 Y OBL Objective Contaurea stoebe 1 N Centaurea stoebe 1 N Centaurea stoebe 1 N Cerex sp. 1 N Selipus cyperinus 0 Cerex sp. 1 N Cerex sp. Cerex sp.	Herb Stratum (Plot size: 5)				$\underline{}$ 3 - Prevalence Index is $\leq 3.0^{\circ}$
2 Cf. Agrostis 2 Y OBL 3 Scirpus cyperinus 2 Y OBL 4 Centaurea stoebe 1 N be present, unless disturded or problematic. 5 Rumex orbiculatus 1 N Definitions of Vegetation Strata: 6 Carex sp. 1 N Definitions of Vegetation Strata: 7.	1 Euthamia graminifolia	2	Y	FAC	 4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2 Y OBL 3. Scirpus cyperinus 2 Y OBL 4. Centaurea stoebe 1 N be present, unless disturbed or problematic. 5. Rumex orbiculatus 1 N Definitions of Vegetation Strata: 6. Carex sp. 1 N Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 8.	2 Cf Agrostis	2	Ý		Problematic Hydrophytic Vegetation ¹ (Explain)
3. Scippus cypernits			 		
4. <u>Centraturea stoepe</u> 1 N be present, unless disturbed or problematic. 5. <u>Rumex orbiculatus</u> 1 N	S. <u>Scripus cyperinus</u>		I		¹ Indicators of hydric soil and wetland hydrology must
5. Rumex orbiculatus 1 N 6. Carex sp. 1 N 7. 1 N 8. 1 N 9. 1 N 10. 1 1 11. 10. 1 12. 1 1 13. 1 1 14. 10. 1 15. 1 1 16. 1 1 17. 1 1 18. 10. 19. 10. 11. 10. 11. 10. 11. 10. 12. 10. 13. 10. 14. 10. 15. 10. 16. 10. 17. 10. 18. 10. 19. 10. 10. 10. 10. 10. 11. 10. 12. 10. 13. 10. 14. 10. 15. 10. 16. 10. 17. 10. 18. 10. 19. 10. 10. 10. 11. 10. 12. 10. 13. 10. 14. 10. 15. 10. 16. 10. 17. 10. 18. 10. 19. 10. 19. 10. 10. 10. 10. 10. 10. 10. 10.<	4. <u>Centaurea stoebe</u>		<u> </u>		be present, unless disturbed or problematic.
6. Carex sp. 1 N Tree – Woody plants 3 in (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 8.	5. <u>Rumex orbiculatus</u>	1	<u>N</u>		Definitions of Vegetation Strata:
7.	6. <u>Carex sp.</u>	1	N		Tree – Woody plants 3 in (7.6 cm) or more in diameter
8.	7				at breast height (DBH), regardless of height.
9.	8				Sanling/shrub – Woody plants less than 3 in DBH
10.	9.				and greater than or equal to 3.28 ft (1 m) tall.
11.	10				Herb – All berbaceous (non-woody) plants, regardless
11.	11				of size, and woody plants less than 3.28 ft tall.
12.	10				Woody vines – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:30) 1	12				height.
Woody Vine Stratum (Plot size:30) 1			= Total Co	over	
1.	Woody Vine Stratum (Plot size: 30)				
2.	1				
3.	2				
4	3				Hydrophytic
	4.				Vegetation
Remarks: (Include photo numbers here or on a separate sheet.) Sparsely vegetated, closed basin.		0	= Total Co	ver	Present? Yes <u>v</u> No
Sparsely vegetated, closed basin.	Remarks: (Include photo numbers here or on a separate	sheet)			
	Sparsely vegetated, closed basin.	011001.)			

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 (r	noist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-14	5YR	3/4	100		0	·		S			
14-18	5YR	4/6	100		0			SII			
		-7/0									
						·		·			
						·					
						·		·			
						·					
						·					
						·		. <u></u> .			
			otion DM-		Maaka	d Sand Cr		² Location	DI - Doro Liping M-Matrix		
Hvdric Soil	Indicators:	i, D-Depi				a Sanu Gia	an 15.	Indicators	for Problematic Hydric Soils ³ :		
Histosol	(A1)			Polyvalue Belov	v Surface	(S8) (L R F	R.	2 cm M	luck (A10) (LRR K. L. MLRA 149B)		
Histic Ep	oipedon (A2)		MLRA 149B)		(00) (,	Coast I	Prairie Redox (A16) (LRR K, L, R)		
Black Hi	stic (A3)			Thin Dark Surfa	ce (S9) (I	LRR R, MI	RA 149B) 5 cm M	lucky Peat or Peat (S3) (LRR K, L, R)		
Hydroge	en Sulfide (A	4)		Loamy Mucky N	lineral (F	1) (LRR K	, L)	Dark S	urface (S7) (LRR K, L)		
Stratified	Layers (A	5)		Loamy Gleyed M	Matrix (F2	2)		Polyval	lue Below Surface (S8) (LRR K, L)		
Depleted	d Below Dai	k Surface	e (A11)	Depleted Matrix	(F3)			Thin Da	ark Surface (S9) (LRR K, L)		
Thick Da	ark Surface	(A12)		Redox Dark Sur	tace (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)		
Sandy N	UCKY Miner	al (S1) v (S4)		Depleted Dark &	SUITACE (F	-7)		Pleama	Dit Floodplain Solis (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A 145 149B)		
Sandy B	edox (S5)	x (34)						Red Pa	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 Remarks)		
³ Indicators of	f hydrophyti	c vegetat	ion and we	tland hydrology mus	t be pres	ent, unless	disturbed	l or problematic			
Restrictive I	_ayer (if ob	served):									
Туре:											
Depth (ind	ches):							Hydric Soil	Present? Yes <u><</u> No		
Remarks:											
Soils are	sand a	bove s	ilt Ioam	 Soils do me 	et a hy	dric sc	oil indica	ator, but th	ne feature has been		
recently	excavat	ed.									



wasb1012e_w_E



wasb1012e_w_N

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):			
wasb1012	2020-06-01			
Location:	Ecological Landsca	ape:		
PLSS: sec 16 T045N R003W	Superior Mineral Range	S		
	Capener mileral range	-		
Lat: <u>46.377744</u> Long: <u>-90.738237</u>	Watershed:			
a charles the training of a start of the second terms	LSTZ, Marengo River			
County: <u>Asniand</u> Town/City/Village: <u>Asniand town</u>				
Julis. Manpad Type(s):	VVVI CIASS.			
Dense sendu la en C to 15 nement element				
Pence sandy loam, 6 to 15 percent slopes	Wetland Type(s):			
Field Verified	PEIN - Wet mea	dow		
The soils were not verified	Watland Cine	Mational Area Imposted		
	Vegetation	0.0390		
	Diget Community F	Δ		
Hydrology.				
The hydrologic regime is seasonally saturated with recharge	I ne wetland is a	a sparsely vegetated, closed		
hydrology. Surface water is present within a portion of the basin	basin dominated	by grass-leaved goldenrod		
and a high water table and surface saturation were observed,	and graminoids.			
though there was recent heavy precipitation at the time of survey.				
hydrology. Surface water is present within a portion of the basin and a high water table and surface saturation were observed, though there was recent heavy precipitation at the time of survey.	and graminoids.	by grass-leaved goldenrod		

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	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	Ν	N	In or adjacent to archaeological or cultural resource site			
WH			Wildlife Habitat			
1	Ν	N	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 >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	N	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other			
8	N	N	Part of a large habitat block that supports area sensitive species			
9	N	N	Ephemeral pond with water present > 45 days			
10	N	V	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	IN		Fish and Aquatic Life Habitat			
1	N	N	Wetland is connected or contiguous with perennial stream or lake			
2	N		Standing water provides habitat for amphibians and aquatic invertebrates			
3	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system			
4	IN N		Vegetation is inundated in spring			
	IN	Ť	Shoreline Protection			
	NI	NI	Along shoreling of a stream lake, nond or open water area (>1 acro), if no, not applicable			
I	IN	IN	Along shoreline of a stream, lake, point of open water area (21 acre) - if no, not applicable			
2	Ν	N	vater levels or high flows if no, not applicable			
3	NI	NI	Densely rooted emergent or woody vegetation			
ст С	IN	IN	Storm and Floodwater Storage			
1	V	V	Basin wetland, constricted outlet, has through flow or is adjacent to a stream			
2	I V	ř V	Water flow through wetland is NOT channelized			
2	T N	T N				
3	IN NI	IN N	Evidence of floopy hydrology			
4	IN NI	IN N	Doint or non-noint source inflow			
5	IN NI	IN N	Importious surfaces cover >10% of land surface within the watershed			
7	IN NI	IN N	Within a watershed with <10% wetland			
0	IN N	IN N	$\frac{10\%}{10\%}$			
0	IN	IN	Water Quality Protection			
1	NI	v	Provides substantial storage of storm and floodwater based on providus soction			
2		ř V	Provides substantial storage of storm and hoodwater based on previous section			
2	ř V	ř V	Water flew through wetland in NOT channelized			
3	Ý NI	Y NI	Vegeteted wetland essesiated with a lake or stream			
4	IN N	IN N				
5	N	N	Cigne of evenes autriente, such as along blooms, begun macrophyte growth			
0	N	N	Signs of excess numerits, such as algae blooms, neavy macrophyte growin			
/	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	N	N	Wetland soils are organic			
5	N	N	Wetland is within a wellhead protection area			

WQ-1: The feature is located within an excavated pit that collects water from precipitation events. Heavy rains can lead to flooding of the feature, but overall the feature is seasonally saturated. WH-10, FA-2: Standing water within the feature may provide habitat for frogs and toads and aquatic invertebrates, but is likely an artifact of recent heavy precipitation events.

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	Frogs and toads				
Y	Y	Garter snake/ observed along margin 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	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)
Cf. Agrostis*			PEM	Barren
Euthamia graminifolia*			PEM	Barren
Rumex orbiculatus*			PEM	Barren
Scirpus cyperinus*			PEM	Barren
Carex sp.			PEM	Barren
Centaurea stoebe			PEM	Barren

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

The floristic integrity is low due to sparse vegetation within a highly disturbed feature dominated by disturbance-oriented graminoids.

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)
	1				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	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
	-				Human trails – unpaved
					Human trails – paved
				_	Removal of large woody debris
Χ	Х		M	С	Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
		Х	M	C	Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
X			Н	C	Excavation or soil grading
					Other (list below):
	ļ				
	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 feature is an excavated soil pit located within an old frisbee golf course and is highly disturbed.
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 sparsely vegetated with low diversity comprised of disturbance-oriented species.
Human Use Values	The feature is used for soil excavation and would not be used for recreation purposes.
Wildlife Habitat	There is some standing water present that may provide habitat for frogs and toads due to pooling water after heavy rain events.
Fish and Aquatic Life Habitat	See above. There is no potential for fish habitat.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is sparsely vegetated with recharge hydrology. The depth of the pit allows for pooling after heavy precipitation events.
Water Quality Protection	See above. The feature is not associated with a waterbody.
Groundwater Processes	The feature exhibits recharge hydrology. A high water table was observed but is likely to be an artifact of recent heavy rains.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

Project/Site: Line 5 Relocation Project	City/Count	iy: Ashland	Sampling Date: <u>2020-06-01</u>
Applicant/Owner: Enbridge		State: <u>V</u>	/isconsin Sampling Point: wasb1012_u
Investigator(s): <u>SAM/KDF</u>	Section, T	ownship, Range: sec 16 T	045N R003W
Landform (hillslope, terrace, etc.): <u>Rise</u>	Local relief (c	oncave, convex, none): <u>Con</u>	Cave Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat:	46.377669	Long: <u>-90.73827</u>	6 Datum: <u>WGS84</u>
Soil Map Unit Name: Pence sandy loam, 6 t	o 15 percent slop	es NWI d	slassification:
Are climatic / hydrologic conditions on the site typical for	r this time of year? Yes _	✓ No (If no, explaining the second	ain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	? Are "Normal Circumsta	nces" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any	answers in Remarks.)
SUMMARY OF FINDINGS – Attach site m	ap showing sampli	ng point locations, tran	sects, important features, etc.
Hydrophytic Vegetation Present? Yes	No_v_ Is f	the Sampled Area	
Hydric Soil Present? Yes	No 🖌 🛛 wit	hin a Wetland? Yes	No
Wetland Hydrology Present? Yes	No If y	es, optional Wetland Site ID:	
Remarks: (Explain alternative procedures here or in a Sample recorded within a borrow pit a mix of Kentucky bluegrass and we wetland.	used for sand an edy forbs. Adjace	d gravel. This portion nt to a depression th	ι is entirely vegetated with at was mapped as

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required; check all t	that apply)	Surface Soil Cracks (B6)			
Surface Water (A1) Wate	er-Stained Leaves (B9)	Drainage Patterns (B10)			
High Water Table (A2) Aqua	atic Fauna (B13)	Moss Trim Lines (B16)			
Saturation (A3) Marl	l Deposits (B15)	Dry-Season Water Table (C2)			
Water Marks (B1) Hyde	rogen Sulfide Odor (C1)	Crayfish Burrows (C8)			
Sediment Deposits (B2) Oxid	lized Rhizospheres on Living Roots (C	C3) Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3) Pres	sence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4) Rece	ent 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) Othe	er (Explain in Remarks)	Microtopographic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)			
Field Observations:					
Surface Water Present? Yes No Dep	pth (inches):				
Water Table Present? Yes No _	pth (inches):				
Saturation Present? Yes <u>No</u> Per Dep (includes capillary fringe)	pth (inches): Wetlar	nd Hydrology Present? Yes No			
Describe Recorded Data (stream gauge, monitoring well, a	aerial photos, previous inspections), if	f available:			
Pomorko:					
Area with no signs of wetland hydrology	V.				

I

Sampling Point: wasb1012_u

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	t Indicator Status	Dominance Test worksheet:
1				That Are OBL, FACW, or FAC: (A)
2 3				Total Number of Dominant Species Across All Strata:4(B)
4			<u> </u>	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 x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =0
1				FAC species 0 $x = 0$
2				FACU species $7()$ x 4 = $28()$
3				Column Totals: 105 (A) 455 (B)
4				
5				Prevalence Index = B/A = <u>4.3333333333333333333</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: 5)				3 - Prevalence index is ≤ 3.0
1. <u>Poa pratensis</u>	40	Y	<u>FACU</u>	data in Remarks or on a separate sheet)
2. <u>Leucanthemum vulgare</u>	10	<u>N</u>	UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Centaurea stoebe</u>	10	N	·	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Lotus corniculatus</u>	10	N	FACU	be present, unless disturbed or problematic.
5. <i>Daucus carota</i>	10	Y	UPL	Definitions of Vegetation Strata:
6. <u>Solidago canadensis</u>	10	Y	FACU	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Bromus inermis</u>	10	Y	UPL	at breast height (DBH), regardless of height.
8. <u>Rumex acetosella</u>	5	N	<u>FACU</u>	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Potentilla recta</u>	5	N	·	and greater than or equal to 3.28 ft (1 m) tall.
10. <i>Potentilla argentea</i>	5	N	<u>FACU</u>	Herb – All herbaceous (non-woody) plants, regardless
11. <u>Hypericum perforatum</u>	5	N	UPL	of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in height
	120	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1			. <u> </u>	
2			. <u> </u>	
3				Hydrophytic
4			. <u> </u>	Vegetation Present? Yes No ✓
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)	t nlants	Samol	e recorded in a borrow nit
		n plante	. oumpi	

SOIL

Profile Desc	ription: (Describe t	o the depth	n needed to document the indicator or confirm	the absence of indi	cators.)
Depth (inchos)	Matrix Color (moist)	0/	Redox Features	Toxturo	Pomarka
<u>0-17</u>	7.5YR 2 5/3	100		SI	Remains
17-20	5VR 1/6	100		<u></u>	
17-20	<u>JIN 4/0</u>	100			
		·	· · · · · · · · · · · · · · · · · · ·	<u> </u>	
				<u> </u>	
				<u> </u>	
			· · · · · · · · · · · · · · · · · · ·	<u> </u>	
				<u> </u>	
¹ Type: C=Co	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=F	ore Lining, M=Matrix.
Hydric Soil	Indicators:			Indicators for Pro	oblematic Hydric Soils ³ :
Histosol	(A1)	_	Polyvalue Below Surface (S8) (LRR R,	2 cm Muck (A	10) (LRR K, L, MLRA 149B)
Histic Ep Black Hi	olpedon (A2) stic (A3)		MLRA 149B) Thin Dark Surface (S9) (I RR R MI RA 149B)	5 cm Mucky F	Redox (A16) (LRR K, L, R) 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)
Stratified	Layers (A5)		Loamy Gleyed Matrix (F2)	Polyvalue Bel	ow Surface (S8) (LRR K, L)
Depleted	d Below Dark Surface	e (A11) _	_ Depleted Matrix (F3) Redex Dark Surface (F6)	Thin Dark Sur	face (S9) (LRR K, L)
Sandy M	lucky Mineral (S1)	_	Depleted Dark Surface (F7)	Piedmont Floo	odplain Soils (F19) (MLRA 149B)
Sandy G	Bleyed Matrix (S4)	_	Redox Depressions (F8)	Mesic Spodic	(TA6) (MLRA 144A, 145, 149B)
Sandy R	edox (S5)			Red Parent M	aterial (F21)
Stripped	Matrix (S6)	I PA 140B)		Very Shallow	Dark Surface (TF12)
		ILIXA 1430)			rin Kendiks)
³ Indicators of	f hydrophytic vegetati	ion and wetl	and hydrology must be present, unless disturbed	or problematic.	
Restrictive I	Layer (if observed):				
Type:				Undria Cail Dragon	42 Vac No (
Depth (ind	ches):			Hydric Soli Preser	it? resNo
Remarks:	oils and likely		II drained		



wasb1012_u_E



wasb1012_u_N

Project/Site: Line 5 Relocation Project	City/County: Ashland Sampling Date: 2020-06-04
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasd1024e_w
Investigator(s): AGG/OTG	Section Township Range: Sec 15 T045N R003W
Landform (hillslope torrace ate.): Depression	real relief (concerve, convex, none): $Concerve, Since (\%): 0-2\%$
Northcentral Forests	
Subregion (LRR or MLRA):	Long: <u>-90.733728</u> Datum: <u>VVG384</u>
Soil Map Unit Name: Cublake-Croswell-Ashwabay compl	ex, 0 to 6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year	ar? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally pro	blematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, transects, important features, etc.
Hvdrophytic Vegetation Present? Yes 🖌 No	Is the Sampled Area
Hydric Soil Present? Yes V No	within a Wetland? Yes 🖌 No
Wetland Hydrology Present? Yes <u>v</u> No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate repor	rt.)
The area is a fresh wet meadow component of	a larger wetland complex. The area is dominated by
Canada bluejoint.	
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 I	Leaves (B9) Drainage Patterns (B10)
High Water Table (A2)	(B13) Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (I	B15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfic	de Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizos	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 Rec	duction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surfa	ace (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain i	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)	(<u> </u>
Water Table Present? Yes <u>v</u> No Depth (inches)	<u> 10 </u>
Saturation Present? Yes <u>v</u> No <u>Depth</u> (inches) (includes capillary fringe)	∴ 9 Wetland Hydrology Present? Yes _ ✓ No
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if available:
Domorika	
The wetland hydrology regime appears to be s	easonally saturated

Sampling Point: wasd1024e_w

Trop Stratum (Plot size: 30)	Absolute	Dominan	t Indicator	Dominance Test worksheet:
	% Cover	Species	Status	Number of Dominant Species
2				$\begin{array}{c} \text{That Ale OBL, FACW, of FAC.} \\ \underline{\mathbf{D}} \end{array} $ (A)
3				Total Number of Dominant Species Across All Strata: 6 (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
0				
o				Prevalence Index worksheet:
/				Total % Cover of: Multiply by:
45		= Total Co	over	OBL species $80 \times 1 = 80$
Sapling/Shrub Stratum (Plot size: 15)	•	Ň		FACW species 10 $x_2 = 20$
1. <u>Fraxinus nigra</u>		<u> Y </u>	<u>FACW</u>	FACU species $0 \times 4 = 0$
2. <u>Fraxinus pennsylvanica</u>	1	<u> Y </u>	FACW	UPL species $0 \times 5 = 0$
3. <u>Populus tremuloides</u>	1	<u> </u>	<u>FAC</u>	Column Totals: <u>99</u> (A) <u>127</u> (B)
4. <u>Abies balsamea</u>	1	Y	FAC	
5				Prevalence Index = $B/A = 1.28282828282828282828282828282828282828$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	5	= Total Co	over	\sim 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				\sim 3 - Prevalence Index is $\leq 3.0^{\circ}$
1. <u>Calamagrostis canadensis</u>	50	Y	OBL	data in Remarks or on a separate sheet)
2. <u>Scirpus cyperinus</u>	20	Y	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Juncus effusus	5	N	OBL	
4. Athyrium angustum	5	N	FAC	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Scirpus microcarpus	5	N	OBL	Definitions of Vegetation Strata:
6. Equisetum svlvaticum	5	N	FACW	Demitions of Vegetation Strata.
7. Onoclea sensibilis	2	N	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8 Osmunda clavtoniana	2	N	FAC	
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb. All herbesseus (nen weedu) plante, regerdless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
12.		Total Co		height.
March March (Distained 20			over	
<u>woody vine Stratum</u> (Plot size: <u>50</u>)				
1				
2				
3				Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
	0	= Total Co	over	
The feature is a fresh wet meadow don	sheet.) ninated	bv Can	ada blue	eioint.
	iniatoa			

SOIL

Depth Matrix Redox Features Inchest 50 Ord Imstill 50 Type Texture Remarks 0-6 10YR 3/2 80 5YR 4/6 20 C M SCL 6-20 5YR 4/4 100 0 SL	Profile Description: (Describe to the de	oth needed to docum	nent the i	ndicator	or confirm	the absence of indicate	ors.)
Inches) Color (molsit) % Color (molsit) % Type: Loc Remarks 0-6 10YR 3/2 .80 5YR 4/6 20 C M SCL 6-20 5YR 4/4 100 0 SL	Depth Matrix	Redox	K Features	3			
0-6 10YR 3/2 80 5YR 4/6 20 C M SCL 6-20 5YR 4/4 100 0 SL	(inches) Color (moist) %	Color (moist)	%	Type'	Loc ²	Texture	Remarks
6-20 5YR 4/4 100 0 SL SL	<u>0-6 10YR 3/2 80</u>	<u>5YR 4/6</u>	20	C	M	SCL	
• D EC • O EC • O EC • Indicators • Indicators • Indicators • Hydric Soli Indicators: • Indicators • Indicators • Histic Epipeton (A2) • MLRA 149B) • Coast Pratine Redux (A16) (LRR K, L, R) • Histic Epipeton (A2) • MLRA 149B) • Coast Pratine Redux (A16) (LRR K, L, R) • Histic Epipeton (A2) • MLRA 149B) • Coast Pratine Redux (A16) (LRR K, L, R) • Histic Epipeton (A2) • MLRA 149B) • Coast Pratine Redux (A16) (LRR K, L, R) • Hydrige Studie (A1) • Learny Gleged Matrix (F2) • Polyvalue Below Sturface (S3) (LRR K, L) • Hydrige Studie (A4) • Learny Gleged Matrix (F2) • Thin Dark Surface (F7) • Polyvalue Below Surface (S3) (LRR K, L) • Studie (A4) • Learny Gleged Matrix (F2) • Thin Dark Surface (F7) • Polyvalue Below Surface (S3) (LRR K, L) • Thick Dark Surface (A11) • Depleted Dark Surface (F7) • Thion-Manganaee Massee (F12) (LRR K, L, R) • Thion-Manganaee Massee (F12) (LRR K, L, R) • Sandy Audex (S6) • Redox Dark Surface (F8) • Mesic Spoid (F19) (MLRA 148, 145) • Sandy Audex (S6) • Redox Dark Surface (F7) • Heist Spoid (F19) (MLRA 148, 145) • Sandy Rudex (S6) • Redox Dark Surface (F7) • Heist Spoi	6-20 5YR 4/4 100		0			SI	
Image: State of the state					·		
Type: C-Concentration. D=Depletion. RM=Reduced Matrix, MS=Masked Sand Grains. ¹ Location: PL=Pore Lining, M=Matrix. Indicators for Photomatic Hydric Soils*: Indicators for Photomatic Hydric Soils*: Histos (A) Histos (A) Polyvalue Below Surface (S8) (LRR R, Histos (A) Loamy MucRA 1499) Sond MucRA 1499) Black Helics (A) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F2) Sondy Redow Dark Surface (A1) Depleted Balow Balow Surface (S8) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Depleted Matrix (F3) Loamy Gleyed Matrix (F2) Sondy Redow Dark Surface (A1) Depleted Matrix (F3) Sandy MucRA (142) Sandy Redow Mark Surface (F1) Loamy Gleyed Matrix (F3) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Redox Depressions (F8) Sandy Redox (S5) Redox Surface (F7) Depleted Dark Surface (F7) Poleyalue Below Surface (T71) Stripped Matrix (S4) Sandy Redox (S5) Redox Surface (F7) Depleted Dark Surface (F7) Poleyalue Below Surface (T712) Other (Explain In Remarks) Poleyalue Below Surface (T72) Stripped Matrix (S4) Sandy Redox (S5) Remarks: A dark surface layer with redox concentrations was observed. No	·						
Type: C-Concentration, D=Depletion, RM-Reduced Matrix, MS=Masked Sand Grains. *Location: PL=Pore Lining, M-Matrix, Indicators for Problematic Hydric Solis': Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Location: PL=Pore Lining, M-Matrix, Indicators for Problematic Hydric Solis': Histosol (A2) MLRA 149B) Coast Prairie Redox (A10) (LRR K, L, R) Black Histo (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histo (A3) Coast Micro (S7) (LRR K, L) Depleted Below Surface (S7) (LRR K, L, R) Black Histo (A3) Coast Micro (S8) (LRR K, L) Depleted Dark Surface (S7) (LRR K, L) Stratified Layers (A5) Locarry Micro (Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Thin Cbark Surface (A1) Depleted Dark Surface (F7) Polydarue Below ILRR K, L, R) Sandy Micro (S1) (LRR K, MLRA 149B) Sandy Hedox (S3) LRR K, L, R) Sandy Micro (S1) (LRR K, MLRA 1449B) Very Shallow Dark Surface (T19) (MLRA 144, 145, 149B) Sandy Kedox (S5) Red Parent Material (P21) Very Shallow Dark Surface (T12) Dark Surface (S7) (LRR K, MLRA 149B) Other (Explain in Remarks) Thin Dark Surface (T2) Sandy Kedox (S5) Red Parent Material (P21) Very Shallow Dark Surface (T12) Differ (Explain in Re							
"Type: C-Concentration, D=Depletion, RM-Reduced Matrix, MS=Masked Sand Grains. *Location: PL=Pore Lining, M=Matrix. Hydric Soli Indicators: Indicators for Problematic Hydric Solis*: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Starlief Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A1) Depleted Matrix (F2) Thick Dark Surface (A12) Polyvalue Below Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Matrix (F2) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depletesions (F8) Sandy Redox (S5) Urder (F1) Stripped Matrix (S4) Redox Depressions (F8) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) "Indicator of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (If observed): Type: Type: Deplet Hark Surface (A10) Depleted Dark Surface (Baryer with redox concentrations was observed.							
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Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. *Location: PL=Pore Lining, M=Matrix. Hydric Soll Indicators: Indicators for Problematic Hydric Solls*. Indicators for Problematic Hydric Solls*. Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Impact 1498) Coast Prainie Redox (A16) (LRR K, L, R) Black Histic (A2) MLRA 1498) Coast Prainie Redox (A16) (LRR K, L, R) Black Histic (A3) Chamy Gleyed Matrix (F2) Polyvalue Selow Surface (S9) (LRR K, L) Stratified Lyers (A5) Loamy Wucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L) Thick Dark Surface (A11) Depleted Matrix (F2) Polyvalue Selow Surface (S9) (LRR K, L, R) Sandy Kedx (Mineral (S1) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L, R) Sandy Kedx (S5) Redox Depressions (F8) Melkeral (F21) (MLRA 1498) Sandy Kedx (S5) Redox Depressions (F8) Melkeral (F21) Sandy Kedx (S5) Redox Depressions (F8) Melkeral (F21) Sandy Kedx (S5) Gene Thin Reduce (T12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Reserversent (Explain in Remarks) ³ Indicators of Layer (frobeserved): Hydric Soil Present?							
"Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. *Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils?: Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S8) (LRR R, MLRA 149B) Stratified Layers (A6) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Thin Dark Surface (A11) Depleted Matrix (F2) Sandy Mucky Mineral (F1) Depleted Matrix (F2) Sandy Mucky Mineral (F1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Dark Surface (F7) Sandy Mucky Mineral (F1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S6) Redox Depressions (F8) Sandy Gleyed Matrix (S6) Redox Depressions (F8) Sandy Gleyed Matrix (S6) Other (Explain in Remarks) *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (If observed): Type: Depletit (inches): Hydric Soil Present? Yes v No Matrix Single Matrix (S6) Hydric Soil Present? Yes v No							
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. *Location: PL=Pore Lining, M=Matrix. *Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Coast Praine Reduck (A10) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Coast Praine Reduck (A16) (LRR K, L, R) Black Histic (A3) Loamy Gleyed Matrix (F2) Depleted Layers (A5) Dark Surface (S9) (LRR K, L, R) Stratified Layers (A5) Loamy Gleyed Matrix (F3) Thin Dark Surface (S9) (LRR K, L, R) Depleted Below Unark Surface (S9) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Matrix (S4) Redox Dark Surface (F7) Piedmont Floodplain Solis (F19) (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Depleted Matrix (S6) Wastrace (T12) (LRR K, L, R) Piedmont Floodplain Solis (F19) (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Depleted Matrix (S6) User Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Depleted Matrix (S6) Wastrace (T12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Matrix (S6) User Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Depleted Matrix (S6) User Spodic (TA6) (MLRA 144A, 145, 149B)				. <u> </u>			
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'Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 'Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils': Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Coast Praine Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR K, L) Dark Surface (S7) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Wlecky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, R) Depleted Below Dark Surface (A12) Redox Dark Surface (F6) Thin Dark Surface (S9) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Redox Depressions (F8) Meest Sordic (TA2) (MLRA 1448, 145, 149B) Sandy Redox (S6) Redox Depressions (F8) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LR R, MLRA 149B) Very Shallow Dark Surface (TF12) alndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Present? Yes volume Type: Depleted Jark surface layer with redox concentrations was observed. Hydric Soil Present? Yes volume							
Hydric Soil Indicators in Indicators for Problematic Hydric Soils*: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) 2 cm Muck (A10) (LRR K, L, R) Histo Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S3) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Thin Dark Surface (S9) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 1448, 145, 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 1444, 145, 149B) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (If observed): Type:	¹ Type: C=Concentration, D=Depletion, RM	I=Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location: PL=Pore	Lining, M=Matrix.
Histosol (A1) Polyvalue Below Surface (S8) (LRR R,	Hydric Soil Indicators:					Indicators for Proble	matic Hydric Soils':
	Histosol (A1)	Polyvalue Belov	v Surface	(S8) (LRF	RR,	2 cm Muck (A10)	(LRR K, L, MLRA 149B)
Initiate (A)	Histic Epipedon (A2)	MLRA 149B)	aa (CO) (I		DA 440D)	Coast Prairie Rec	lox (A16) (LRR K, L, R)
Implanded (M) Implant (M) <td>Hydrogen Sulfide (A4)</td> <td> I nin Dark Surra</td> <td>Ce (59) (L lineral (F1</td> <td>) (IRR K</td> <td>LRA 149B)</td> <td>5 cm Mucky Peat</td> <td>or Peat (53) (LRR N, L, R)</td>	Hydrogen Sulfide (A4)	I nin Dark Surra	Ce (59) (L lineral (F1) (IRR K	LRA 149B)	5 cm Mucky Peat	or Peat (53) (LRR N, L, R)
Learner Loss Carlos Carlos (Carlos (Carlo	Stratified Lavers (A5)	Loamy Gleved M	Matrix (F2)		, ⊑)	Polyvalue Below	Surface (S8) (I RR K. I)
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) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) No No	Depleted Below Dark Surface (A11)	Depleted Matrix	(F3)			Thin Dark Surface	e (S9) (LRR K. L)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 143B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes vol Remarks: A dark surface layer with redox concentrations was observed.	Thick Dark Surface (A12)	 Redox Dark Sur 	face (F6)			Iron-Manganese I	Masses (F12) (LRR K, L, R)
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes volume Remarks: A dark surface layer with redox concentrations was observed.	Sandy Mucky Mineral (S1)	Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)				Piedmont Floodpl	ain Soils (F19) (MLRA 149B)
Sandy Redox (S5) Red Parent Material (F21) 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): Depth (inches): No Remarks: A dark surface layer with redox concentrations was observed.	Sandy Gleyed Matrix (S4)	Sandy Gleved Matrix (S4) Redox Depressions (F8)				Mesic Spodic (TA	6) (MLRA 144A, 145, 149B)
Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) "	Sandy Redox (S5)					Red Parent Mater	rial (F21)
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):	Stripped Matrix (S6)					Very Shallow Dar	k Surface (TF12)
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed):	Dark Surface (S7) (LRR R, MLRA 149B)					Other (Explain in	Remarks)
Restrictive Layer (if observed): Type: Depth (inches): Remarks: A dark surface layer with redox concentrations was observed.	3						
Type:	Indicators of hydrophytic vegetation and w	etland hydrology mus	t be prese	nt, unless	sdisturbed	or problematic.	
Type:	Restrictive Layer (if observed):						
Depth (inches):	Туре:						X / N
Remarks: A dark surface layer with redox concentrations was observed.	Depth (inches):					Hydric Soil Present?	Yes <u>/</u> No
A dark surface layer with redox concentrations was observed.	Remarks:						
	A dark surface layer with red	ox concentratio	ons wa	s obse	erved.		



wasd1024e_w_S



wasd1024e_w_W

Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wad1024f1.w Investigator(s): AGG/OTG Section, Township, Range: Sec 15 T045N R003W Landform (hillslope, torrace, etc.): Depression Local relif (concave, convex, none): ConCave Subregion (LRR or MLRA): Nothcontral Forests Lat: 46.377854 Long: -90.735791 Datum: WGS84 Solid Map Unit Name: Cublake-Crosswell-Ashtwabay complex. 0 to 6 percent slopes. NWI classification: Are dimatic / hydrologic conditions on the site typical for this time of year? Yes No (if needed. explain any answers in Remarks.) Are Vegetation Soli or Hydrology naturally problematic? (if needed. explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. It the Sampled Area year No	Project/Site: Line 5 Relocation Project	//County: Ashland Sampling Date: 2020-06-04					
Investigator(s): AGC/OTC Section, Township, Range: Sec 15 T045N R003W Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Stope (%): D-2% Subregion (LRR or MLRA), Northcentral Forests Lat: 46.377854 Long: -90.735791 Datum: WGS84 Soil Map Unit Name: Cublake-Croswell-Ashwabay complex, 0 to 6 percent slopes NWI classification: Are vegetation Action (Interpret Not Concave) No (Interpret Not Concave) No Action (Interpret Not Concave) No (Interpret Not Concave) No Action (Interpret Notconcave) No Ac	Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasd1024f1_w					
Indergencip indicators: Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%. Subregion (LRR or MLRA): Northcentral Forestis Lat: 46.377854 Long: -90.735791 Datum: WGS84 Soil Map Unit Name: Cublake-Croswell-Ashwabay complex, 0 to 6 percent slopes NWI classification: Are dimatic / hydrologi conditions on the site typical for this time of year? Yes _ No (If no, explain in Remarks.) Are Vegetation	Investigator(s): AGG/OTG	ction Township Range: sec 15 T045N R003W					
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.377854	Landform (billslope terrace etc.): Depression	relief (concave, convex, none): Concave, Slope (%): 0-2%					
eauling (LKK 01 MLRA).	Subrogion (LBB or MLBA). Northcentral Forests Let: 46 377854	Long: -00.735701 Detum: WGS84					
Soli Map Unit Name: CUDIARCE-LIOSWEIT-XSTIWADDAY CONTIPIEX, DI O'O D'PETCETTI SICISES NWY dassincation: Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Hydro Soil Present? Yes No Is the Sampled Area within a Wetland? Yes No Hydro Soil Present? Yes No It yes, optional Wetland Site ID: No Remarks: (Splain alternative procedures here or in a separate report.) The area is an aspen-dominated component of a larger wetland complex. This portion will transition to a PFO if left undisturbed. Surface Soil Cracks (B6) Surface Water (At1) Water-Stained Leaves (B9) Drainage Patterns (B10) High Water Table (A2) Aquatic Fauna (B13) Mos Strim Lines (B16) Surface Water (At1) Water-Stained Leaves (B9) Drainage Patterns (B10) High Water Table (A2) Aquatic Fauna (B13) Cracks (B6) Surface Soil Cracks (B1) Hydrogen sulfide Odor (C1) Cracks (B6) Dry-Season Water Table (C2) Satu	Sublegion (LRR of MLRA) Lat. 40.577654	Long. <u>-90.753751</u> Datum. <u>VVOS04</u>					
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology naturally problematic? Are "Normal Circumstances" present? Yes No SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Hydrology Present? Yes No Wetland Hydrology Present? Yes No I's the Sampled Area "within a Wetland? Yes No Hydrophytic Vegetation Present? Yes No I's espendominated component of a larger wetland complex. This portion will transition to a PFO if left undisturbed. 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) Yes High Water Table (A2) Aquatic Fauna (B13) Aquatic Fauna (B13) Moss Tim Lines (B16) Saturation (A3) Mard Deposits (B15) Diff Deposits (B3) Presence of Reduced Inin (C1) Crayfish Burrows (C2) Saturation Visible on Aerial Imagery (C9) Diff Deposits (B3) Presence of Reduced Inin (C1) Algal Mat or Crust (B4) Recent Iron Reduced Inin (C1) Algal Mat or Crust (B4) Presence of Reduced Inin (C1) Algal Mat or Crust (B4) Thin Mack S	Soil Map Unit Name: CUDIAKE-Croswell-Ashwabay complex	., U IU 6 percent Slopes NWI classification:					
Are Vegetation	Are climatic / hydrologic conditions on the site typical for this time of year?	Yes <u> </u>					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Is the Sampled Area Wetland Hydrology Present? Yes No	Are Vegetation, Soil, or Hydrology significantly dis	turbed? Are "Normal Circumstances" present? Yes <u>v</u> No					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No	Are Vegetation, Soil, or Hydrology naturally proble	matic? (If needed, explain any answers in Remarks.)					
Hydrophytic Vegetation Present? Yes V No Is the Sampled Area within a Wetland? Yes No If yes, optional Wetland? Yes Vo If yes, optional Wetland? Yes Yes Vo If yes, optional Wetland? Yes	SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						
Wetland Hydrology Present? Tes	Hydrophytic Vegetation Present? Yes _ No Hydric Soil Present? Yes _ No Wotland Hydrology Present? Yes _ No	Is the Sampled Area within a Wetland? Yes <u>✓</u> No					
Remarks: (Explain alternative procedures here or in a separate report.) The area is an aspen-dominated component of a larger wetland complex. This portion will transition to a PFO if left undisturbed. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Wetland Hydrology Present? Yes <u>v</u> 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)							
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply)	HYDROLOGY						
Primary Indicators (minimum of one is required; check all that apply)	Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
	Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)					
✓ High Water Table (A2) — Addutic 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) — Drift Deposits (B2) — Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) — Adgal Mat or Crust (B4) — 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) ✓ Depth (inches): — Microtopographic Relief (D4) — Water Table Present? Yes — No — Depth (inches): Water Table Present? <td colspan="4"> Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10)</td>	Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10)						
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) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) V Depth (inches): FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): 10 Saturation Present? Yes No Depth (inches): 9 Wetland Hydrology Present? Yes No	High Water Table (A2) Aqualle Fauna (B) Aqualle Fauna (B) Mail Deposite (B1)	5) Moss Trim Lines (B10)					
	Water Marks (B1) Hvdrogen Sulfide	Ddor (C1) Cravfish Burrows (C8)					
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? YesNo Depth (inches): 10 Water Table Present? YesNo Depth (inches): 9 Saturation Present? YesNo Depth (inches): 9 (includes capillary fringe) Wetland Hydrology Present? Yes No	Sediment Deposits (B2) Oxidized Rhizosph	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)					
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5) Field Observations: Depth (inches): Water Table Present? Yes No Depth (inches): 10 Saturation Present? Yes No Depth (inches): 9 Wetland Hydrology Present? Yes No	Drift Deposits (B3) Presence of Redu	ced Iron (C4) Stunted or Stressed Plants (D1)					
Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5) Field Observations: Depth (inches): Surface Water Present? Yes Depth (inches): Water Table Present? Yes Depth (inches): 10 Saturation Present? Yes No Depth (inches): 9 Wetland Hydrology Present? Yes No No	Algal Mat or Crust (B4) Recent Iron Reduc	tion in Tilled Soils (C6) Geomorphic Position (D2)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): 10 Saturation Present? Yes No Depth (inches): 9 Wetland Hydrology Present? Yes No	Iron Deposits (B5) Thin Muck Surface	(C7) Shallow Aquitard (D3)					
	Inundation Visible on Aerial Imagery (B7) Other (Explain in F	(D4)					
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): 10 Saturation Present? Yes No Depth (inches): 9 (includes capillary fringe) Wetland Hydrology Present? Yes No	Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)					
Surface water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): 10 Saturation Present? Yes No Depth (inches): 9 Wetland Hydrology Present? Yes No (includes capillary fringe) Wetland Hydrology Present?	Field Observations:						
Water rable Present? Pes_v No Depth (inches): _10 Saturation Present? Yes _v No Depth (inches): _9 (includes capillary fringe) Wetland Hydrology Present? Yes _v No	Water Table Present? Yes / No Popth (inches):	0					
	Saturation Present? Yes <u>v</u> No <u>Depth (inches):</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _ ✓ No					
	Remarks:						
Remarks:	The wetland hydrology regime is seasonally satu	rated.					
Remarks: The wetland hydrology regime is seasonally saturated.							
Remarks: The wetland hydrology regime is seasonally saturated.							
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Remarks: The wetland hydrology regime is seasonally saturated.							
Remarks: The wetland hydrology regime is seasonally saturated.							

Sampling Point: wasd1024f1_w

Tree Stratum (Plot cize: 30)	Absolute % Cover	Dominant	Indicator	Dominance Test worksheet:
1 Populus tremuloides	<u>10</u>	<u> </u>		Number of Dominant Species
				That Are OBL, FACW, or FAC:3 (A)
2	_	·		Total Number of Dominant
3				Species Across All Strata. <u>5</u> (B)
4		·		Percent of Dominant Species
5		·		
6				Prevalence Index worksheet:
7		·		Total % Cover of:Multiply by:
	10	= Total Co	ver	OBL species <u>10</u> x 1 = <u>10</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species 40 x 2 = 80
1. <u>Populus tremuloides</u>	75	<u> </u>	FAC	FAC species 135 x 3 = 405
2. <u>Fraxinus pennsylvanica</u>	5	N	FACW	$\begin{array}{c} FACU \text{ species} \\ \hline \\ UPL \text{ species} \\ \hline \\ \end{array} \\ 0 \\ x 5 = 0 \\ \hline \\ 0 \\ x 5 = 0 \\ \hline \\ \end{array}$
3. <u>Alnus incana</u>	5	N	FACW	Column Totals: 185 (A) 495 (B)
4. <u>Fraxinus nigra</u>	5	N	FACW	
5				Prevalence Index = $B/A = 2.675675675675675676$
6	_			Hydrophytic Vegetation Indicators:
7	_			1 - Rapid Test for Hydrophytic Vegetation
	90	= Total Co	ver	_∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹
1 Osmunda clavtoniana	50	Y	FAC	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2 Equisetum sylvaticum	10	<u> </u>	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Onoclea sensibilis	10	 N	FACW	
A Carex crinita	<u> </u>	 		¹ Indicators of hydric soil and wetland hydrology must
	<u> </u>	N		be present, unless disturbed or problematic.
5. <u>Juncus enusus</u>	<u> </u>			Definitions of Vegetation Strata:
6. <u>Flaxinus nigra</u>				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Fraxinus pennsylvanica</u>		<u>IN</u>		at breast height (DBH), regardless of height.
8. <u>Rubus pubescens</u> 9.		N	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
	85	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1	_			
2				
3				Hydrophytic
4.				Vegetation
	0	= Total Co	ver	Present? Yes V NO
Remarks: (Include photo numbers here or on a separate	sheet.)			1
The feature is dominated by young qua	kina as	nen Iti	s assum	ed that in time the area will transition

I he teature is dominated by young quaking aspen. It is assumed that in time the area will transition into a PFO if left undisturbed.

Profile Desc	cription: (I	Describe t	o the dep	th needed	to docun	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth		Matrix			Redo	x Features	3				
(inches)	<u>Color (</u>	moist)	%	<u>Color (r</u>	noist)		Type'	Loc ²	Texture	Remarks	
0-6	<u>10YR</u>	3/2	80	<u>5YR</u>	4/6		_C_	M	<u> </u>		
0-6				<u>10YR</u>	5/1	5	D	Μ	SC		
6-20	5YR	4/4	90	5YR	4/6	10	С	М	SIL		
	<u> </u>										
						·					
			·			·					
						·					
						·					
¹ Type: C=C	oncentratio	n, D=Deple	etion, RM	Reduced N	/atrix, MS	6=Masked	Sand Gra	ains.	² Location	: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:			Dohace		v Curfooo		Б	Indicators	tor Problematic Hydric Solls":	
Histosol Histic Fi	r(A⊺) pipedon (A2	2)		Polyva	RA 149B)	v Suriace	(58) (LRF	К,	2 cm N Coast	Prairie Redox (A16) (LRR K, L, MLRA 149B)	
Black H	istic (A3)	-/		Thin D	ark Surfa		.RR R, ML	.RA 149B)	5 cm N	Aucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (/	44)		Loamy	/ Mucky N	/lineral (F1) (LRR K,	L)	Dark S	Surface (S7) (LRR K, L)	
Stratifie	d Layers (A	5) sk. Osofa a s	()	Loamy	Gleyed I	Matrix (F2)		Polyvalue Below Surface (S8) (LRR K, L)		
Deplete Thick D:	d Below Da ark Surface	rk Surface	(A11)	Deplet	Dark Su	(F3) face (F6)			Inin D	агк Sufface (S9) (LRR K, L) anganese Masses (E12) (LRR K I R)	
Sandy N	Aucky Mine	ral (S1)		Deplet	ed Dark Su	Surface (F	7)		Piedm	ont Floodplain Soils (F19) (MLRA 149B)	
Sandy C	Gleyed Matr	ix (S4)		Redox	Depress	ions (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	Inace (S7) (LRR R, M	LRA 1491	3)						(Explain in Remarks)	
³ Indicators o	f hydrophyt	ic vegetati	on and we	etland hydro	logy mus	t be prese	ent, unless	disturbed	or problematio	2.	
Restrictive	Layer (if ob	oserved):									
Туре:											
Depth (in	ches):								Hydric Soil	Present? Yes <u><</u> No	
Remarks:											
A dark s	urface la	ayer wi	th redo	ox conce	entratio	ons wa	s obse	rved.			



wasd1024f1_w_N



wasd1024f1_w_W

Project/Site: Line 5 Relocation Project City	//County: Ashland Sampling Date: 2020-06-05
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasd1024f2_w
Investigator(s): AGG/OTG See	ction, Township, Range: sec 15 T045N R003W
Landform (hillslope, terrace, etc.); Talf	relief (concave, convex, none): None Slope (%): 0-2%
Subregion (LBR or MLBA). Northcentral Forests Lat: 46 377255	Long: -90 734368 Datum: WGS84
Sublegion (ERR of MERA) Lat. 40.577255	to 1 percent clopper Data
Soli Map Unit Name: LupiOII, Califio, and Tawas Solis, U	IO I PEICEIII SIOPES INVI classification: PFO2/353Dg
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 dist	urbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally proble	matic? (If 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 v No	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 report.)	
I ne area is a coniferous bog that is part of a large	er wetland complex. The area is dominated by
black spruce and has continuous cover of Sphag	num moss.
	Secondary Indicators (minimum of two required)
wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Lea	Ves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B1	3) Moss Trim Lines (B16)
Saturation (A3) Mari Deposits (B15) Dry-Season Water Lable (C2)
Water Marks (BT) Hydrogen Suilide (Door (CT) Craylish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosph	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drill Deposits (B3) Presence of Reduct	tion in Tilled Soils (C6)
Algai Mai of Crust (B4) Recent Iron Reduct	(C7) Chelleu: Asuiterd (D2)
Iron Deposits (B5) Inin Muck Surface	(C7) Snallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain In R	Entarks) Microtopographic Relief (D4)
Sparsely vegetated Concave Surface (B8)	
Surface Water Propert? Voc. 14 No. Donth (inches): 2	
Water Table Present? Yes / No Depth (inches): 2	·
Continential Present? Yes <u>v</u> No Depth (inches). <u>U</u>	
(includes capillary fringe)	Wetland Hydrology Present? Yes <u>v</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	revious inspections), if available:
Remarks:	rated
The welland hydrology regime is seasonally salu	

Sampling Point: wasd1024f2_w

	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>Picea mariana</u>		<u> </u>	FACW	That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3			·	Species Across All Strata:4(B)
4				Percent of Dominant Species
5			·	That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	30	= Total Co	ver	OBL species <u>62</u> x 1 = <u>62</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>31</u> x 2 = <u>62</u>
1 Chamaedaphne calvculata	10	Y	OBI	FAC species x 3 =
2		- ·		FACU species x 4 =0
2		-	·	UPL species x 5 =
3			·	Column Totals: <u>93</u> (A) <u>124</u> (B)
4			·	Prevalence Index = B/A = 1.33333333333333333333333333333333333
5			·	
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	10	= Total Co	ver	\sim 2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)				\sim 3 - Prevalence index is ≤ 3.0
1. <u>Maianthemum trifolium</u>	25	Y	OBL	data in Remarks or on a separate sheet)
2. Carex trisperma	10	Y	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Rhododendron groenlandicum	5	N	OBL	
4 Carex oligosperma	 5	N	OBL	¹ Indicators of hydric soil and wetland hydrology must
5 Friophorum angustifolium	 5	N		
S. <u>Enophoram angustionam</u>	<u> </u>			Definitions of Vegetation Strata:
				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
		IN	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) tail.
10			·	Herb – All herbaceous (non-woody) plants, regardless
11			·	of size, and woody plants less than 3.28 it tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	53	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1		_		
2.				
3				Hydrophytic
A				Vegetation
		- Total Ca		Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate			vei	
The area is a coniferous bog dominate	d by bla	ck spru	ce. Thei	e is a 100% cover of Sphagnum
moss.	-	•		

Depth	Matrix		Redo	ox Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
	· · · · · · · · · · · · · · · · · · ·	<u> </u>			·		·	
					·		·	
					·		·	
	· . <u> </u>				·			
							. <u> </u>	
	<u></u>							
¹ Type: C=C	Concentration D=Den	etion RM=F	Reduced Matrix M	S=Masker	d Sand Gr	ains	² Location:	PL=Pore Lining M=Matrix
Hvdric Soil	Indicators:					anis.	Indicators	for Problematic Hydric Soils ³ :
 Histosc 	l (A1)		Polyvalue Belo	w Surface	(S8) (I RI	RR	2 cm M	uck (A10) (I RR K I MI RA 149B)
Histic F	pipedon (A2)	-	MLRA 149B		(00) (ER	ις rς	Coast F	Prairie Redox (A16) (LRR K. L. R)
Black H	listic (A3)		Thin Dark Surf	, ace (S9) (I	LRR R. M	LRA 149B) 5 cm M	ucky Peat or Peat (S3) (LRR K. L. R)
Hydrog	en Sulfide (A4)	_	Loamy Mucky	Mineral (F	1) (LRR K	(, L)	/ Dark Sເ	urface (S7) (LRR K, L)
Stratifie	ed Layers (A5)	_	Loamy Gleyed	Matrix (F2	2)	. ,	Polyval	ue Below Surface (S8) (LRR K, L)
Deplete	ed Below Dark Surface	e (A11)	Depleted Matri	x (F3)			Thin Da	ark Surface (S9) (LRR K, L)
Thick D	ark Surface (A12)	_	Redox Dark Su	urface (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Sandy	Mucky Mineral (S1)	_	Depleted Dark	Surface (F	-7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy	Gleyed Matrix (S4)	_	Redox Depress	sions (F8)			Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy	Redox (S5)						Red Pa	rent Material (F21)
Strippe	d Matrix (S6)						Very Sh	nallow Dark Surface (TF12)
Dark S	urface (S7) (LRR R, N	ILRA 149B)					Other (I	Explain in Remarks)
3								
Indicators	of hydrophytic vegetat	ion and wetl	and hydrology mu	st be pres	ent, unles	s disturbed	or problematic.	
Restrictive	Layer (if observed):							
Type:								
Depth (ir	nches):						Hydric Soil I	Present? Yes <u>ィ</u> No
Remarks:								
Soils are	e thick. saturate	ed peat	deeper than	the ler	nath of	the aud	aer. Color v	was not recorded.
	, ,	- I			3		y	



wasd1024f2_w_N

Project/Site: Line 5 Relocation Project	City/County	Ashland	Sampling Date: <u>2020-06-05</u>		
Applicant/Owner: Enbridge		State:	Wisconsin Sampling Point: wasd1024s_w		
Investigator(s): AGG/OTG	Section, To	wnship, Range: <u>Sec 15</u>	T045N R003W		
Landform (hillslope, terrace, etc.): <u>Talf</u>	Local relief (co	ncave, convex, none): <u>NO</u>	ne Slope (%): 0-2%		
Subregion (LRR or MLRA): Morthcentral Forests Lat: 4	6.377004	Long: <u>-90.7332</u>	35 Datum: WGS84		
Soil Map Unit Name: Lupton, Cathro, and Taw	<u>as soils, 0 to 1 p</u>	ercent slopes NW	l classification: <u>PFO2/SS3Bg</u>		
Are climatic / hydrologic conditions on the site typical for the	is time of year? Yes	✓ No (If no, ex	plain in Remarks.)		
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circums	tances" present? Yes 🖌 No		
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain a	ny answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map	showing samplin	g point locations, tra	nsects, important features, etc.		
Hydrophytic Vegetation Present? Yes Ves No					
HYDROLOGY					
Wetland Hydrology Indicators:		Second	ary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all	that apply)	Sur	face Soil Cracks (B6)		
Surface Water (A1) Wa	ater-Stained Leaves (B9)	Dra	inage Patterns (B10)		
High Water Table (A2)	uatic Fauna (B13)	Mos	ss Trim Lines (B16)		
Saturation (A3)	rl Deposits (B15)	Dry	-Season Water Table (C2)		

- Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3) ____ Saturation Visible on Aerial Imagery (C9)
- Presence of Reduced Iron (C4)
- Water Marks (B1)
 Sediment Deposits (B2)
 Drift Deposits (B3)
 Algal Mat or Crust (B4)
 Iron Deposits (B5)
 Inundation Visited ____ Recent Iron Reduction in Tilled Soils (C6) ____ Thin Muck Surface (C7)
 - Other (Evalein in Dev

Inundation Visible on Ae	erial Imagery (B7) Other (Explain in Remarks) ncave Surface (B8)	Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present?	Yes <u><</u> No <u>Depth (inches)</u> : <u>2</u>	
Water Table Present?	Yes <u><</u> No <u>Depth (inches)</u> : <u>0</u>	
Saturation Present? (includes capillary fringe)	Yes <u>v</u> No <u>Depth (inches)</u> : <u>0</u>	Wetland Hydrology Present? Yes <u>v</u>

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

Remarks:

The wetland hydrology regime is seasonally saturated.

Crayfish Burrows (C8)

____ Geomorphic Position (D2)

____ Shallow Aquitard (D3)

____ Stunted or Stressed Plants (D1)

No

Sampling Point: wasd1024s_w

Trac Stratum (Plot size: 20)	Absolute	Dominar	t Indicator	Dominance Test worksheet:
1	% Cover	<u>Species</u>		Number of Dominant Species $\mathbf{P}_{\mathbf{A}}$
1		·		That Are OBL, FACW, or FAC: 2 (A)
2		·		Total Number of Dominant
3		·		
4				Percent of Dominant Species That Are OBL_FACW_or_FAC ⁻ 100 (A/B)
5				
6		·		Prevalence Index worksheet:
7		·		Total % Cover of:Multiply by:
	0	= Total Co	over	OBL species <u>80</u> x 1 = <u>80</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =
1. <u>Chamaedaphne calyculata</u>	75	<u> </u>	OBL	FAC species $()$ $x^3 = ()$
2. <u>Ilex mucronata</u>	5	N		FACU species $0 \times 4 = 0$
3				$\begin{array}{c} \text{OPL species} \underline{0} x_{5} = \underline{0} \\ \text{Column Totals:} 80 (A) 80 (B) \end{array}$
4	<u> </u>			
5.				Prevalence Index = B/A = <u>1.0</u>
6.	_			Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
·	80	- Total Co		∠ 2 - Dominance Test is >50%
			Jvei	3 - Prevalence Index is ≤3.0 ¹
<u>Herb Stratum</u> (Piot size: <u>5</u>)	Б	V		4 - Morphological Adaptations ¹ (Provide supporting
				Problematic Hydrophytic Vegetation ¹ (Explain)
3		. <u> </u>		
4				¹ Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed of problematic.
6				Definitions of Vegetation Strata:
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7		·		at breast neight (DBH), regardless of neight.
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
11		·		
12		·		Woody vines – All woody vines greater than 3.28 ft in height.
	5	= Total Co	over	5
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2		·		
3				Hydrophytic
4	<u> </u>			Vegetation Present? Ves v No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)			
I he feature is an open bog dominated	by leath	erleaf.	I here is	5 100% Sphagnum moss cover.

	Redo:	<pre>K Features</pre>		
(inches) Color (moist)	% Color (moist)	<u> </u>	Loc ² Texture	Remarks
			·	
¹ Type: C=Concentration, D=Depleti	ion, RM=Reduced Matrix, MS	=Masked Sand Grain	s. ² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:			Indicators f	or Problematic Hydric Soils ³ :
🖌 Histosol (A1)	Polyvalue Belov	v Surface (S8) (LRR F	2 , 2 cm Mu	uck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	MLRA 149B)		Coast P	rairie Redox (A16) (LRR K, L, R)
Black Histic (A3)	Thin Dark Surfa	ce (S9) (LRR R, MLR	A 149B) 5 cm Mu	ucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)	Loamy Mucky N	lineral (F1) (LRR K, L) Dark Su	rface (S7) (LRR K, L)
Stratified Layers (A5)	Loamy Gleyed N	Matrix (F2)	Polyvalu	ie Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (/	A11) Depleted Matrix	(F3)	Thin Da	rk Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	Redox Dark Sur	face (F6)	Iron-Ma	nganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1)	Depleted Dark a		Pieamoi Magia S	nt Floodplain Solis (F19) (MLRA 1496
Sandy Redox (S5)	Redux Depress	0115 (FO)	Iviesic 3 Red Par	pould (TAO) (MILKA 144A, 143, 143D ent Material (E21)
Stripped Matrix (S6)			Verv Sh	allow Dark Surface (TE12)
Dark Surface (S7) (I RR R MI	RA 149B)		Other (F	Explain in Remarks)
	n and wetland hydrology mus	t be present, unless d	sturbed or problematic.	
Indicators of hydrophytic vegetation				
Restrictive Layer (if observed):				
Indicators of hydrophytic vegetation Restrictive Layer (if observed): Type:				
Producators of hydrophytic vegetation Restrictive Layer (if observed): Type: Depth (inches):			Hydric Soil F	Present? Yes ✔ No
Indicators of hydrophytic vegetation Restrictive Layer (if observed): Type: Depth (inches):			Hydric Soil F	Present? Yes <u>v</u> No
Indicators of hydrophytic vegetation Restrictive Layer (if observed): Type: Depth (inches): Remarks: Doot outconding poot the		Soile wore no	Hydric Soil F	Present? Yes <u>~</u> No
Indicators of hydrophytic vegetation Restrictive Layer (if observed): Type: Depth (inches): Remarks: Peat extending past the	length of the auger	. Soils were no	Hydric Soil F	Present? Yes <u>~</u> No early meet the Histosol
Indicators of hydrophytic vegetation Restrictive Layer (if observed): Type: Depth (inches): Remarks: Peat extending past the ndicator.	length of the auger	. Soils were no	Hydric Soil F t colored, but cle	Present? Yes <u>~</u> No early meet the Histosol
Indicators of hydrophytic vegetation Restrictive Layer (if observed): Type: Depth (inches): Remarks: Peat extending past the ndicator.	length of the auger	. Soils were no	Hydric Soil F	Present? Yes <u>~</u> No early meet the Histosol
Indicators of hydrophytic vegetation Restrictive Layer (if observed): Type: Depth (inches): Remarks: Peat extending past the ndicator.	length of the auger	. Soils were no	Hydric Soil F	Present? Yes <u>~</u> No early meet the Histosol
Trype: Type: Depth (inches): Remarks: Peat extending past the ndicator.	length of the auger	. Soils were no	Hydric Soil F	Present? Yes <u>~</u> No early meet the Histosol
Trype: Type: Depth (inches): Remarks: Peat extending past the ndicator.	length of the auger	. Soils were no	Hydric Soil F	Present? Yes <u>~</u> No early meet the Histosol
Type: Depth (inches): Remarks: Peat extending past the ndicator.	length of the auger	. Soils were no	Hydric Soil F	Present? Yes <u>~</u> No early meet the Histosol
Indicators of hydrophytic vegetatior Restrictive Layer (if observed): Type: Depth (inches): Remarks: Peat extending past the ndicator.	length of the auger	. Soils were no	Hydric Soil F	Present? Yes <u>~</u> No early meet the Histosol
Indicators of hydrophytic vegetation Restrictive Layer (if observed): Type: Depth (inches): Remarks: Peat extending past the ndicator.	length of the auger	. Soils were no	Hydric Soil F	Present? Yes <u>~</u> No <u></u> early meet the Histosol
Indicators of hydrophytic vegetation Restrictive Layer (if observed): Type: Depth (inches): Remarks: Peat extending past the ndicator.	length of the auger	. Soils were no	Hydric Soil F	Present? Yes <u>~</u> No <u></u> early meet the Histosol



wasd1024s_w_E



wasd1024s_w_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):		
wasd1024	2020-06-05		
Location:	Ecological Landsca	ape:	
PLSS: sec 15 T045N R003W	North Central Forest		
Lat: <u>46.377255</u> Long: <u>-90.734368</u>	Watershed:		
Country Achland Town (Oth Wills no. Achland town	LSTZ, Marengo River		
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u> T			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	T3/E1Kv, T8K, S9K		
Lupton, Cathro, and Tawas soils, 0 to 1 percent slopes.	Wetland Type(s):		
Cublake-Croswell-Ashwabay complex, 0 to 6 percent slopes.	PFO/PEM - Coniferous bog/open bog/hardwood		
Field Verified:	swamp/fresh wet meadow complex		
complex; in the hardwood swamp component soils were a sandy clay over silty	Wetland Size:	Wetland Area Impacted	
clay loam. In the bog components soils were a thick, saturated peat histosol	5.3535	5.3535	
were a reduced sandy clay loam over sandy loam.	Vegetation:		
	Plant Community D	Description(s):	
Hydrology:	The plant community co	nsists of a hardwood swamp dominated by	
meadow and hardwood swamp components are located near a road, which has	quaking aspen, green ash, and black ash, a fresh wet meadow		
likely influenced hydrology in this part of the wetland. The majority of the feature,	dominated by black spru	ice, and an open bog dominated by	
water table (though this water table may draw down later in the growing season).	leatherleaf and bog wire	grass sedge.	

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	Y	Y	Used for educational or scientific purposes
3	Y	Y	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
Б		Ň	In or adjacent to RED FLAG areas
5	N	Y	List: Trout Streams: Silver Creek
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	Ν	N	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	Ň	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
1	Y	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>> 4</u> 5 days
10	Ν	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	Ν	N	Seasonally exposed mudflats present
12	Ν	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	Ν	N	Wetland is connected or contiguous with perennial stream or lake
2	Ν	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	Ν	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	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	NI	NI	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 <u>or</u> is adjacent to a stream
2	Y	Y	Water flow through wetland is NOT channelized
3	Y	Y	Dense, persistent vegetation
4	N	N	Evidence of flashy hydrology
5	N	Y	Point or non-point source inflow
6	N	N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <a>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	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	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-4: The feature is an intact wetland complex that includes a bog component. HU-5: The wetland is in moderate proximity of this trout stream area. The wetland does not share any obvious hydrologic connection.

WH-6: The feature includes hardwood swamp, fresh wet meadow, coniferous bog, and open bog components.

WQ-1: The feature is a large basin feature that can hold a large capacity of stormwater and allows it to infiltrate.

GW-3: Bog conditions are likely perpetuated by a high water table, with stormwater inputs being a relatively minor water input source.

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
Y	Y	Birds
Y	Y	Insects

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)
Chamaedaphne calyculata*			PFO/PEM	Interrupted
Picea mariana*			PFO	Rare
Calamagrostis canadensis			PEM	Rare
Carex oligosperma			PFO/PEM	Rare
Maianthemum trifolium			PFO/PEM	Rare
Populus tremuloides			PFO	Rare
Eriophorum angustifolium			PFO/PEM	Barren
Fraxinus nigra			PFO	Barren
llex mucronata			PFO/PEM	Barren
Rhododendron groenlandicum			PFO/PEM	Barren
Scirpus cyperinus			PEM	Barren
Vaccinium oxycoccos			PFO/PEM	Barren
Acer rubrum			PFO	Barren
Andromeda polifolia			PFO/PEM	Barren
Athyrium filix-femina			PFO/PEM	Barren
Carex magellanica			PFO/PEM	Barren
Carex trisperma			PFO/PEM	Barren
Cypripedium acaule			PFO	Barren
Fraxinus pennsylvanica			PFO	Barren
Kalmia polifolia			PFO/PEM	Barren
Larix laricina			PFO	Barren
Onoclea sensibilis			PFO/PEM	Barren
Osmunda claytoniana			PFO/PEM	Barren
Rubus pubescens			PFO/PEM	Barren
Sarracenia purpurea			PFO/PEM	Barren
Scirpus microcarpus			PEM	Barren

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

The feature has a large amount of diversity, both in habitat structure and species composition. The bog component appears to be essentially undisturbed, and no invasive species were observed in the feature.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
	Х		L	С	Drainage – tiles, ditches
					Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
	Х		L	С	Polluted runoff
					Pond construction
					Agriculture – row crops
	Х		L	С	Agriculture – hay
					Agriculture – pasture
	Х		L	С	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	х		L	С	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
					Removal of tree or shrub strata – logging, unprescribed fire
	Х		L	С	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
	Х		L	С	Cover of non-native and/or invasive species
	Х		L	С	Residential land use
	Х		L	С	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 human disturbance in the surrounding area, but it has a low impact on the wetland feature, and the feature itself 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	There is a very good diversity of species present, and the bog component is intact.
Human Use Values	Not very valuable for human use.
Wildlife Habitat	Very diverse habitat structure, and the bog component is likely an important habitat patch for boreal birds and certain insects.
Fish and Aquatic Life Habitat	Standing water may provide some habitat, although the feature cannot support more than aquatic invertebrates.
Shoreline Protection	N/A
Flood and Stormwater Storage	Large shallow basin feature with the potential to storm stormwater from the surrounding area.
Water Quality Protection	The feature holds and filters a large amount of water, and is densely vegetated with a large quantity of continuous sphagnum cover.
Groundwater Processes	The bog component likely has associated groundwater processes with a common high water table and highly organic soils.

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:	Ashland	Sampling) Date: <u>2020-06-0</u> 4			
Applicant/Owner: <u>Enbridge</u>		Stat	e: <u>Wisconsin</u> Sampli	ing Point: <u>wasd1024_</u> u1			
Investigator(s): AGG/OTG	Section, Town	ship, Range: <u>Sec 1</u> ;	<u>5 T045N R003</u>	W			
Landform (hillslope, terrace, etc.): Side Slope	Local relief (conca	ave, convex, none): <u>C</u>	onvex	Slope (%): <u>3-7%</u>			
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.3</u>	377976	Long: <u>-90.735</u>	986	Datum: <u>WGS84</u>			
Soil Map Unit Name: Cublake-Croswell-Ashwabay	complex, 0 to 6	percent slopes N	WI classification:				
Are climatic / hydrologic conditions on the site typical for this ti	ime of year? Yes <u></u>	No (If no, e	explain in Remarks.)				
Are Vegetation, Soil, or Hydrology sign	nificantly disturbed?	Are "Normal Circur	nstances" present?	Yes 🖌 No			
Are Vegetation, Soil, or Hydrology nat	urally problematic?	(If needed, explain	any answers in Rema	arks.)			
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? Yes No	✓ Is the S	Sampled Area					
Hydric Soil Present? Yes No	v within a	a Wetland?	Yes No	V			
Wetland Hydrology Present? Yes No	If yes, α	ptional Wetland Site II	D:	_			

Remarks:	(Explain	alternative	procedures	here	or in a	separate	report.)
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The upland sample point was taken upslope of the wetland feature along a roadside.

HYDROLOGY

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

Sampling Point: wasd1024_u1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 Quercus rubra	50	Y	FACU	Number of Dominant Species
2 Tilia americana	<u> </u>	N	FACU	
3			1700	Total Number of Dominant Species Across All Strata: 4 (B)
0				
5				That Are OBL, FACW, or FAC: 25 (A/B)
6				
7				Prevalence Index worksheet:
/	60	Tatal Oa		Total % Cover of:Multiply by:
Oralia (Ohmath Otastana (Dhataisan 16	0		/er	OBL species 0 $x_1 = 0$
Sapling/Shrub Stratum (Plot size: 15)				FAC species $22 \times 3 = 66$
1				FACU species 77 x 4 = 308
2				UPL species <u>30</u> x 5 = <u>150</u>
3				Column Totals: <u>131</u> (A) <u>528</u> (B)
4				Prevalence Index = B/A = -1.03
5				
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation 2 Dominance Test is >50%
	0	= Total Cov	/er	$3 - Prevalence Index is \leq 3.0^{1}$
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Bromus inermis</u>	25	<u> Y </u>	UPL	data in Remarks or on a separate sheet)
2. <u>Alopecurus pratensis</u>	10	<u>N</u>	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Poa pratensis</u>	10	Y	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must
4. Symphyotrichum lateriflorum	10	Y	FAC	be present, unless disturbed or problematic.
5. <u>Dactylis glomerata</u>	5	N	<u>FACU</u>	Definitions of Vegetation Strata:
6. Apocynum androsaemifolium	5	<u> N </u>	UPL	Tree Marchy plants 2 in (7.6 am) as more in diameter
7. <u>Ranunculus acris</u>	2	N	FAC	at breast height (DBH), regardless of height.
8. <u>Rhus typhina</u>	2	N		Sapling/shrub – Woody plants less than 3 in DBH
9. <u>Solidago gigantea</u>	2	N	FACW	and greater than or equal to 3.28 ft (1 m) tall.
10. Parthenocissus inserta	2	N	<u>FACU</u>	Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	73	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: <u>30</u>)				
1.				
2.				
3.				Hydrophytic
4.				Vegetation
	0	= Total Cov	/er	Present? Yes <u>No /</u>
Remarks: (Include photo numbers here or on a separate a	sheet.)			
The area is dominated by weedy specie	es inclu	ding sm	ooth bro	ome.

Depth	Matrix		Red	ox Feature	s			· · · · · · ,
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
						·		
						. <u> </u>		
¹ Type: C=C	Concentration, D=Depl	etion, RM=I	Reduced Matrix, N	IS=Masked	Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators	for Problematic Hydric Soils ³ :
<u> </u>	ol (A1)	_	Polyvalue Belo	ow Surface	(S8) (LRF	R R,	2 cm M	luck (A10) (LRR K, L, MLRA 149B)
Histic E	Epipedon (A2)		MLRA 149E	B)			Coast F	Prairie Redox (A16) (LRR K, L, R)
Black H	listic (A3)	_	Thin Dark Surf	ace (S9) (I	RR R, M	LRA 149B)) 5 cm M	lucky Peat or Peat (S3) (LRR K, L, R)
Hydrog	en Sulfide (A4)	_	Loamy Mucky	Mineral (F	1) (LRR K	(, L)	Dark Si	urface (S7) (LRR K, L)
Stratifie	ed Layers (A5)	-	Loamy Gleyed	Matrix (F2	2)		Polyval	ue Below Surface (S8) (LRR K, L)
Deplete	ed Below Dark Surface	e (A11)	Depleted Matri	ix (F3)			Thin Da	ark Surface (S9) (LRR K, L)
Thick D	0ark Surface (A12)	_	Redox Dark Si	urface (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Sandy	Mucky Mineral (S1)	_	Depleted Dark	Surface (F	7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy	Gleyed Matrix (S4)	-	Redox Depres	sions (F8)			Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy	Redox (S5)						Red Pa	arent Material (F21)
Strippe	d Matrix (S6)						Very Sł	hallow Dark Surface (TF12)
Dark S	urface (S7) (LRR R, M	LRA 149B))				Other (Explain in Remarks)
2								
°Indicators	of hydrophytic vegetat	on and wet	land hydrology mu	ist be prese	ent, unless	s disturbed	or problematic	-
Restrictive	Layer (if observed):							
Туре:								
Depth (ir	nches):						Hydric Soil	Present? Yes No
Pomarke:								
The soil	s wara not sam	nlad du	e to the loca	ation no	ar a ro	io2 he	le are ace	umed to be non-bydric
						au. 301	15 010 055	unied to be non-nyunc
based o	n the landscap	e positio	on and domi	nant ve	getatic	on.		



wasd1024_u1_S



wasd1024_u1_W

Project/Site: Line 5 Relocation Project	_ City/County: <u>Ashland</u>	Sampling	Date: <u>2020</u>)-06-05
Applicant/Owner: <u>Enbridge</u>		State: Wisconsin Samplin	ng Point: <u>was</u>	d1024_u2
Investigator(s): <u>AGG/OTG</u>	Section, Township, Range: <u>Se</u>	c 15 T045N R003V	V	
Landform (hillslope, terrace, etc.): <u>Side Slope</u>	Local relief (concave, convex, none	e): <u>Convex</u>	_ Slope (%):	<u>3-7%</u>
Subregion (LRR or MLRA): Morthcentral Forests Lat: 46.3767	257 Long: <u>-90</u> .	.733134	Datum: WC	<u>3S84</u>
Soil Map Unit Name: Cublake-Croswell-Ashwabay con	nplex, 0 to 6 percent slope	es NWI classification:		
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🖌 No (I	f no, explain in Remarks.)		
Are Vegetation, Soil, or Hydrology significar	ntly disturbed? Are "Normal (Circumstances" present? Y	'es 🖌 N	lo
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, ex	xplain any answers in Remar	rks.)	
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point locatio	ns, transects, importa	ant feature	s, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No <u> </u>	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No 🖌	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced The upland sample point i	ures here or in a	a separate report.) ntative of the s	surrounding area.

HYDROLOGY

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

Sampling Point: wasd1024_u2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan Species?	t Indicator Status	Dominance Test worksheet:
1. Populus grandidentata	50	Y	FACU	Number of Dominant Species That Are OBL EACW or EAC: 1 (A)
2. Populus tremuloides	25	Ý	FAC	
3.				Total Number of Dominant Species Across All Strata: 5 (B)
4			- <u> </u>	Percent of Dominant Species
5		·	. <u> </u>	That Are OBL, FACW, or FAC: <u>20</u> (A/B)
6		·		
7		·	·	Prevalence Index worksheet:
/·	75	- Tatal Ca	·	Iotal % Cover of:Multiply by:
Openie v/Ohmeth Otherteren (Distriction 15)	_75		ver	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15)				FAC species $27 \times 3 = 81$
1			·	FACU species $80 \times 4 = 320$
2		·	·	UPL species x 5 =
3			·	Column Totals: <u>107</u> (A) <u>401</u> (B)
4		·	·	Drevelence Index - $R/A = 3.7476635514018602$
5		· - <u></u>	·	
6		·	·	Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co	ver	2 - Dominance Test is >50% 3 - Prevalence Index is <3.0 ¹
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Oryzopsis asperifolia</u>	10	Y	·	data in Remarks or on a separate sheet)
2. <u>Pteridium aquilinum</u>	10	Y	<u>FACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Fragaria virginiana</u>	5	N	FACU	¹ Indicators of hydric soil and wotland hydrology must
4. Gaultheria procumbens	5	N	FACU	be present, unless disturbed or problematic.
5. <u>Mitchella repens</u>	5	Y	<u>FACU</u>	Definitions of Vegetation Strata:
6. <u>Uvularia sessilifolia</u>	5	N	FACU	
7. <u>Carex pedunculata</u>	2	N	FAC	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
	42	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1				
2			·	
3		·		I hadro a ha địa
		·	·	Vegetation
· ·		- Total Co	vor	Present? Yes No 🗸
Remarks: (Include photo numbers here or on a separate	sheet.)	- 10(a) CO	vei	
The sample point is located within a sta	and of a	spen re	generati	ion.

SOIL

Profile Desc	cription: (Describe	to the depth	n needed to document the indicator or confirm	the absence of indicators.)
Depth (inches)	<u>Matrix</u>	%	Redox Features	Texture Remarks
<u>(incres)</u>	7.5YR 3/3	100		
10_20	7 5YR 4/3	100		<u> </u>
10-20	<u>7.511 4/5</u>	100		
		·		
. <u></u>				
		·		
		·		
¹ Tvpe: C=C	oncentration. D=Dep	letion. RM=F	Reduced Matrix. MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:	,		Indicators for Problematic Hydric Soils ³ :
<u> </u>	(A1)	-	Polyvalue Below Surface (S8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic El	pipedon (A2)		MLRA 149B) Thin Dark Surface (S0) (LDD D. MLDA 149D)	Coast Prairie Redox (A16) (LRR K, L, R)
Hydroge	en Sulfide (A4)	-	Loamy Mucky Mineral (F1) (LRR K, MLRA 149B)	Dark Surface (S7) (LRR K, L)
Stratified	d Layers (A5)	-	Loamy Gleyed Matrix (F2)	Polyvalue Below Surface (S8) (LRR K, L)
Deplete	d Below Dark Surface	e (A11) _	Depleted Matrix (F3)	Thin Dark Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12) Aucky Mineral (S1)	-	Redox Dark Surface (F6)	Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Eloodalain Soils (E19) (MI RA 149 R)
Sandy G	Gleyed Matrix (S4)	-	Redox Depressions (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	fface (S7) (LRR R, N	/ILRA 149B)		Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetat	tion and wetl	and hydrology must be present, unless disturbed o	or problematic.
Restrictive	Layer (if observed):			
Туре:				
Depth (in	ches):			Hydric Soil Present? Yes No
Remarks:				
The solls	s are sandy an	ia well a	rained.	


wasd1024_u2_E



wasd1024_u2_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Pro	oject	City/County: Ashland	Samp	oling Date: <u>2020-06-05</u>			
Applicant/Owner: <u>Enbridge</u>			State: Wisconsin Sa	mpling Point: wasd1025f_w			
Investigator(s): <u>AGG/OTG</u>		Section, Township, Range: <u>Se</u>	ec 15 T045N R00)3W			
Landform (hillslope, terrace, etc.): Depres	ssion Lo	cal relief (concave, convex, non	e): <u>Concave</u>	Slope (%): <u>0-2%</u>			
Subregion (LRR or MLRA): Northcentral Fo	orests Lat: <u>46.37676</u>	4 Long: <u>-90</u>	.731717	Datum: WGS84			
Soil Map Unit Name: Udorthents, ravines and escarpments, 25 to 60 percent slopes NWI classification:							
Are climatic / hydrologic conditions on the sit	e typical for this time of ye	ear? Yes 🖌 No (lf no, explain in Remark	s.)			
Are Vegetation, Soil, or Hydr	ology significantly	disturbed? Are "Normal	Circumstances" present	? Yes 🖌 No			
Are Vegetation, Soil, or Hydr	ology naturally pro	oblematic? (If needed, e	xplain any answers in R	emarks.)			
SUMMARY OF FINDINGS – Attac	h site map showing	g sampling point locatio	ns, transects, imp	ortant features, etc.			
Hydrophytic Vegetation Present?	res _ ✔ No res _ ✔ No res _ ✔ No here or in a separate repo vamp dominated I	Is the Sampled Area within a Wetland? If yes, optional Wetland by black ash. The fea	Yes _ ✔ _ N ^{Site ID:} ture is fed by gr	o			
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indicators (n	ninimum of two required)			
Primary Indicators (minimum of one is requ	ired; check all that apply)		Surface Soil Cracks	s (B6)			
Surface Water (A1)	<u> </u> Water-Stained	Leaves (B9)	Drainage Patterns	(B10)			
_∠ High Water Table (A2)	Aquatic Fauna	(B13)	Moss Trim Lines (B	16)			
_∠ Saturation (A3)	Marl Deposits	(B15)	Dry-Season Water	Table (C2)			
Water Marks (B1)	Hydrogen Sulfi	de Odor (C1)	Crayfish Burrows (0)	(8)			
Sediment Deposits (B2)	Oxidized Rhizo	ospheres on Living Roots (C3)	Saturation Visible of Contract of Contr	n Aerial Imagery (C9)			

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 wetland hydrology regime is seasonally saturated based on the depth of saturation and water table.

Presence of Reduced Iron (C4)

____ Thin Muck Surface (C7)

 Yes
 No
 ✓
 Depth (inches):

 Yes
 ✓
 No
 Depth (inches):
 10

Yes <u>v</u> No ____ Depth (inches): <u>9</u>

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

____ Other (Explain in Remarks)

____ Recent Iron Reduction in Tilled Soils (C6)

____ Stunted or Stressed Plants (D1)

_ Geomorphic Position (D2)

Shallow Aquitard (D3)
 Microtopographic Relief (D4)

FAC-Neutral Test (D5)

Wetland Hydrology Present? Yes _

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1025f_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 Fraxinus nigra	<u>- 70 6010</u>	Y	FACW	Number of Dominant Species
2 Rotula alloghanionsis	<u>00</u> 25	 		$\begin{array}{c} \text{That Are OBL, FACW, of FAC.} \\ \underline{\mathbf{O}} \end{array} $ (A)
2. Thuis accidentalia	10	 N		Total Number of Dominant
		<u> </u>	FACW	Species Across Air Strata (B)
4				Percent of Dominant Species
5			<u> </u>	
6				Prevalence Index worksheet:
7			. <u></u>	Total % Cover of: Multiply by:
	85	= Total Cov	/er	OBL species x 1 =0
Sapling/Shrub Stratum (Plot size: 15)				FACW species71 x 2 =142
1. <u>Fraxinus nigra</u>	5	Y	FACW	FAC species 37 x 3 = 111
2. <u>Betula alleghaniensis</u>	5	Y	FAC	FACU species x 4 =
3				$\begin{array}{c} \text{UPL species} \\ \text{Column Totale:} \\ \begin{array}{c} 110 \\ 10 \\ \end{array} \\ \begin{array}{c} (A) \\ 261 \\ \end{array} \\ \begin{array}{c} 261 \\ (B) \\ \end{array} \\ \begin{array}{c} (B) \\ (B) \\ \end{array} \\ \begin{array}{c} (A) \\ (B) \\ \end{array} \\ \begin{array}{c} (A) \\ (B) \\ (B) \\ (B) \\ \end{array} \\ \begin{array}{c} (B) \\ $
4				$\begin{array}{c} \text{Column rotals.} \\ \hline \end{array} \\ (A) \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array} \\ (B) \\ \hline \end{array} \\ (B)$
5.				Prevalence Index = B/A = 2.37272727272727272
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	10	- Total Ca		∠ 2 - Dominance Test is >50%
Harb Stratum (Plat size) 5		- 10tai C0		$\underline{}$ 3 - Prevalence Index is $\leq 3.0^1$
<u>Held Stratum</u> (Plot size. <u>5</u>)	F	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Athynum angustum</u>		<u> </u>		data in Remarks of on a separate sneet)
2. <u>Doellingeria umbellata</u>		<u> </u>	FACW	
3. <u>Equisetum hyemale</u>	2	<u> N </u>	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Onoclea sensibilis</u>	2	<u> N </u>	<u>FACW</u>	be present, unless disturbed or problematic.
5. <u>Phegopteris connectilis</u>	2	<u> </u>	<u>FACU</u>	Definitions of Vegetation Strata:
6. <u>Rubus pubescens</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 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
	15	= Total Cov	/er	height.
Woody Vine Stratum (Plot size:				
1				
··			·	
2		· <u> </u>		
3			<u> </u>	Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
	<u> </u>	= Total Cov	/er	
The feature is a hardwood swamp dom	ninated b	ov black	ash.	
···· ··· ··· ··· ··· ··· ··· ··· ··· ·		,		

SOIL

Profile Desc	cription: (Describe to	o the dep	th needed	to docun	nent the i	ndicator	or confirm	the absence of	f indicator	rs.)	
Depth	Matrix			Redo	x Features	5					
(inches)	Color (moist)	%	Color (r	noist)	%	Type ¹	Loc ²	Texture		Remarks	
0-12	5YR 2.5/2	95	5YR	4/6	5	C	Μ	SL			
12-20	5YR 4/4	95	5YR	4/6	5	С	М	SCL			
							·				
	,						·				
							· ·				
					·						
					·						
					·		·				
¹ Type: C=C	oncentration D=Deple	tion RM	=Reduced I	Matrix MS	S=Masked	Sand Gra	ains	² Location:	PI =Pore I	ining M=Matri	
Hydric Soil	Indicators:		Reduced	Matrix, Me				Indicators fo	or Problem	natic Hydric S	oils ³ :
Histosol	(A1)		Polyva	alue Belov	w Surface	(S8) (LRF	RR,	2 cm Mu	ıck (A10) (I	LRR K, L, MLF	RA 149B)
Histic Ep	oipedon (A2)		ML	RA 149B)	1			Coast Pr	rairie Redo	x (A16) (LRR I	K, L, R)
Black Hi	stic (A3)		Thin D	Dark Surfa	ice (S9) (L	.RR R, ML	RA 149B)	5 cm Mu	icky Peat o	or Peat (S3) (Ll	RR K, L, R)
Hydroge	en Sulfide (A4)		Loam	y Mucky N	/lineral (F1	l) (LRR K ,	, L)	Dark Sur	rface (S7) ((LRR K, L)	
Stratified	d Layers (A5) d Rolow Dark Surface	(11)	Loam	y Gleyed I	Matrix (F2)		Polyvalu	e Below Si	urface (S8) (LF	R K, L)
Depieted	ark Surface (A12)	(ATT)	Depie	Chark Su	rface (F6)			Iron-Man	n Sullace I	(39) (LKK K, I asses (F12) (I	-) RRKIR)
Sandy N	Aucky Mineral (S1)		Deple	ted Dark St	Surface (F	7)		Piedmon	nt Floodplai	in Soils (F19) (MLRA 149B)
Sandy G	Gleyed Matrix (S4)		Redox	Corress	ions (F8)	,		Mesic Sp	, podic (TA6) (MLRA 144A	, 145, 149B)
Sandy F	Redox (S5)							Red Pare	ent Materia	al (F21)	
Stripped	l Matrix (S6)							Very Shallow Dark Surface (TF12)			.)
Dark Su	rface (S7) (LRR R, M	LRA 149	3)					Other (E	xplain in R	emarks)	
³ Indicators o	f hydrophytic vegetati	on and w	etland hydro	oloav mus	t be prese	ent unless	disturbed of	or problematic			
Restrictive	Laver (if observed):			blogy mae							
Type:	,										
Denth (in	ches):							Hvdric Soil P	resent?	Yes 🖌	No
Bemarks:	enes).										
A dark si	urface laver wi	th reda		entratio	ons wa	s obse	erved				
/ aun o		linioad		onnaux			i vou.				



wasd1025f_w_E



wasd1025f_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):		
wasd1025	2020-06-05		
Location:	Ecological Landsca	ape:	
PLSS: sec 15 T045N R003W	North Central Forest		
Lat: <u>46.376752</u> Long: <u>-90.731720</u>	Watershed:		
Country Achland Town (City) (Village, Achland town	LOTZ, Marengo River		
County: <u>Ashland</u> Town/City/village: Ashland town			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Udorthents, ravines and escarpments, 25 to 60 percent slopes	Wetland Type(s):		
	PFO - hardwood swamp		
Field Verified:			
Series not verified. Soils were a sandy loam over	Wetland Size:	Wetland Area Impacted	
sandy clay loam.	0.1566	0.1566	
	Vegetation:	·	
	Plant Community D	Description(s):	
Hydrology:	The feature is a	hardwood swamp dominated	
The wetland hydrology regime is seasonally	by black ash.	-	
saturated, based on the depth of saturation and			
water table.			

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
2	Ν	Ν	Used for educational or scientific purposes
3	Ν	Ν	Visually or physically accessible to public
4	Ν	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
Б		Ň	In or adjacent to RED FLAG areas
5	Y	Y	List: Trout Streams: Silver Creek
6	Ν	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	Y	Y	3 or more strata present (>10% cover)
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	Y	Y	100 m buffer – natural land cover <a>>50% (south) 75% (north) intact
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			Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
	Y	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	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	Y	Y	Wetland is connected or contiguous with perennial stream or lake
2	N	Ň	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aguatic species within aguatic 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	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	Ň	Dense, persistent vegetation
4	N	N	Evidence of flashy hydrology
5	Y	Y	Point or non-point source inflow
6	N	Ň	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <10% wetland
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	N	Y	Provides substantial storage of storm and floodwater based on previous section
2	Y	Ý	Basin wetland or constricted outlet
3	Ý	Ý	Water flow through wetland is NOT channelized
4	Ý	Ý	Vegetated wetland associated with a lake or stream
5	Ň	Ň	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	Y	Stormwater or surface water from agricultural land is major hydrology source
8	N	Ý	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		N	Location near a groundwater divide or a beadwater wetland
2			Wetland remains saturated for an extended time period with no additional water inputs
1			Wetland soils are organic
4			Wetland is within a wellhead protection area
5	I N	I N	wettand is within a weinteau protection area

HU-5: The wetland is associated with a perennial stream and is hydrologically connected to the Silver Creek trout stream through this waterbody.

WH-6: There are small areas of upland present within the feature. FA-1: The feature is associated with a small perennial stream that flows into Silver Creek.

ST-5: The feature appears to be fed by seepage.

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	Y	Insects
	Y	Herpetofauna

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

Observed	Potential	Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 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	Interrupted
Betula alleghaniensis			PFO	Rare
Thuja occidentalis			PFO	Rare
Equisetum hyemale			PFO	Rare
Osmunda cinnamomea			PFO	Rare
Rubus pubescens			PFO	Rare
Athyrium filix-femina			PFO	Barren
Carex crinita			PFO	Barren
Carex scabrata			PFO	Barren
Onoclea sensibilis			PFO	Barren
Doellingeria umbellata			PFO	Barren
Impatiens capensis			PFO	Barren
Phegopteris connectilis			PFO	Barren
Ribes triste			PFO	Barren

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

The feature has an average assemblage of species and no invasives are 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
	Х		L	C	Agriculture – pasture
					Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
v	v		NA	C	Removal of herbaceous stratum – mowing,
~	^		IVI	C	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 only major disturbance to the area appears to be the presence of earthworms.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The feature has an average assemblage of native species.
Human Use Values	No signs of active human use.
Wildlife Habitat	Has dispersion of habitat and multiple strata present.
Fish and Aquatic Life Habitat	The feature is associated with a perennial stream that may provide marginal habitat (or at least influences Silver Creek).
Shoreline Protection	N/A
Flood and Stormwater Storage	Has the potential to hold flood and storm waters.
Water Quality Protection	Allows water from the surrounding area to infiltrate.
Groundwater Processes	Appears to be fed by groundwater seepage.

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: Ashland	Sampling Date: <u>2020-06-05</u>
Applicant/Owner: Enbridge	State:	Wisconsin Sampling Point: wasd1025_u
Investigator(s): <u>KDF/OTG</u>	Section, Township, Range: <u>Sec 15</u>	T045N R003W
Landform (hillslope, terrace, etc.): Side Slope	Local relief (concave, convex, none): <u>Cc</u>	DIVEX Slope (%): <u>8-15%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46</u> .	.376728 Long: <u>-90.7317</u>	283 Datum: WGS84
Soil Map Unit Name: Udorthents, ravines and esca	arpments, 25 to 60 percent slopes NM	/I classification:
Are climatic / hydrologic conditions on the site typical for this	time of year? Yes <u>v</u> No (If no, ex	plain in Remarks.)
Are Vegetation, Soil, or Hydrologysi	gnificantly disturbed? Are "Normal Circums	stances" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology na	aturally problematic? (If needed, explain a	ny answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling point locations, tra	insects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area	20. No. 1/
Hydric Soil Present? Yes No		
Wetland Hydrology Present? Yes No	□ If yes, optional Wetland Site ID:	
Remarks: (Explain alternative procedures here or in a sep The upland is characterized by steeply s	arate report.) sloped ravine within mesic hardw	ood forest.

HYDROLOGY

Wetland Hydrology Indicators:	5	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>Ves</u> No <u>v</u> Depth (inches): (includes capillary fringe)	Wetland Hy	/drology Present? Yes No
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)	Wetland Hy tions), if availa	rdrology Present? Yes No∕ able:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	Wetland Hy tions), if avail	/drology Present? Yes No _∠_ able:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective) Remarks:	Wetland Hy tions), if avail	/drology 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: No indicators of wetland hydrology were observed. The up	Wetland Hy tions), if availa	rdrology Present? Yes <u>No v</u>
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective) Remarks: No indicators of wetland hydrology were observed. The uple well-drained No	Wetland Hy tions), if availa and area	rdrology Present? Yes <u>No</u>
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective) Remarks: No indicators of wetland hydrology were observed. The upl well-drained. No	Wetland Hy tions), if availa and area	rdrology Present? Yes <u>No</u>
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective) Remarks: No indicators of wetland hydrology were observed. The upl well-drained. No	Wetland Hy tions), if availa	rdrology Present? Yes <u>No</u>
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. The upl well-drained.	Wetland Hy tions), if availa and area	rdrology Present? Yes <u>No v</u>
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. The upl well-drained.	Wetland Hy tions), if availa and area	rdrology Present? Yes <u>No v</u> able: is sloped and soils are
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. The upl well-drained.	Wetland Hy tions), if availa and area	able: able: is sloped and soils are
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. The upl well-drained.	Wetland Hy tions), if availa	able: is sloped and soils are
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. The upl well-drained.	Wetland Hy tions), if availa	able: is sloped and soils are
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. The upl well-drained.	Wetland Hy tions), if availa and area	able: is sloped and soils are

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1025_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan Species?	t Indicator Status	Dominance Test worksheet:
1. Acer saccharum	50	Y	FACU	Number of Dominant Species
2 Betula alleghaniensis	15	Y	FAC	$\frac{1}{2}$
3 Abies balsamea	<u> </u>	 N	FAC	Total Number of Dominant Species Across All Strata: 6 (B)
4				
5				That Are OBL, FACW, or FAC:33 (A/B)
6				Provalance Index worksheet:
7	_			Total % Cover of: Multiply by:
	70	= Total Co	over	$\begin{array}{c} \hline \hline$
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>6</u> x 2 = <u>12</u>
1. Abies balsamea	50	Y	FAC	FAC species <u>87</u> x 3 = <u>261</u>
2. Tilia americana	25	Y	FACU	FACU species <u>113</u> x 4 = <u>452</u>
3. Fraxinus pennsylvanica	5	N	FACW	UPL species x 5 =
4 Acer rubrum	5	N	FAC	Column Totals: <u>206</u> (A) <u>725</u> (B)
5				Prevalence Index = B/A = <u>3.5194174757281553</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	85	- Total Co		2 - Dominance Test is >50%
Horb Stratum (Plot size: 5)		- 101ai CC		3 - Prevalence Index is ≤3.0 ¹
1 Lonicera canadensis	25	V	FACU	4 - Morphological Adaptations ¹ (Provide supporting
2 Mitchella renens	<u> </u>	 N	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Carex pedunculata	<u> </u>	<u> </u>		
A Condus cornuta	<u> </u>			¹ Indicators of hydric soil and wetland hydrology must
5 Trientalis horealis	2	 N	FAC.	
6. Equisetum hyemale	2	<u> </u>		Definitions of Vegetation Strata:
7. Pyrola olliptica	2	 		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
 Fyrola elliptica Equisatum scirpaidas 	2	N		at breast height (DBH), regardless of height.
 Acer rubrum 	<u> </u>	N		Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall
 Majanthemum canadense 	 1	 		
10. <u>Malanthemum canadense</u>	 1	N		of size, and woody plants less than 3.28 ft tall.
			TACW	Woody vines – All woody vines greater than 3.28 ft in
12	<u> </u>	- Total Ca		height.
Western 20			over	
<u>woody vine Stratum</u> (Plot size: <u>50</u>)				
1		·		
2		·		
3		·		Hydrophytic Vegetation
4			<u> </u>	Present? Yes No 🗸
Demostra (Include abote some base base and		= Total Co	over	
The vegetation is representative of upla	and dom	ninated	by suga	r maple with ground cover dominated

by fly-honeysuckle and beaked hazelnut at the sample plot. Partridgeberry and graminoids are abundant throughout the upland area.

Profile Desc	cription: (Describ	e to the dept	h needed to document the indicator or confirm	the absence of indica	itors.)
Depth (inches)	<u>Matrix</u>	0/2	Redox Features	Toyturo	Remarks
					Telliark3
0-8	<u>7.5YR 3/2</u>			<u> </u>	
8-20	<u>5YR 3/4</u>	<u> 100 </u>		<u> S </u>	
·					
·	-	·		·	
	-				
·					
1				21	
Type: C=C Hydric Soil	oncentration, D=De	epletion, RM=	Reduced Matrix, MS=Masked Sand Grains.	Location: PL=Poi	e Lining, M=Matrix. Iematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Below Surface (S8) (I BB B	2 cm Muck (A10	
Histic E	pipedon (A2)	-	MLRA 149B)	Coast Prairie Re	edox (A16) (LRR K, L, R)
Black Hi	istic (A3)		Thin Dark Surface (S9) (LRR R, MLRA 149B)	5 cm Mucky Pea	at or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)		Loamy Mucky Mineral (F1) (LRR K, L)	Dark Surface (S	7) (LRR K, L)
Stratified	d Layers (A5) d Dalaw Dark Swrft		Loamy Gleyed Matrix (F2)	Polyvalue Belov	v Surface (S8) (LRR K, L)
Depieted Thick Da	d Below Dark Surfa ark Surface (A12)		Depieted Matrix (F3) Redox Dark Surface (F6)	Iron-Manganese	Masses (F12) (IRR K I R)
Sandy N	/ucky Mineral (S1)		Depleted Dark Surface (F7)	Piedmont Flood	plain Soils (F19) (MLRA 149B)
Sandy G	Gleyed Matrix (S4)		Redox Depressions (F8)	Mesic Spodic (T	A6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)			Red Parent Mat	erial (F21)
Stripped	I Matrix (S6)),	Very Shallow Da	ark Surface (TF12)
Dark Su	nace (57) (LRR R ,	, WILKA 149B)	Other (Explain I	n Remarks)
³ Indicators o	f hydrophytic vegel	tation and we	tland hydrology must be present, unless disturbed o	or problematic.	
Restrictive	Layer (if observed	d):			
Туре:					
Depth (in	ches):			Hydric Soil Present	? Yes No
Remarks:					
Soils are	sand throug	hout. No	indicators of hydric soil were obse	erved.	
	-		-		



wasd1025_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Applicant/Owner: Enbridge	Samping Date. 2020-00-00
-	State: <u>Wisconsin</u> Sampling Point: <u>wasd1027f_w</u>
Investigator(s): AGG/OTG	Section, Township, Range: <u>sec 15 T045N R003W</u>
Landform (hillslope, terrace, etc.): Side Slope	cal relief (concave, convex, none): <u>Convex</u> Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.37611	8 Long: -90.730332 Datum: WGS84
Soil Map Unit Name: Udorthents, ravines and escarpment	ts, 25 to 60 percent slopes NWI classification: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🔜 🖌 No (If no, explain in Remarks.)
Are Vegetation . Soil . or Hvdrology significantly	disturbed? Are "Normal Circumstances" present? Yes 🗸 No
Are Vegetation Soil or Hydrology naturally pr	oblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🖌 No	Is the Sampled Area
Hydric Soil Present? Yes ✓ No	within a Wetland? Yes 🖌 No
Wetland Hydrology Present? Yes <u>v</u> No	If ves, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate repo	rt.)
HYDROLOGY	
wetland Hydrology indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply)	
Surface Water (A1) Water-Stained	Leaves (B9) Drainage Patterns (B10)
Surface Water (A1) Water-Stained High Water Table (A2) Aquatic Fauna Saturation (A3) Marl Deposite	Leaves (B9) Drainage Patterns (B10) (B13) Moss Trim Lines (B16) (R15) Dry Season Water Table (C2)
	Leaves (B9)

Remarks:

The wetland hydrology regime is seasonally saturated. The feature meets geomorphic position due to its location near a groundwater seepage area.

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1027f_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Fraxinus nigra	30	Y	FACW	Number of Dominant Species That Are OBL EACW or EAC: 2 (A)
2 Betula alleghaniensis	 5	 N	FAC	
				Total Number of Dominant Species Across All Strata: 3 (B)
0				
T			······································	That Are OBL, FACW, or FAC: 67 (A/B)
5				
0				Prevalence Index worksheet:
1				<u>Total % Cover of:</u> <u>Multiply by:</u>
		= Total Co	ver	OBL species 30 x1 = 30
Sapling/Shrub Stratum (Plot size: 15)	•			FACW species 32 x 2 - 04
1. <u>Fraxinus nigra</u>	2	<u> </u>	<u>FACW</u>	FACU species $0 \times 4 = 0$
2				UPL species $0 \times 5 = 0$
3				Column Totals: <u>77</u> (A) <u>139</u> (B)
4				
5				Prevalence Index = $B/A = \frac{1.8051948051948052}{1.8051948052}$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	2	= Total Co	ver	\sim 2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)				\sim 3 - Prevalence Index is $\leq 3.0^{\circ}$
1. <u>Carex scabrata</u>	25	Y	OBL	data in Remarks or on a separate sheet)
2. <u>Carex arctata</u>	25	Y		Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Athyrium angustum</u>	10	N	FAC	
4. Glyceria striata	5	N	OBL	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5.	_			Pofinitions of Vagatation 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.				Conting (church Maadu planta laas 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
12	65	- Total Co		height.
Weedy Vine Stratum (Plat size: 30)		- 10(a) 00		
l				
2				
3				Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
	<u> </u>	= Total Co	ver	
The feature is a hardwood swamp dom	inated t	ov black	ash.	

Profile Des	cription: (Describe t	o the dep	th needed	to docun	nent the i	indicator	or confirm	the absence	of indicators.)
Depth	Matrix			Redo	x Feature	s			
(inches)	Color (moist)	%	Color (r	noist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	<u>10YR 2/1</u>	100			0			SIL	
4-20	7.5YR 2.5/1	95	5YR	4/4	5	С	М	SCI	
	<u></u>			1/1					
·		·							
					·	·			
						. <u> </u>			
			-						
		<u> </u>			·				
					·	·			
						·			
17			De de ce d				- 1	21	DL Dana Lining M. Matrice
Type: C=C	oncentration, D=Depi	etion, RM	Reduced I	Matrix, MS	S=Masked	a Sand Gra	ains.		: PL=Pore Lining, M=Matrix.
Hyune Son			Dahar		0				
Histosol	I (AI) ninodon (A2)				v Suriace	(58) (LR	К ,		IUCK (A10) (LRR K, L, MLRA 149B)
HISUC E	pipedon (A2) $istic (A3)$		ML Thin Γ	RA 149D) Dark Surfa	(SQ) (I		DA 140B)	Coasi	Mucky Peat or Peat (S3) (I PP K I P)
Hvdroge	en Sulfide (A4)			v Muckv M	lineral (F	1) (I RR K	LKA 1430)	5 cm M	Surface (S7) (I RR K I)
Stratifie	d Lavers (A5)		Loam	v Gleved I	Matrix (F2	?)	, =/	Polvva	lue Below Surface (S8) (LRR K. L)
Deplete	d Below Dark Surface	e (A11)	Deple	ted Matrix	(F3)	-,		Thin D	ark Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)	()	Redox	Coark Su	face (F6)	1		Iron-M	anganese Masses (F12) (LRR K, L, R)
Sandy M	Aucky Mineral (S1)		Deple	ted Dark S	, Surface (F	7)		Piedm	ont Floodplain Soils (F19) (MLRA 149B)
Sandy C	Gleyed Matrix (S4)		Redox	Depress	ions (F8)			Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5) Red Parent Material (F2				arent Material (F21)					
Stripped	d Matrix (S6)							Very S	hallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)						(Explain in Remarks)			
³ Indicators o	f hydrophytic vegetat	ion and we	atland hydr		t ha nrasi	ant unless	e disturbed	or problematic	,
Restrictive	l aver (if observed):			Jogy mus	t be prese	ent, unies:	Suistuibeu		
Type:									
Type.									Present? Ves // No
Depth (in	ches):							Hyaric Soli	Present? Yes v No
Remarks:									
A dark s	hallow layer w	ith redo	ox was (observ	ed.				



wasd1027f_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):	
wasd1027	2020-06-05	
Location:	Ecological Landsca	ape:
PLSS: sec 15 T045N R003W	North Central Forest	
	North Ochian Orest	
Lat: <u>46.376130</u> Long: <u>-90.730329</u>	Watershed:	
	LS12, Marengo River	
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u>		
SITE DESCRIPTION		
Soils:	WWI Class:	
Mapped Type(s):	N/A	
Udorthents, ravines and escarpments, 25 to 60 percent slopes	Wetland Type(s):	
	PFO - Hardwood	d swamp
Field Verified:		-
The soils were not verified.	Wetland Size:	Wetland Area Impacted
	0.0385	0.0385
	Vegetation:	
	Plant Community D	Description(s):
Hydrology:	The feature is a	hardwood swamp dominated
The wetland hydrology regime is seasonally	by black ash.	·
saturated. The feature meets geomorphic position	by black dom	
due to its location near a groundwater seepage area.		

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
2	Ν	N	Used for educational or scientific purposes
3	Ν	Ν	Visually or physically accessible to public
4	Ν	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	N	v	Supports or provides habitat for endangered, threatened or special concern species
7		N	In or adjacent to archaeological or cultural resource site
ŴН		IN	Wildlife Habitat
1	V	×	Wetland and contiguous habitat >10 acres
2	V	V I	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	N	N	Interspersion of habitat structure (hemi-marsh shrub/emergent, wetland/upland complex etc.)
			Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan. or other
7	N	Y	plans
8	V	V	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present > 45 days
10	N	× ×	Standing water provides habitat for amphibians and aquatic invertebrates
10	N	N	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	N	N	Wetland is connected or contiguous with perennial stream or lake
2	N		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	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	Y	Y	Point or non-point source inflow
6	N	N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <10% wetland
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
ŴQ			Water Quality Protection
1	N	N	Provides substantial storage of storm and floodwater based on previous section
2	N	N	Basin wetland or constricted outlet
3	Y	Y	Water flow through wetland is NOT channelized
4	N	N	Vegetated wetland associated with a lake or stream
5	N	Y	Dense, persistent vegetation
6	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	V	Springs, seeps or indicators of groundwater present
2		N	Location near a droundwater divide or a headwater wetland
2			Wetland remains saturated for an extended time period with no additional water inputs
1			Wetland soils are organic
5			Wetland is within a wellbead protection area
	1 IN	I IN	ייזיטנומרים ואיונוווד מ איטווויטמע פוטנטנוטוד מופמ

Section 1 Comments (Refer to Section 1 numbers)

HU-5/6, WH-4: The wetland is within an intact forested buffer around Silver Creek which is a designated trout stream. WH-1/2/8: The wetland is within a large forested block along Silver Creek and has the potential to provide habitat for rare wildlife species. GW-1: The feature appears to be fed by seepage outside of the survey 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	Amphibians
Y	Y	Insects
Y	Y	Birds

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

Observed	Potential	Species/Habitat

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)
Eraxinus nigra*			PFO	Patchy
Carex arctata*			PFO	Patchy
Betula alleghaniensis			PFO	Rare
Carex scabrata			PFO	Rare
Athyrium filix-femina			PFO	Rare
Glyceria striata			PFO	Rare
Matteuccia struthiopteris			PFO	Rare
•				

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

The floristic integrity is moderate due to native species dominance, absence of invasives, but low diversity.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells,
					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
		×	н	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
					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 area has been highly impacted by the presence of earthworms.

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 native species dominance, absence of invasives, but low diversity.
Human Use Values	There are signs of hunting observed in the area.
Wildlife Habitat	The wetland is a small feature within a buffer of Silver Creek.
Fish and Aquatic Life Habitat	
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is small and has low capacity of stormwater storage.
Water Quality Protection	Vegetation is sparse and does not provide ample filtration of stormwater.
Groundwater Processes	The feature is fed by groundwater seepage.

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>Ashland</u>	Sampling	Date: <u>2020-</u>	<u>06-05</u>
Applicant/Owner: Enbridge		State: Wisconsin Sampli	ng Point: <u>wasd</u>	1027_u
Investigator(s): <u>AGG/OTG</u>	Section, Township, Range:	sec 15 T045N R003	Ν	
Landform (hillslope, terrace, etc.): <u>Talf</u>	Local relief (concave, convex,	none): <u>None</u>	Slope (%):)-2%
Subregion (LRR or MLRA): Morthcentral Forests Lat: 46.3761	26 Long: -	90.730213	Datum: WG	<u>S84</u>
Soil Map Unit Name: Udorthents, ravines and escarpme	ents, 25 to 60 percent sl	Opes NWI classification: PE	M1C	
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 significar	ntly disturbed? Are "Norr	nal Circumstances" present?	r∕es <u>r</u> No	
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed	ៅ, explain any answers in Rema	arks.)	
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point loca	tions, transects, import	ant features	, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes 🖌	No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes No		No 🖌	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedu The area is a mixed conife	res here or in a r-hardwoo	separate report.) d forest with v	well drained, sandy soils.

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 V Depth (inches):	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	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	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 (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
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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: wasd1027_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1 Picca dauca	<u>50</u>	V		Number of Dominant Species
1. <u>Ficea giauca</u>				That Are OBL, FACW, or FAC:3 (A)
2. <u>Aples paisamea</u>		<u> </u>		Total Number of Dominant
3. <u>Acer saccharum</u>	10	<u> </u>	FACU	Species Across All Strata:4 (B)
4. <u>Populus tremuloides</u>	5	<u> N</u>	FAC	Percent of Dominant Species
5				That Are OBL, FACW, or FAC:(5(A/B)
6			·	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				FAC species <u>50</u> x 3 = <u>150</u>
2				FACU species <u>65</u> x 4 = <u>260</u>
2			·	UPL species x 5 =
0			·	Column Totals: <u>115</u> (A) <u>410</u> (B)
4				Prevalence Index = $B/A = 3.57$
5			·	
6			·	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co	ver	\sim 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations1 (Provide supporting
1. <u>Carex pedunculata</u>	10	Y	FAC	data in Remarks or on a separate sheet)
2. Athyrium angustum	10	Y	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Mitchella repens	5	Ν	FACU	
4 Trillium sp	 1	N		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
	26	= Total Co	ver	ling it.
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 area is dominated by conifers inclu	udinģ wł	nite spru	ice and	balsam fir.

SOIL

Profile Desc	ription: (Describe t	the depth	n needed to document the indicator or confirm	the absence of indicators.)					
Depth (inchos)	Matrix Color (moist)	0/	Redox Features	Toxturo Pomorko					
<u>(incries)</u>	7.5YR 2.5/3	100		SI					
7-20	7.5VR 3/3	100							
	<u>7.511 3/5</u>	100		<u> </u>					
¹ Type: C=Co	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.					
Hydric Soil	Indicators:		Debuselus Delevy Surface (SS) (I DD D	Indicators for Problematic Hydric Soils":					
Histic Ep	(AT) bipedon (A2)	-	MLRA 149B)	Coast Prairie Redox (A16) (LRR K, L, MLRA 149B)					
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)					
Otraulied Depleted	d Below Dark Surface	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 M	Nucky Mineral (S1)	-	Depleted Dark Surface (F7)	Piedmont Floodplain Soils (F19) (MLRA 149B)					
Sandy G	Redox (S5)	-	Redox Depressions (F8)	Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21)					
Stripped	Matrix (S6)			Very Shallow Dark Surface (TF12)					
Dark Su	rface (S7) (LRR R, M	ILRA 149B)		Other (Explain in Remarks)					
³ Indicators of	f hydrophytic vegetati	ion and wetl	and hydrology must be present, unless disturbed o	pr problematic.					
Restrictive I	Layer (if observed):			•					
Туре:									
Depth (ind	ches):			Hydric Soil Present? Yes No 🗸					
Remarks:									
The soils	are well drain	ied and	sandy.						



wasd1027_u_E



wasd1027_u_N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

The wetland hydrology regime is temporarily flooded. The feature meets geomorphic position due to its location within a floodplain.

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1026f_w

Trac Stratum (Plot size: 20)	Absolute	Dominar	nt Indicator	Dominance Test worksheet:					
1 Fravinus pigra	<u>25</u>	V		Number of Dominant Species					
2 Abios balsamos	_ <u></u>			That Are OBL, FACW, or FAC:6 (A)					
3. Populus balsamifera	_ <u>10</u>	 N		Total Number of Dominant Species Across All Strata: 6 (B)					
4. Fravinus poppsylvanica	_ <u>10</u>								
				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)					
5									
7				Prevalence Index worksheet:					
/·	 	- Total C		Total % Cover of:Multiply by:					
Conting/Shrub Stratum (Distaire) 15	$\underline{33}$ = 1 otal Cover		Jver	EACW species $57 \times 2 = 114$					
<u>Saping/Shrub Stratum</u> (Plot size: 13)	F	V		FAC species $44 \times 3 = 132$					
1. <u>Fraxinus nigra</u>	<u>5</u>	<u> </u>		FACU species x 4 =8					
2. <u>Ables balsamea</u>	5	<u> </u>	FAC	UPL species x 5 =					
3. <u>Fraxinus pennsylvanica</u>	5	<u> </u>	FACW	Column Totals: <u>103</u> (A) <u>254</u> (B)					
4				Provolonce Index = P/A = -2.466010447475728					
5				Prevalence index = $B/A = \frac{2.466019417475728}{2.466019417475728}$					
6				Hydrophytic Vegetation Indicators:					
7				1 - Rapid Test for Hydrophytic Vegetation					
	15	= Total Co	over	\sim 2 - Dominance Lest is >50%					
Herb Stratum (Plot size: <u>5</u>)				\sim 3 - Prevalence index is \geq 5.0					
1. Matteuccia struthiopteris	25	Y	FAC	data in Remarks or on a separate sheet)					
2. <u>Athyrium angustum</u>	2	N	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)					
3. <u>Equisetum hyemale</u>	2	N	FAC	1					
4. Doellingeria umbellata	2	Ν	FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
5. Caulophvllum thalictroides	2	N		Definitions of Vegetation Strate:					
6. Majanthemum racemosum	2	N	FACU	Demitions 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.					
5									
				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.					
		= I otal Co	over						
Woody Vine Stratum (Plot size: <u>30</u>)									
1									
2									
3				Hydrophytic Versteller					
4				Present? Yes <u>v</u> No					
= Total Cover									
Remarks: (Include photo numbers here or on a separate sheet.)									
The reature is a noouplain forest dominated by black ash and green ash.									

SOIL

Depth (inches) Matrix Redox Features 0-12 5YR 4/3 100 0 S 12-20 7.5YR 3/2 100 0 LS									
(inches) Color (moist) % Type' Loc' Texture Remarks 0-12 5YR 4/3 100 0 S									
0-12 5YR 4/3 100 0 S 12-20 7.5YR 3/2 100 0 LS									
12-20 7.5YR 3/2 100 0 LS									
¹ Type: C=Concentration D=Depletion PM=Peduced Matrix MS=Macked Sand Grains									
Hydric Soil Indicators: Location, D-Depletion, NWI-Neucoco Matrix, MO-Masked Sand Grains. Location. PL-Pore Lining, M-Matrix. 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)									
Stratified Lavers (A5) Loamy Gleved Matrix (F2) 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) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R)									
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B)									
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)									
Stripped Matrix (S6) Very Shallow Dark Surface (TE12)									
Other (Explain in Remarks)									
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.									
Type									
Remarks: The soils are naturally problematic due to the location within a floodplain. The soils of the area are									
sandy denosite									



wasd1026f_w_E



wasd1026f_w_N

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

Project name:	Evaluator(s):						
Line 5 Relocation Project	AGG/OTG						
File #:	Date of visit(s):						
wasd1026	2020-06-05						
Location:	Ecological Landscape:						
PLSS: sec 15 T045N R003W	North Control Forget						
	Notifi Central Forest						
Lat: <u>46.376405</u> Long: <u>-90.730714</u>	Watershed: LS12, Marengo River						
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u>							
SITE DESCRIPTION							
Soils:	WWI Class:						
Mapped Type(s):	Т3/5К						
Udorthents, ravines and escarpments, 25 to 60 percent slopes	Wetland Type(s):						
	PFO - Floodplain forest						
Field Verified:							
The soils were not verified.	Wetland Size:	Wetland Area Impacted					
	0.6432	0.6432					
	Vegetation:						
	Plant Community Description(s):						
Hydrology:	The feature is a floodplain forest dominated						
The wetland hydrology regime is temporarily							
flooded. The feature meets geomorphic position	by black ash and	by black asil and green asil and is associated					
due to its leastion within a fleadalain	with the adjacen	it Silver Creek.					

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		
2	Ν	N	Used for educational or scientific purposes		
3	Ν	Ν	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	V	V	LISI. Suiver Creek		
7	T N	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	r V	ř V	3 or more strate present (>10% cover)		
2	Y N	Y NI	Within or adjacent to babitat corridor or established wildlife babitat area		
			100 m buffer - natural land cover >50% (south) 75% (north) intact		
5	Y N	Y NI	Occurs in a Joint Venture priority township		
6	IN N		Interspersion of habitat structure (hemi marsh shruh/emergent, wetland/unland complex etc.)		
0	IN	IN	Supports or provides babitat for SCCN or birds listed in the WI All Bird Cons. Plan, or other		
7	Ν	Y	plans		
8	N	Y	Part of a large habitat block that supports area sensitive species		
9	N	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	Y	Y	Wetland is connected or contiguous with perennial stream or lake		
2	N	Ý	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	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	Y	water levels or high flows – if no. not applicable		
3	Y	Y	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	Ň	N	Dense, persistent vegetation		
4	N	N	Evidence of flashy hydrology		
5	Y	Y	Point or non-point source inflow		
6	N	N	Impervious surfaces cover >10% of land surface within the watershed		
7	N	N	Within a watershed with <10% wetland		
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event		
WQ			Water Quality Protection		
1	Y	Y	Provides substantial storage of storm and floodwater based on previous section		
2	Ň	Ň	Basin wetland or constricted outlet		
3	Y	Y	Water flow through wetland is NOT channelized		
4	Ý	Ý	Vegetated wetland associated with a lake or stream		
5	Ň	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	NI	N	Springs seeps or indicators of groundwater present		
2			Location near a groundwater divide or a boddwater wotland		
2			Wotland remains saturated for an extended time period with ne additional water insulta		
3			Wetland soils are organic		
4	N N		Wetland is within a wellhood protection area		
5	I N	I N	vyeuanu is within a weilneau protection area		

HU-4/5/6: The wetland is within the floodplain of Silver Creek, which is a designated trout stream. There was no pollution or degradation observed within the feature. SP-1: The feature is a floodplain associated with Silver Creek.

WQ-1: The floodplain appears to effectively hold the flood waters of Silver Creek.

WH-1/2/4: The wetland is located within a buffer around Silver Creek that has three strata present and likely provides habitat for a variety of wildlife 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	Mammals
Y	Y	Insects
Y	Y	Birds

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

Observed	Potential	Species/Habitat

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
Fraxinus pennsylvanica			PFO	Patchy
Abies balsamea			PFO	Rare
Fraxinus pennsylvanica			PFO	Rare
Matteuccia struthiopteris*			PFO	Rare
Athyrium filix-femina			PFO	Rare
Populus balsamifera			PFO	Rare
Thuja occidentalis			PFO	Rare
Acer negundo			PFO	Barren
Alnus incana			PFO	Barren
Calamagrostis canadensis			PFO	Barren
Caulophyllum thalictroides			PFO	Barren
Corylus cornuta			PFO	Barren
Equisetum hyemale			PFO	Barren
Onoclea sensibilis			PFO	Barren
Parthenocissus inserta			PFO	Barren
Solidago gigantea			PFO	Barren
Symphyotrichum lateriflorum			PFO	Barren
Trientalis borealis			PFO	Barren
Ulmus americana			PFO	Barren
Acer rubrum			PFO	Barren
Acer saccharum			PFO	Barren
Agrimone sp.			PFO	Barren
Anemone canadensis			PFO	Barren
Arisaema triphyllum			PFO	Barren
Cardamine diphylla			PFO	Barren
Carex arctata			PFO	Barren
Carex communis			PFO	Barren

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

The floristic integrity is moderate to high due to dominance by a diverse assemblage of native species and no observed invasives. Additional species: Clematis virginiana (Plant Communities: PFO, Abundance: Barren), Doellingeria umbellata (Plant Communities: PFO, Abundance: Barren), Luzula acuminata (Plant Communities: PFO, Abundance: Barren), Luzula acuminata (Plant Communities: PFO, Abundance: Barren), Maianthemum racemosum (Plant Communities: PFO, Abundance: Barren), Myosotis cf. scorpioides (Plant Communities: PFO, Abundance: Barren), Prunus virginiana (Plant Communities: PFO, Abundance: Barren), Pyrola elliptica (Plant Communities: PFO, Abundance: Barren), Ranunculus sp. (Plant Communities: PFO, Abundance: Barren), Rumex obtusifolius (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
					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	н	С	Removal of herbaceous stratum – mowing, 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)

There are very few anthropogenic disturbances present in the area.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The vegetation is dominated by a diverse assemblage of native species and no observed non natives or invasives.
Human Use Values	Very little potential for human uses within the floodplain.
Wildlife Habitat	Diversity of plant species, three strata, and location along a perennial waterbody provides habitat for a variety of wildlife.
Fish and Aquatic Life Habitat	Along a perennial river.
Shoreline Protection	The wetland is an intact floodplain forest along Silver Creek.
Flood and Stormwater Storage	The wetland holds floodwaters from Silver Creek.
Water Quality Protection	The wetland holds floodwaters from Silver Creek.
Groundwater Processes	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: <u>Ashland</u>	Sampling Date: <u>2020-06-05</u>
Applicant/Owner: Enbridge	Sta	ate: Wisconsin Sampling Point: wasd1026_u
Investigator(s): <u>AGG/OTG</u>	Section, Township, Range: <u>SeC ´</u>	15 T045N R003W
Landform (hillslope, terrace, etc.): <u>Rise</u>	Local relief (concave, convex, none):	Convex Slope (%): 0-2%
Subregion (LRR or MLRA): Lat: Lat:	271 Long: <u>-90.73</u>	0722 Datum: WGS84
Soil Map Unit Name: Udorthents, ravines and escarpme	ents, 25 to 60 percent slopes	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes 🖌 No (If no	, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	ntly disturbed? Are "Normal Circ	umstances" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, expla	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	within a Wetland? Yes No <u>v</u>
Wetland Hydrology Present? Yes No 🖌		No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed	lures here or in	a separate report.)	surrounding area.
The upland sample point	is represer	ntative of the s	

HYDROLOGY

I

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

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1026_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>Picea glauca</u>	25	<u> Y </u>	<u>FACU</u>	That Are OBL, FACW, or FAC:3(A)
2. <u>Betula alleghaniensis</u>	10	<u> Y </u>	FAC	Total Number of Dominant
3. <u>Tsuga canadensis</u>	10	Y	<u>FACU</u>	Species Across All Strata:6(B)
4. <u>Thuja occidentalis</u>	5	<u> N </u>	FACW	Percent of Dominant Species
5	<u> </u>			That Are OBL, FACW, or FAC: <u>50</u> (A/B)
6	<u> </u>			Prevalence Index worksheet
7				Total % Cover of: Multiply by:
	50	= Total Cov	ver	$\begin{array}{c} \hline \hline$
Sapling/Shrub Stratum (Plot size: 15)				FACW species $5 \times 2 = 10$
1 Abies balsamea	5	V	FAC	FAC species <u>55</u> x 3 = <u>165</u>
				FACU species <u>60</u> x 4 = <u>240</u>
2				UPL species x 5 =
3				Column Totals: <u>120</u> (A) <u>415</u> (B)
4				Prevalence Index = B/A = 3.458333333333333335
5				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
/				2 - Dominance Test is >50%
		= Total Cov	ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Phegopteris connectilis</u>	25	<u> </u>	<u>FACU</u>	data in Remarks or on a separate sheet)
2. <u>Matteuccia struthiopteris</u>	25	<u> </u>	FAC	Problematic Hydrophytic Vegetation' (Explain)
3. <u>Equisetum scirpoides</u>	10	<u> N </u>	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Equisetum hyemale</u>	5	N	FAC	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				
12			<u> </u>	Woody vines – All woody vines greater than 3.28 ft in height.
	65	= Total Cov	ver	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2	<u> </u>			
3				Hydrophytic
4.				Vegetation
	0	= Total Cov	ver	Present? Yes No V
Remarks: (Include photo numbers here or on a separate	sheet.)		., .	
I he sample plot is located within a mix	ed hard	wood-co	oniter fo	rest dominated by white spruce and
yellow birch.				

Profile Desc	cription: (Descr	ibe to the dep	th needed to docur	nent the	indicator or confirn	n the absence of indica	itors.)
Depth	Matri	x	Redo	x Feature	S		
(inches)	Color (moist) %	Color (moist)	%	Type ¹ Loc ²	Texture	Remarks
0-8	7.5YR 3/2	2 100		0		S	
Q 20	5VD 3/	3 100		0		<u> </u>	
	<u> 31R 3/</u>	5 100			·	<u> </u>	
					<u> </u>		
				·			
<u> </u>							
·						;;	
					·		
¹ Type: C=C	oncentration, D=I	Depletion, RM=	Reduced Matrix, MS	S=Maske	d Sand Grains.	² Location: PL=Po	e Lining, M=Matrix.
Hydric Soil	Indicators:					Indicators for Prob	lematic Hydric Soils ³ :
Histosol	l (A1)		Polyvalue Belov	v Surface	e (S8) (LRR R,	2 cm Muck (A10)) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)		MLRA 149B)			Coast Prairie Re	edox (A16) (LRR K, L, R)
Black H	istic (A3)		Thin Dark Surfa	ice (S9) (LRR R, MLRA 149B) 5 cm Mucky Pe	at or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)		Loamy Mucky N	/lineral (F	1) (LRR K, L)	Dark Surface (S	7) (LRR K, L)
Stratifie	d Layers (A5)		Loamy Gleyed I	Matrix (F2	2)	Polyvalue Belov	v Surface (S8) (LRR K, L)
Deplete	d Below Dark Su	face (A11)	Depleted Matrix	(F3) face (F0)		Thin Dark Surfa	ce (S9) (LRR K, L)
	ark Surface (A12)) 1 \	Redox Dark Su	nace (F6)) -7\		Masses (F12) (LRR K, L, R)
Sandy N	Nucky Mineral (S	1)	Depleted Dark 3	Surface (I	-7)	Pleamont Flood	
Sandy C	Bieyeu Matrix (54	•)	Redox Depress			Nesic Spould (1	A0) (WLRA 144 A , 145, 149 B) $arial (E21)$
Sanuy r	Motrix (S6)						ellai (F21) ark Surfaco (TE12)
Surpped Dark Su	urface (S7) (I RR					Other (Explain i	n Remarks)
			')				(in Remarks)
³ Indicators o	of hvdrophytic veg	etation and we	tland hvdrologv mus	t be pres	ent. unless disturbed	l or problematic.	
Restrictive	Laver (if observe	ed):	, ,,	•	,		
Type [.]		,					
Denth (in	-1					Hydric Soil Present	
Depth (In	cnes):					riyane oon riesent	
Remarks:			ale a service of The	!!.			
NO NYARI	c soil indica	tors were	observed. In	e sons	s are well drain	hed and sandy.	





wasd1026_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling Date: <u>2020-06-0</u>
Applicant/Owner: Enbridge		_ State: <u>Wisconsin</u> Sampling Point: <u>wasd1029s</u> _
Investigator(s): <u>AGG/OTG</u>	Section, Township, Range: <u>Se</u>	e 15 T045N R003W
Landform (hillslope, terrace, etc.): <u>Side Slope</u>	Local relief (concave, convex, non	e): <u>Convex</u> Slope (%): <u>26-60</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.3</u>	76761 Long: <u>-90</u>	.729025 Datum: WGS84
Soil Map Unit Name: Udorthents, ravines and escare	oments, 25 to 60 percent slop	es NWI classification:
Are climatic / hydrologic conditions on the site typical for this tin	ne of year? Yes <u><</u> No (lf no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signi	ificantly disturbed? Are "Normal	Circumstances" present? Yes <u> V</u> No
Are Vegetation, Soil, or Hydrology natu	rally problematic? (If needed, e	xplain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map she	owing sampling point locatio	ns, 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>
Remarks: (Explain alternative procedures here or in a separa The feature is a seepage fed alder thicket	te report.) t. The feature discharges i	nto nearby Silver Creek.
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)

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

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1029s_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1 Abies balsamea	<u></u>	V	FAC	Number of Dominant Species
				That Are OBL, FACW, or FAC: 4 (A)
2				Total Number of Dominant
3		·		Species Across All Strata: <u>4</u> (B)
4		·	<u> </u>	Percent of Dominant Species
5		·		$\begin{bmatrix} \text{Inat Are OBL, FACW, of FAC.} \\ \end{bmatrix}$
6				Prevalence Index worksheet:
7		·		Total % Cover of: Multiply by:
	10	= Total Co	ver	OBL species <u>20</u> x 1 = <u>20</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>80</u> x 2 = <u>160</u>
1. <u>Alnus incana</u>	75	Y	FACW	FAC species <u>10</u> x 3 = <u>30</u>
2.				FACU species x 4 =
3				UPL species x 5 =
0			<u> </u>	Column Totals: <u>110</u> (A) <u>210</u> (B)
4				Prevalence Index = $B/A = 1.909090909090909092$
5			<u> </u>	
6		·	<u> </u>	Hydrophytic Vegetation Indicators:
7			. <u> </u>	1 - Rapid Test for Hydrophytic Vegetation
		= Total Co	ver	\sim 2 - Dominance rest is >50%
Herb Stratum (Plot size: <u>5</u>)				\sim 3 - Frevalence index is ≥ 3.0
1. <u>Glyceria striata</u>	20	Y	OBL	data in Remarks or on a separate sheet)
2. <u>Rubus pubescens</u>	5	Y	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3.				
4				Indicators of hydric soil and wetland hydrology must
5				
o				Definitions of Vegetation Strata:
0		·		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 it tall.
12		. <u> </u>		Woody vines – All woody vines greater than 3.28 ft in
	25	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1.				
2.				
3		<u></u>		Hydrophytic
0				Vegetation
4				Present? Yes <u>v</u> No
Pomorka: (Includo photo numboro horo or on o conorato	U	= Total Co	ver	
The feature is an alder seepage swam	b domin	ated by	speckle	ed alder.
		,	-1	

SOIL

Profile Desc	ription: (E	Describe t	o the de	oth needed	to docun	nent the ir	ndicator	or confirm	the absence	of indicators.)
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-20	5YR	3/3	90	5YR	5/6	10	С	Μ	SL	
						·				
						·				
						·				
		<u> </u>								
						·				
		<u> </u>								
						·				
¹ Type: C=Co	oncentratio	n, D=Depl	etion, RN	Reduced	Matrix, MS	S=Masked	Sand Gr	ains.	² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:			.		0 (Indicators	for Problematic Hydric Soils":
Histosol Histic Fr	(A1) Dipedon (A2	2)		Polyv	RA 149B)	w Surrace ((58) (LRI	Κ ,	2 cm N Coast	1uck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R)
Black Hi	stic (A3)	-/		Thin [Dark Surfa	, ice (S9) (L	RR R, MI	LRA 149B)	5 cm M	lucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	n Sulfide (A	44)		Loam	y Mucky N	/lineral (F1) (LRR K	(, L)	Dark S	urface (S7) (LRR K, L)
Stratified	d Layers (A	5) rk Surfood	(11)	Loam	y Gleyed I	Matrix (F2)			Polyva	lue Below Surface (S8) (LRR K, L)
Thick Da	ark Surface	(A12)	(ATT)	Redo	x Dark Su	rface (F6)			Iron-M	andanese Masses (F12) (LRR K. L. R)
Sandy M	lucky Mine	, , ral (S1)		Deple	ted Dark S	Surface (F	7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy G	Bleyed Matr	ix (S4)		Redo	x Depress	ions (F8)			Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy R	ledox (S5)	1							Red Pa	arent Material (F21)
Dark Su	rface (S7) () (LRR R, M	LRA 149	B)					Other (Explain in Remarks)
_	()(,		/						,
³ Indicators of	f hydrophyt	ic vegetati	on and w	etland hydr	ology mus	t be prese	nt, unless	s disturbed	or problematic	2.
Type:	Layer (II of	Servea):								
Donth (in	abaa).								Hydric Soil	Present? Yes ✔ No
Depth (Ind	cnes):									
Redox co	oncentr	ations	vere c	bserved	d within	n red sa	andv lo	am		
				5001100		1100 00		Jann		



wasd1029s_w_N



wasd1029s_w_W

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

Evaluator(s):		
AGG/OTG		
Date of visit(s):		
2020-06-06		
Ecological Landsca	ape:	
North Central Forest		
North Ochilar Forest		
Watershed:		
LS12, Marengo River		
WWI Class:		
N/A		
Wetland Type(s):		
PSS - Alder thicket		
Wetland Size:	Wetland Area Impacted	
0.0260	0.0260	
Vegetation:		
Plant Community	Description(s):	
The feature is an alder seepage wetland		
	Evaluator(s): AGG/OTG Date of visit(s): 2020-06-06 Ecological Landsca North Central Forest Watershed: LS12, Marengo River WWI Class: N/A Wetland Type(s): PSS - Alder thic Wetland Size: 0.0260 Vegetation: Plant Community I The feature is a dominated by sp	

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	N	N	Used for recreation (hunting, birding, hiking, etc.). List:
2	Ν	Ν	Used for educational or scientific purposes
3	Ν	Ν	Visually or physically accessible to public
4	Ν	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	V	V	In or adjacent to RED FLAG areas
5	Ŷ	Ŷ	List: Trout Streams: Silver Creek
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	Ν	Ν	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	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			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	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	Y	Y	Wetland is connected or contiguous with perennial stream or lake
2	N	Ň	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	Y	Natural Heritage Inventory (NHI) listed aguatic species within aguatic 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	Y	Y	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	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
ŴŌ			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	Water flow through wetland is NOT channelized
4	v	v v	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		V	Discharge to surface water
9	N	N	Natural land cover in 100m buffer area < 50%
GW/			Groundwater Processes
1	V	v	Springs seens or indicators of groundwater present
	T N	T NI	opinings, seeps of indicators of groundwater present
2	N	N	Location near a groundwater divide or a neadwater wetland
3	N	N N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N N	Wetland soils are organic
5	I N	I N	veliand is within a wellnead protection area

ST-2/WQ-3: Seepage through the feature is not channelized. GW-1: The feature is a very small feature that is fed by seepage that outlets into Silver Creek.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Bird nest
	Y	Insects
	Y	Birds
	Y	Herpetofauna

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

Observed	Potential	Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 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	Continuous
Glyceria striata			PSS	Rare
Abies balsamea			PSS	Rare
Rubus pubescens			PSS	Barren
Equisetum hyemale			PSS	Barren

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

There is a very low diversity of species present, as the feature itself is very small and dominated by speckled alder.

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 is no observed disturbances in the direct area in or around the wetland. Some disturbances, such as earthworms or historic logging, may be present in the area but are negligible in regards to the wetland's quality.

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	invasive species were observed in the area. The feature is smal d not diverse.				
Human Use Values	No discernible uses, difficult to access.				
Wildlife Habitat	Very small wetland on a steep slope.				
Fish and Aquatic Life Habitat	The feature has a steep slope and likely provides no habitat for aquatic life.				
Shoreline Protection	The feature actively erodes the bank of the Silver Creek.				
Flood and Stormwater Storage	The feature is a discharge wetland and is very small.				
Water Quality Protection	See above.				
Groundwater Processes	The feature is fed by groundwater seepage.				

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

Applicant/Owner: Enbridge	,		Stata: Wiscon	sin Sampling Doint: Wasd1029 U
Investigator(s): <u>KDF/OTG</u>		Section, Township, Rang	e: <u>SEC 15_1045</u>	N R003W
Landform (hillslope, terrace, etc.): Sid	e Slope	Local relief (concave, conve	x, none): <u>Convex</u>	Slope (%): <u>26-60%</u>
Subregion (LRR or MLRA):	ral Forests Lat: 46.376	790 Long:	-90.729032	Datum: WGS84
Soil Map Unit Name: Udorthents, r	avines and escarpm	ents, 25 to 60 percent	slopes NWI classifi	cation:
Are climatic / hydrologic conditions on t	he site typical for this time o	of year? Yes 🖌 No 🔄	(If no, explain in I	Remarks.)
Are Vegetation, Soil, or	Hydrology significa	antly disturbed? Are "No	ormal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or	Hydrology naturally	y problematic? (If need	led, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS - A	ttach site map show	ing sampling point loc	ations, transects	s, important features, etc.
Hydrophytic Vegetation Present?	Yes No 🖌	Is the Sampled A	rea	
Hydric Soil Present?	Yes No 🔽	within a Wetland	? Yes	No <u> ⁄</u>
Wetland Hydrology Present?	Yes No 🖌	If yes, optional We	etland Site ID:	
Remarks: (Explain alternative proced	ures here or in a separate r	eport.) ern mesic forest svs	tem located un	slope from Silver
Creek		chi mesic forest sys	icini located up	
HYDROLOGY				
			0 1 1 1	

wetiand hydrology indicators.	becondary 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 Sc	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No</u> Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No	Wetland Hydrology Present? Yes No
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Ves Ves Ves Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No ctions), if available:
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
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 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 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: No indicators of wetland hydrology were observed. The land	Wetland Hydrology Present? Yes No ctions), if available: odscape position is a steeply-sloped
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: No indicators of wetland hydrology were observed. The lance upslope from a river	Wetland Hydrology Present? Yes No ctions), if available: Model and the second seco
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: No indicators of wetland hydrology were observed. The lance convex surface upslope from a river.	Wetland Hydrology Present? Yes No ctions), if available: No odscape position is a steeply-sloped
Water Table Present? Yes No \checkmark Depth (inches): Saturation Present? Yes No \checkmark Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: No indicators of wetland hydrology were observed. The lance convex surface upslope from a river.	Wetland Hydrology Present? Yes No
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: No indicators of wetland hydrology were observed. The lanconvex surface upslope from a river.	Wetland Hydrology Present? Yes <u>No</u> 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 inspec Remarks: No indicators of wetland hydrology were observed. The lan convex surface upslope from a river.	Wetland Hydrology Present? Yes No
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 Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: Remarks: No indicators of wetland hydrology were observed. The lan convex surface upslope from a river.	Wetland Hydrology Present? Yes No
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 inspec Remarks: No indicators of wetland hydrology were observed. The lan convex surface upslope from a river.	Wetland Hydrology Present? Yes No
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: No indicators of wetland hydrology were observed. The lan convex surface upslope from a river.	Wetland Hydrology Present? Yes No
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 inspec Remarks: No indicators of wetland hydrology were observed. The lan convex surface upslope from a river.	Wetland Hydrology Present? Yes No

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1029_u

		D · ·		
Tree Stratum (Plot size: <u>30</u>)	Absolute <u>% Cover</u>	Dominant Species?	Status	Dominance Test worksheet:
1. <u>Populus grandidentata</u>	50	Y	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2. <u>Acer saccharum</u>	25	Y	FACU	Total Number of Dominant
3. <u>Acer rubrum</u>	10	N	FAC	Species Across All Strata: <u>7</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>29</u> (A/B)
6				Provalence Index worksheet:
7				Total % Cover of Multiply by
	85	= Total Co	ver	$\begin{array}{c} \hline \hline \\ $
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>12</u> x 2 = <u>24</u>
1. Tilia americana	25	Y	FACU	FAC species <u>33</u> x 3 = <u>99</u>
2 Corvlus cornuta	10	Ý	FACU	FACU species <u>118</u> x 4 = <u>472</u>
3 Abies balsamea	<u> </u>	 N	FAC	UPL species x 5 =
4 Acer rubrum	<u> </u>	<u>N</u>	FAC	Column Totals: <u>163</u> (A) <u>595</u> (B)
5 Alnus incana	<u> </u>	<u>N</u>		Prevalence Index = B/A = <u>3.6503067484662575</u>
6. Fravinus nigra	<u> </u>	N		Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
/		Tatal Oa	·	2 - Dominance Test is >50%
Had Obstance (Distained France)			ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>5</u>)	40	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Equisetum nyemaie</u>	<u> 10 </u>	<u> </u>		data in Remarks or on a separate sheet)
2. <u>Malanthemum canadense</u>		<u> </u>	FACU	
3. <u>Equisetum pratense</u>	5	<u> </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Symphyotrichum lateritlorum</u>		<u> N </u>	FAC	be present, unless disturbed or problematic.
5. <u>Hieracium aurantiacum</u>	2	<u> N </u>		Definitions of Vegetation Strata:
6. <u>Poa pratensis</u>	1	<u> N </u>	<u>FACU</u>	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Quercus rubra</u>	1	<u> N</u>	<u>FACU</u>	at breast height (DBH), regardless of height.
8. <u>Vitis riparia</u>	1	N	FAC	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Hieracium umbellatum</u>	1	<u>N</u>	<u> </u>	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Taraxacum officinale</u>	1	N	<u>FACU</u>	Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12			·	Woody vines – All woody vines greater than 3.28 ft in height
	29	= Total Co	ver	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2	<u> </u>		<u> </u>	
3			<u> </u>	Hydrophytic
4				Vegetation Procent? Voc No //
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			· · · · · · · · · · · · · · · · · · ·
I he vegetation at the sample plot is rep	presenta	ative of	upland o	dominated by big-tooth aspen with
ground cover dominated by Equisetum	spp.			

SOIL

Profile Desc	ription: (Describe	to the dept	h needed to docun	nent the i	indicator	or confirm	n the absence of	indicators.)
Depth	Matrix		Redo	<u>x Feature</u>	s1		- ·	5
<u>(inches)</u>	Color (moist)	%	Color (moist)	%	Type'	Loc ²	Texture	Remarks
0-20	<u>5YR 3/2</u>	100		0			LS	
·					·			
·								
		lation DM-	Doducod Matrix, MS	-Mookor	d Sand Cr	aina	² l contion:	RI-Roro Lining M-Matrix
Hydric Soil I	ndicators:				a Sanu Gr	all 15.	Indicators fo	r Problematic Hydric Soils ³
Histopol	(A 1)			v Surface			2 om Mu	
	(AI) Vinadan (A2)	-		v Sunace	(30) (LR I	х κ,	2 cm Mud	CK (A10) (LRR R, L, MLRA 149D)
Block Hi	stic (A2)		Thin Dark Surfa	co (S0) /I			Coast Pro	alle Redox (A10) (LRR R, L, R) sky Post or Post (S3) (LPP K L, P)
	n Sulfide (ΔA)	-	I nin Dark Suna	lineral (F		LKA 1430, 11)) 5 cm Mud Dark Sur	face $(S7)$ (I RR K I)
Trydroge		-	Loamy Gleved I	Matrix (E2		, L /	Dark Sur	Below Surface (S8) (I RR K I)
Oralineo	l Below Dark Surfac	- 	Loanny Oleyeun Depleted Matrix	(F3)	-)		Thin Darl	k Surface (S9) (LRR K I)
Depicted	ark Surface (A12)		Bedox Dark Su	face (F6)			Iron-Man	danese Masses (F12) (LRR K R)
Sandy M	lucky Mineral (S1)	-	Depleted Dark S	Surface (F	-7)		Piedmon	t Eloodplain Soils (E19) (MI RA 149B)
Sandy G	ileved Matrix (S4)	-	Bedox Depress	ions (F8)	')		Mesic Sn	odic (TA6) (MI RA 144A 145 149B)
Sandy B	edox (S5)	-					Red Pare	ent Material (F21)
Stripped	Matrix (S6)						Verv Sha	Illow Dark Surface (TE12)
Dark Sur	face (S7) (I RR R I	MI RA 1498					Other (E)	kolain in Remarks)
³ Indicators of	hvdrophytic vegeta	tion and wet	land hydrology mus	t be prese	ent unles	s disturbed	or problematic	
Restrictive I	aver (if observed)	•		p				
Type		•						
Type.								
Depth (inc	ches):						Hydric Soil Pi	resent? Yes <u>No v</u>
Remarks:							•	
Soils are	loamy sand t	througho	ut the profile.	. No in	dicator	s of hy	dric soil we	re observed. Soils are
well-drair	ned.	Ū	·					





wasd1029_u_N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland Sampling Date: 2020-06-06
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wasd1028f_w</u>
Investigator(s): AGG/OTG	Section, Township, Range: <u>Sec 15 T045N R003W</u>
Landform (hillslope, terrace, etc.): Side Slope	al relief (concave, convex, none): Convex Slope (%): 3-7%
Subregion (I RR or MI RA): Northcentral Forests Lat: 46.375986	Long: -90,728562 Datum: WGS84
Soil Map Unit Name: Udorthents, ravines and escarpments	s, 25 to 60 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year	ar? Yes 🗸 No (If no. explain in Remarks.)
Are Vegetation Soil or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Ves 🖌 No
Are Vegetation Soil or Hydrology naturally pro	blematic? (If needed, evolution any answers in Remarks.)
Are vegetation, Son, or rightiology naturally pro	
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 <u>v</u> No	If yes, optional Wetland Site ID:
	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	eaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (E	315) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfid	le Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizos	spheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Rec	duced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Rec	duction in Tilled Soils (C6) $\underline{\checkmark}$ Geomorphic Position (D2)
Iron Deposits (B5) Inin Muck Surfa	ace (C7) Shallow Aquitard (D3)
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)</u>	4
Saturation Present? Yes <u>v</u> No <u>Depth</u> (inches): (includes capillary fringe)	. <u>3</u> Wetland Hydrology Present? Yes <u>✓</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos	s, previous inspections), if available:

Remarks:

The wetland hydrology regime is seasonally saturated. The feature meets geomorphic position due to its location near a groundwater seep.

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1028f_w

Trop Stratum (Plot size: 30)	Absolute % Cover	Dominar	t Indicator	Dominance Test worksheet:
1 Fravinus pigra	<u>15</u>	<u>opecies</u> V		Number of Dominant Species
1. <u>Flaxinus nigra</u>	<u>15</u>	 		That Are OBL, FACW, or FAC:5(A)
2. <u>Betula allegnanierisis</u>		<u> </u>		Total Number of Dominant
3. <u>Ables balsamea</u>	<u>10</u>	. <u> </u>		Species Across All Strata. <u>5</u> (B)
4. <u>Fraxinus pennsylvanica</u>	5	<u> </u>	FACW	Percent of Dominant Species
5				
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
	45	= Total Co	over	OBL species <u>60</u> x 1 = <u>60</u>
Sapling/Shrub Stratum (Plot size:15)				FACW species <u>52</u> x 2 = <u>104</u>
1. <u>Fraxinus pennsylvanica</u>	25	<u> </u>	FACW	FAC species 32 x 3 = 96
2				FACU species $()$ $x 4 = ()$
3		<u> </u>		$\begin{array}{c} \text{OPL species} \underline{0} x_5 = \underline{0} \\ \text{Column Totals:} \underline{144} (A) \underline{260} (B) \end{array}$
4				$\frac{144}{200}$
5				Prevalence Index = B/A = <u>1.80555555555555555555555555555555555555</u>
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
··	25	- Total Co		_∠ 2 - Dominance Test is >50%
Harb Stratum (Diataiza) 5	_20		Jvei	$_$ 3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>5</u>)	50	V		4 - Morphological Adaptations ¹ (Provide supporting
		<u> </u>		data in Remarks or on a separate sneet)
2. <u>Carex crinita</u>	10	<u> </u>		
3. <u>Equisetum hyemale</u>	5	<u> N </u>	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Onoclea sensibilis</u>	5	<u> N </u>	<u>FACW</u>	be present, unless disturbed or problematic.
5. <u>Equisetum pratense</u>	2	<u>N</u>	FACW	Definitions of Vegetation Strata:
6. <u>Equisetum scirpoides</u>	2	<u>N</u>	FAC	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11			_	of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
	74	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30)				
1				
2				
2				
3				Vegetation
4				Present? Yes <u>v</u> No
Pomarka: (Include photo numbers here or on a separate	U		over	
The feature is a hardwood swamp dom	ninated k	by blacl	k ash an	d yellow birch.
		5		,

SOIL

Profile Desc	cription: (Describe	to the depth	needed to document the indicator	or confirm the absence	e of indicators.)
Depth (inchos)	Matrix	0/.	Redox Features	Loo ² Toxturo	Bomorko
					Remarks
0-12	<u>10YR 2/1</u>	100	0		
12-20	<u>7.5YR 3/2</u>	100	0	<u></u>	
				· ·	
				· ·	
				· ·	
				· ·	
				· ·	
¹ Type: C=C	oncentration, D=Depl	etion, RM=Re	educed Matrix, MS=Masked Sand G	ains. ² Locatio	n: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:			Indicators	s for Problematic Hydric Soils':
Histosol	(A1)		Polyvalue Below Surface (S8) (LR	R R, 2 cm	Muck (A10) (LRR K, L, MLRA 149B)
HISTIC EP Black Hi	oipedon (A2)		MLRA 149B) Thin Dark Surface (SQ) (I PP P M	Coasi	(A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LPR K L P)
Hydroge	en Sulfide (A4)	_	Loamy Mucky Mineral (F1) (LRR #	(, L) Dark	Surface (S7) (LRR K, L)
Stratified	d Layers (A5)	_	Loamy Gleyed Matrix (F2)	Polyv	alue Below Surface (S8) (LRR K, L)
Depleted	d Below Dark Surface	e (A11)	Depleted Matrix (F3)	Thin I	Dark Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)		Redox Dark Surface (F6)	Iron-N	/langanese Masses (F12) (LRR K, L, R)
Sandy M	Aucky Mineral (S1)		Depleted Dark Surface (F7)	Piedn	nont Floodplain Soils (F19) (MLRA 149B)
Sandy G	Bleyed Matrix (S4)		_ Redox Depressions (F8)	Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy R	I Matrix (S6)			Verv	Shallow Dark Surface (TF12)
Dark Su	rface (S7) (LRR R, N	ILRA 149B)		Other	(Explain in Remarks)
		,			
³ Indicators o	f hydrophytic vegetat	ion and wetla	nd hydrology must be present, unles	s disturbed or problemat	ic.
Restrictive I	Layer (if observed):				
Туре:			_		
Depth (in	ches):		_	Hydric Soi	I Present? Yes <u>✓</u> No
Remarks:					
A mucky	mineral layer	was obse	erved over a layer of sar	id.	



wasd1028f_w_N



wasd1028f_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):		
wasd1028	2020-06-06		
Location:	Ecological Landscape:		
PLSS: sec 15 T045N R003W	North Central Forest		
Lat: <u>46.375986</u> Long: <u>-90.728562</u>	Watershed:		
Our to Asking The Color Arithmet Asking town	LSTZ, Marengo River		
County: Ashland Town/City/Village: Ashland town			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Udorthents, ravines and escarpments, 25 to 60 percent slopes	Wetland Type(s):		
	PFO - Hardwood swamp		
Field Verified:		•	
Series not verified. Soils were a fairly thick mucky	Wetland Size:	Wetland Area Impacted	
mineral over sand.	0.8210	0.8210	
	Vegetation:		
	Plant Community	Description(s):	
Hyarology:	The feature is a	hardwood swamp dominated	
The wetland hydrology regime is seasonally	by black ash and yellow birch. Eastern rough sedge and fowl manna grass are common in the herbaceous layer.		
saturated. The feature is located near a			
groundwater seep.			

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	Ν	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
Б	Ň	Ň	In or adjacent to RED FLAG areas
5	Y	Y	List: Trout Streams: Silver Creek
6	Ν	Y	Supports or provides habitat for endangered, threatened or special concern species
7	Ν	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	Y	Y	3 or more strata present (>10% cover)
3	Ν	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	Y	Y	100 m buffer – natural land cover <a>>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	N	Y	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present > 45 days
10	N	N	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	Y	Y	Wetland is connected or contiguous with perennial stream or lake
2	N	Ň	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	Y	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	Y	Ý	Vegetation is inundated in spring
SP	•		Shoreline Protection
1	Y	Y	Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable
	•		Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
2	Y	Y	water levels or high flows – if no, not applicable
3	N	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	Y	Ý	Water flow through wetland is NOT channelized
3	Y	Ý	Dense, persistent vegetation
4	N	Ň	Evidence of flashv hvdrology
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	Y	Provides substantial storage of storm and floodwater based on previous section
2	N	Ň	Basin wetland or constricted outlet
3	Y	Y	Water flow through wetland is NOT channelized
4	Ý	Ý	Vegetated wetland associated with a lake or stream
5	Ý	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	N	N	Natural land cover in 100m buffer area < 50%
GW/			Groundwater Processes
1	V	v	Springs seens or indicators of groundwater present
2			Leastion near a groundwater divide or a beadwater watend
2	N N		Wetland remains a groundwater divide of a frequencies wetland
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	Y	Y	Wetland is within a wellhaad protection area
5	N	N	welland is within a wellnead protection area

Section 1 Comments (Refer to Section 1 numbers)

HU-5: The wetland intersects this RED FLAG area, and discharges water into this trout stream.

FA-1: The feature is a seepage wetland that adjoins silver creek the discharge from the feature flows into the creek.

WH-6: There is an upland island located within the feature. ST-1: The feature is a discharge wetland that outlets into a stream.

GW-1: The feature is seepage-fed.

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

Observed	Potential	Species/Habitat/Comments
	Y	birds
	Y	herpetofauna
	Y	insects

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 scabrata*			PFO	Interrupted
Fraxinus nigra*			PFO	Patchy
Glyceria striata*			PFO	Patchy
Betula alleghaniensis			PFO	Rare
Carex crinita			PFO	Rare
Abies balsamea			PFO	Rare
Alnus incana			PFO	Rare
Equisetum hyemale			PFO	Rare
Fraxinus pennsylvanica			PFO	Rare
Onoclea sensibilis			PFO	Rare
Equisetum scirpoides			PFO	Barren
Thuja occidentalis			PFO	Barren
Tsuga canadensis			PFO	Barren
Athyrium filix-femina			PFO	Barren
Cardamine pensylvanica			PFO	Barren
Carex arctata			PFO	Barren
Carex gracillima			PFO	Barren
Carex stipata			PFO	Barren
Chelone glabra			PFO	Barren
Equisetum pratense			PFO	Barren
Impatiens capensis			PFO	Barren
Juncus effusus			PFO	Barren
Osmunda cinnamomea			PFO	Barren
Phegopteris connectilis			PFO	Barren
Ranunculus hispidus			PFO	Barren
Ribes triste			PFO	Barren
Rubus pubescens			PFO	Barren

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

There is an average diversity of native species present, and the feature represents a typical relatively undisturbed hardwood forest plant community.

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

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,
v		1	<u> </u>	Unprescribed life
~		L		Human trails – unpaved
				Removal of large weedy debrie
				Cover of non-native and/or invasive species
				Pesidential land use
				Lirban commercial or industrial use
				Parking lot
				Golf course
				Gravel nit
				Recreational use (boating ATVs etc.)
				Excavation or soil grading
				Other (list below):
	Buffer	Buffer Historic Image: Construct on the second secon	Buffer Historic Impact Level* Impact Impact Impact Impact	Buffer Historic Impact Level* Relative Frequency** Impact Relative Impact Relative Impact Relative Impact Impact Imp

* 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 very little human disturbance in the direct area. A gravel pit is nearby but outside of the buffer 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	No invasive species were observed, and an average assemblage of native species was present.
Human Use Values	Very few potential observed human uses.
Wildlife Habitat	There is a diversity of habitats within the feature.
Fish and Aquatic Life Habitat	Silver Creek hosts aquatic life, and the wetland may at least provide habitat for herpetofauna, although the feature is a hillside seep that does not have the potential to directly support aquatic life with standing water.
Shoreline Protection	The feature discharges into the Silver Creek and actively erodes the bank. Vegetation may slow this erosion in places.
Flood and Stormwater Storage	The feature is a discharge wetland with dense, persistent vegetation.
Water Quality Protection	The feature is a discharge wetland that filters water through dense vegetation before it is discharged into the Silver Creek.
Groundwater Processes	The feature is fed by groundwater seepage, with partially organic soils.

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: Ashla	and Sa	ampling Date: <u>2020-06-06</u>
--	------------------------------	--------------------------------	---------------------------------
Applicant/Owner: Enbridge		State: Wisconsin	Sampling Point: wasd1028_u
Investigator(s): KDF/OTG	Section, Township, F	Range: sec 15 T045N R	2003W
Landform (hillslope, terrace, etc.): Rise	Local relief (concave, co	onvex. none): Convex	Slope (%): 8-15%
Subregion (I BB or MI BA). Northcentral Forests Lat: 16.37	6050	ong: -90 728428	0.000 (10).
Soil Man Unit Name: I Idorthents, ravines and escaro	<u>5050</u> -	ent slopes NWI classification	
An elimetia (hydrologia conditions on the site typical for this time	nemis, 23 to 00 perc		ли
Are climatic / hydrologic conditions on the site typical for this time	in year? Yes <u>v</u> No		arks.)
Are Vegetation, Soil, or Hydrology signifi	cantly disturbed? Ar	e "Normal Circumstances" pres	ent? Yes <u><</u> No
Are Vegetation, Soil, or Hydrology natura	Ily problematic? (If	needed, explain any answers in	n Remarks.)
SUMMARY OF FINDINGS – Attach site map sho	wing sampling point	t locations, transects, ir	nportant features, etc.
Hydronhytic Vegetation Present? Ves No	Is the Sampl	ed Area	
Hydrophytic Vegetation resent? Yes No	within a Wet	land? Yes	No 🖌
Wetland Hydrology Present? Yes No	If ves. optional	al Wetland Site ID:	
Remarks: (Explain alternative procedures here or in a separate	e report.)		
The upland is representative of a northern	mesic forest syste	em located upslope fr	om Silver Creek.
Sample plot located on an upland island su	irrounded by hard	wood swamp.	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators	s (minimum of two required)
Primary Indicators (minimum of one is required; check all that a	pply)	Surface Soil Cra	icks (B6)
Surface Water (A1) Water-St	ained Leaves (B9)	Drainage Patter	ns (B10)
High Water Table (A2) Aquatic F	auna (B13)	Moss Trim Lines	s (B16)
Saturation (A3) Marl Dep	osits (B15)	Dry-Season Wa	ter Table (C2)
Water Marks (B1) Hydroger	I Sulfide Odor (C1)	Crayfish Burrow	s (C8)
Sediment Deposits (B2) Oxidized	Rhizospheres on Living Ro	oots (C3) Saturation Visibl	e on Aerial Imagery (C9)
Drift Deposits (B3) Presence	of Reduced Iron (C4)	Stunted or Stres	sed Plants (D1)
Algal Mat or Crust (B4) Recent Ir	on Reduction in Tilled Soils	s (C6) Geomorphic Pos	sition (D2)
Iron Deposits (B5)	K Surface (C7)	Shallow Aquitare	d (D3)
Inundation Visible on Aerial Imagery (B7) Other (E)	piain in Remarks)		c Relief (D4)
Sparsely vegetated Concave Surface (bo)			
Field Observations.	achao).		
Surface Water Present? Yes No V Depth (i	icnes):		
Water Table Present? Yes No V Depth (i	iches):		X
Saturation Present? Yes No Depth (i (includes capillary fringe)	iches):	Wetland Hydrology Present?	Yes No
Describe Recorded Data (stream gauge, monitoring well, aeria	photos, previous inspectio	ons), if available:	
Remarks:	re of wotland bydy	alagy wara absaryog	
	15 OF WElland Hyur	blogy were observed	1.

Sampling Point: wasd1028_u

	Absolute	Dominan	t Indicator	
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Dominance Test worksheet:
1. <u>Tsuga canadensis</u>	50	Y	FACU	That Are OBL, FACW, or FAC: (A)
2. <u>Betula alleghaniensis</u>	10	N	FAC	Total Number of Dominant
3. <u>Thuja occidentalis</u>	10	N	FACW	Species Across All Strata: <u>4</u> (B)
4. <u>Picea glauca</u>	5	N	FACU	Percent of Dominant Species
5. <u>Abies balsamea</u>	5	N	FAC	That Are OBL, FACW, or FAC: <u>50</u> (A/B)
6		_		Provalance Index worksheet:
7.				Total % Cover of: Multiply by:
	80	= Total Co	ver	$\frac{1}{OBL \text{ species}} \qquad 0 \qquad \text{ x1 = } 0$
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =
1 Acer saccharum	25	Y	FACU	FAC species <u>75</u> x 3 = <u>225</u>
2 Condus corputa	<u> </u>	 N	FACU	FACU species <u>115</u> x 4 = <u>460</u>
3 Abies balsamea	<u> </u>	N		UPL species x 5 =
4. Erovinus nigro	 	N		Column Totals: <u>216</u> (A) <u>737</u> (B)
4. <u>Flaxinus nigra</u>			FACW	Prevalence Index = B/A = 3.412037037037037
0				Hydrophytic Vegetation Indicators:
0			<u></u>	1 - Rapid Test for Hydrophytic Vegetation
/				2 - Dominance Test is >50%
	40	= Total Co	ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:5)		Ň		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Equisetum hyemale</u>	25	<u> Y </u>		data in Remarks or on a separate sheet)
2. <u>Equisetum scirpoides</u>	25	<u> </u>	FAC	Problematic Hydrophytic Vegetation (Explain)
3. <u>Pteridium aquilinum</u>	15	N	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Equisetum pratense</u>	10	N	FACW	be present, unless disturbed or problematic.
5. <u>Carex pedunculata</u>	5	N	FAC	Definitions of Vegetation Strata:
6. <u>Corylus cornuta</u>	5	N	<u>FACU</u>	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Maianthemum canadense</u>	5	N	FACU	at breast height (DBH), regardless of height.
8. <u>Tsuga canadensis</u>	2	N	<u>FACU</u>	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Mitchella repens</u>	2	N	<u>FACU</u>	and greater than or equal to 3.28 ft (1 m) tall.
10. <i>Maianthemum racemosum</i>	1	N	<u>FACU</u>	Herb – All herbaceous (non-woody) plants, regardless
11. <u>Fraxinus nigra</u>	1	N	FACW	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
	96	= Total Co	ver	height.
Woody Vine Stratum (Plot size: <u>30</u>)				
1.				
2.				
3.				Hydrophytic
4.				Vegetation
	0	= Total Co	ver	Present? Yes No
Remarks: (Include photo numbers here or on a separate	sheet.)			
The vegetation at the sample plot is rep	oresenta	ative of	an uplar	nd dominated by hemlock, with
scattered yellow birch and eastern whit	e cedar	. Groun	a cover	is dominated by Equisetum spp. and
pracken tern. Sparse talse Solomon's s	seal and	partrid	geberry	are also present throughout the
ground layer.				

Profile Desc	cription: (Describe t	o the dept	h needed to document the indicator or confirm	the absence of in	dicators.)
Depth (inches)	Color (moist)	%	<u>Color (moist)</u> <u>%</u> <u>Type¹</u> Loc ²	Texture	Remarks
0-6	7.5YR 3/2	100	0	L	
6-20	7.5YR 2.5/3	100			
020	1.011(2.0/0			F	
		<u> </u>			
·					
		<u> </u>			
		·			
¹ Type: C=C	oncentration, D=Depl	etion, RM=l	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=	Pore Lining, M=Matrix.
Hydric Soil	Indicators:			Indicators for P	roblematic Hydric Soils':
Histosol Histic Fi	(A1) pipedon (A2)	-	Polyvalue Below Surface (S8) (LRR R, MI RA 149B)	2 cm Muck (Coast Prairi	(A10) (LKR K, L, MLRA 149B) e Redox (A16) (I RR K I R)
Black Hi	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 Surfac	e (S7) (LRR K, L)
Stratified	d Layers (A5) d Bolow Dark Surface	. (A 11)	Loamy Gleyed Matrix (F2)	Polyvalue B	elow Surface (S8) (LRR K, L)
Thick Da	ark Surface (A12)	- (ATT) _	Redox Dark Surface (F6)	Iron-Mangai	nese Masses (F12) (LRR K. L. R)
Sandy N	/ucky Mineral (S1)	-	Depleted Dark Surface (F7)	Piedmont Fl	oodplain Soils (F19) (MLRA 149B)
Sandy G	Gleyed Matrix (S4)	-	Redox Depressions (F8)	Mesic Spod	ic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)			Red Parent	Material (F21)
Dark Su	rface (S7) (LRR R, M	LRA 149B)	Other (Expla	ain in Remarks)
		,			,
³ Indicators o	f hydrophytic vegetati	on and wet	land hydrology must be present, unless disturbed o	or problematic.	
Type.	Layer (il observed).				
Dopth (in	choc):			Hvdric Soil Pres	ent? Yes No ✔
Bemarks:	cnes).				·····
Soils are	drv loam thro	uahout [.]	the profile. No indicators of hydric	soil were ob	served.



wasd1028_u_E



wasd1028_u_N

Project/Site: Line 5 Relocation Project	City/County: Ashland Sampling Date: 20)20-05-28
Applicant/Owner: Enhridge	State: Wisconsin Sampling Point:	<u>vase1024e</u> w
	Section Township Pange: Sec 22 T0/5N R003W	
Landform (hillologo torroog etc.): Depression	_ Section, Township, Narge. <u>Sect 22 TO+SIN ROOOW</u>	(0/.). 0_20/
Northcentral Forests		(%). <u>U-270</u>
Subregion (LRR or MLRA): Lat: Lat:	36 Long: <u>-90.725943</u> Datum: _	<u>VVG584</u>
Soil Map Unit Name: <u>Gogebic, very stony-Pence, very stony-Cat</u>	<u>iro complex, 0 to 6 percent slopes</u> NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	/ear? Yes _ ✔_ No (If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significan	ly disturbed? Are "Normal Circumstances" present? Yes <u>v</u>	No
Are Vegetation, Soil, or Hydrology naturally	roblematic? (If needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locations, transects, important feat	ures, 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 re The wetland sample plot was taken within a r meadow/hardwood swamp complex. The roa bordered by roads on the north and east end	Is the Sampled Area within a Wetland? Yes <u>✓</u> No If yes, optional Wetland Site ID: ort.) oadside ditch. The ditch wetland is part of a wet d splits into two private roads, so the feature is S.	 :
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply	<u>Secondary Indicators (minimum of two</u>	<u>o required)</u>
Surface Water (A1) Water-Staine	d Leaves (B9) Drainage Patterns (B10)	
High Water Table (A2) Aquatic Faur	a (B13) Moss Trim Lines (B16)	
Saturation (A3) Marl Deposit	(B15) Dry-Season Water Table (C2)	
Water Marks (B1) Hydrogen St	(filde Odor (C1) Crayfish Burrows (C8)	am (CO)
Sediment Deposits (B2) Oxidized Rhi	20spheres on Living Roots (C3) Saturation Visible on Aerial Image Roduced Iron (C4) Stunted or Stressed Plants (D1)	sry (C9)
Algal Mat or Crust (B4)	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	n in Remarks) Microtopographic Relief (D4)	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)	
Field Observations:		
Surface Water Present? Yes 🖌 No Depth (inche	9s): <u>5</u>	
Water Table Present? Yes No Depth (inche	es):	
Saturation Present? Yes <u>No</u> Depth (inch-	s): Wetland Hydrology Present? Yes N	10
Describe Recorded Data (stream gauge, monitoring well, aerial pho	itos, previous inspections), if available:	
Domorkoj		
The hydrologic regime is seasonally saturate saturation could not be observed. The wet m receives inputs from nearby seepage within t	d. Soils were not sampled, so the water table ar eadow is assumed to be a recharge wetland that he adjacent hardwood swamp.	ıd .t

Sampling Point: wase1024e_w

	Absolute	Dominan	t 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>Ilex verticiliata</u>	<u>5</u>	<u> </u>		That Are OBL, FACW, or FAC: 3 (A)
2. <u>Populus tremuloides</u>		<u> </u>		Total Number of Dominant
3. <u>1 Ilia americana</u>	2	<u> N </u>	FACU	Species Across All Strata: <u>3</u> (B)
4				Percent of Dominant Species
5				Inat Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	12	= Total Co	over	OBL species <u>6</u> x 1 = <u>6</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>60</u> x 2 = <u>120</u>
1. <u>Abies balsamea</u>	2	<u> N</u>	FAC	FAC species 14 x 3 = 42
2. <u>Rubus idaeus</u>	2	N	FAC	FACU species <u>2</u> x 4 = <u>8</u>
3				UPL species $0 \times 5 = 0$
4.				Column Totals: <u>82</u> (A) <u>176</u> (B)
5.				Prevalence Index = B/A = <u>2.15</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		- Total Ca		∠ 2 - Dominance Test is >50%
Hark Stratum (Distaira) 5			Jvei	3 - Prevalence Index is ≤3.0 ¹
<u>Held Stratum</u> (Plot size. <u>5</u>)	50	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Phalans arundinacea</u>	_ <u>_ 50</u>	<u> </u>		data in Remarks or on a separate sneet)
2. <u>Equisetum sylvaticum</u>	5	<u> </u>		
3. <u>Chamaenerion angustifolium</u>	5	<u> </u>	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Scirpus cyperinus</u>	2	<u> N</u>	OBL	be present, unless disturbed or problematic.
5. <u>Typha sp.</u>	2	<u>N</u>	OBL	Definitions of Vegetation Strata:
6. <u>Scirpus microcarpus</u>	2	N	OBL	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Calamagrostis canadensis</u>	0	N	OBL	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
	66	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30)				
1				
2				
2				Usedne s he d'e
0				Vegetation
4		Tatal O		Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	<u> </u>		over	
The vegetation is representative of the	emerge	nt ditch	n wetland	d. Areas within the feature are bare
due to inundation.	-			

Depth	cription: (Describe t Matrix	o the dept	h needed to docui	ment the	Indicator	or confirm	the absence of i	ndicators.)
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
		·						
						<u> </u>		
		···········						
		<u> </u>			<u> </u>			
		·						
		<u> </u>						
¹ Tvpe: C=C	oncentration. D=Depl	etion. RM=	Reduced Matrix. M	 S=Maske	d Sand Gr	ains.	² Location: Pl	_=Pore Lining, M=Matrix,
Hydric Soil	Indicators:	*	,				Indicators for	Problematic Hydric Soils ³ :
<u> </u>	I (A1)	-	Polyvalue Belo	w Surface	e (S8) (LR	R R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)		MLRA 149B)			Coast Prai	rie Redox (A16) (LRR K, L, R)
Black H	listic (A3)	-	Thin Dark Surfa	ace (S9) (LRR R, M	LRA 149B)	5 cm Muck	xy Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)	-	Loamy Mucky I	Mineral (F	1) (LRR K	Σ, L)	Dark Surfa	ice (S7) (LRR K, L)
Stratifie	d Layers (A5)	(Loamy Gleyed	Matrix (F2	2)		Polyvalue	Below Surface (S8) (LRR K, L)
Deplete	ork Surface (A12)	(A11)	Depleted Matrix	X (F3) urface (E6)	\			Surface (S9) (LRR K, L)
Sandy I	Mucky Mineral (S1)	-	Redux Dark Su Depleted Dark	Surface (F0)) E7)			Eloodnlain Soils (E19) (MI RA 149 R)
Sandy (Gleved Matrix (S4)	-	Bedox Depress	sions (F8)	()		Mesic Spo	dic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)	-					Red Paren	t Material (F21)
Stripped	d Matrix (S6)						Very Shall	ow Dark Surface (TF12)
Dark Su	urface (S7) (LRR R, M	LRA 149B)				✓ Other (Exp	lain in Remarks)
2								
°Indicators o	of hydrophytic vegetati	on and wet	land hydrology mus	st be pres	ent, unles	s disturbed	or problematic.	
Restrictive	Layer (If observed):							
Туре:								
Depth (in	iches):						Hydric Soil Pre	sent? Yes <u> </u>
Remarks:				_				
The soils	s were not sam	ipled du	ie to the loca	tion of	the we	etland w	vithin a roads	side ditch. The soils are
assumed	d to be hydric b	ased o	n the presen	ce of h	iydroph	nytic veg	getation and	hydrologic indicators.



wase1024e_w_S



wase1024e_w_W

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling Date: <u>2020-05-28</u>
Applicant/Owner: <u>Enbridge</u>		_ State: <u>Wisconsin</u> Sampling Point: <u>wase1024f_w</u>
Investigator(s): <u>DMP/ARK</u>	Section, Township, Range: <u>Se</u>	ec 22 T045N R003W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, non	ne): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46	.370712 Long: -90	.725757 Datum: WGS84
Soil Map Unit Name: Gogebic, very stony-Pence, very st	ony-Cathro complex, 0 to 6 percent slop	Des NWI classification:
Are climatic / hvdrologic conditions on the site typical for this	s time of vear? Yes ✔ No (If no. explain in Remarks.)
Are Vegetation Soil or Hydrology s	ignificantly disturbed? Are "Normal	Circumstances" present? Yes 🖌 No
Are Vegetation Soil or Hydrology r	naturally problematic? (If needed e	xnlain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map	showing sampling point locatio	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes V	o Is the Sampled Area	
Hydric Soil Present? Yes N	o within a Wetland?	Yes No
Wetland Hydrology Present? Yes <u>v</u> N	o If yes, optional Wetland	Site ID:
Remarks: (Explain alternative procedures here or in a sep	parate report.)	
I ne sample plot was taken within a har	dwood swamp that is part of	a complex that includes a wet
meadow. The road splits into two privat	e roads, so the hardwood sv	wamp is bordered by roads on
the north and east ends.		
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all t	that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Wat	er-Stained Leaves (B9)	Drainage Patterns (B10)
🔽 High Water Table (A2) 🛛 🔄 Aqu	atic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Mar	l Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hyd	rogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxic	lized Rhizospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Pres	sence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Rec	ent 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) Othe	er (Explain in Remarks)	 Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	1	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <u> Ves No</u> De	pth (inches): <u>1</u>	
Water Table Present? Yes <u>v</u> No De	pth (inches): <u>0</u>	
Saturation Present? Yes <u>v</u> No <u>De</u>	pth (inches): 0 Wetland H	ydrology Present? Yes <u><</u> No
Describe Recorded Data (stream gauge, monitoring well, a	aerial photos, previous inspections). if avai	ilable:
(· · · ···· 3····3·, · ················	, ,,,,,,	

Remarks:

The hydrologic regime is seasonally saturated. There was seepage observed within the hardwood swamp and the water table was observed at the soil surface.

Sampling Point: wase1024f_w

Trace Structure (Dist size) 20	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>Populus tremuloides</u>	<u> </u>	<u> </u>		That Are OBL, FACW, or FAC:6(A)
2. <u>Fraxinus nigra</u>	25	<u> </u>	FACW	Total Number of Dominant
3				Species Across All Strata: <u>6</u> (B)
4			·	Percent of Dominant Species
5			·	Inat Are OBL, FACVV, or FAC:(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 species <u>47</u> x 2 = <u>94</u>
1. <u>Viburnum lentago</u>	25	Y	FAC	FAC species X 3 =25
2. <u>Ilex verticillata</u>	5	N	FACW	FACU species <u>9</u> x 4 = <u>36</u>
3. <u>Cornus alba</u>	5	N	FACW	UPL species $0 \times 5 = 0$
4.				Column Totals: 151 (A) 375 (B)
5.				Prevalence Index = B/A = 2.4834437086092715
6.			·	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	35	- Total Co	vor	_∠ 2 - Dominance Test is >50%
Hark Stratum (Plat size) 5		- 10181 00	vei	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>5</u>)	45	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Calamagrostis canadensis</u>	<u></u>	<u> </u>		data in Remarks or on a separate sneet)
2. <u>Equisetum sylvaticum</u>		<u> </u>		
3. <u>Carex stipata</u>	5	<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Rubus pubescens</u>	5	<u> Y </u>	FACW	be present, unless disturbed or problematic.
5. <u>Carex gracillima</u>	5	<u> N</u>	<u>FACU</u>	Definitions of Vegetation Strata:
6. <i>Maianthemum racemosum</i>	2	N	<u>FACU</u>	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Onoclea sensibilis</u>	2	N	<u>FACW</u>	at breast height (DBH), regardless of height.
8. <u>Fragaria virginiana</u>	2	N	<u>FACU</u>	Sapling/shrub – Woody plants less than 3 in. DBH
9			·	and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11			·	of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	41	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1				
2				
2			·	Under a lock -
0				Vegetation
4		- Total Ca	·	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	U		ver	
The vegetation is representative of the	hardwo	od swai	mp com	munity. The canopy is dominated by
quaking aspen. The shrub layer is a mi	x of nan	nyberry	, winter	berry, and red-osier dogwood. The
herbaceous layer is dominated by dwa	rf raspbe	erry and	d Canad	a bluejoint.

SOIL

Profile Desc	cription: (Describe	to the de	oth needed	to docun	nent the i	ndicator	or confirm	the absence of indicators	s.)	
Depth	Matrix			Redox	x Features	s 1	. 2	— .	-	
(inches)	Color (moist)	<u>%</u>		noist)		Type [*]			Remarks	
	<u>10YR 3/2</u>	98	<u>7.5YR</u>	4/4		<u>C</u>	M			
	<u>10YR 4/2</u>	95	<u>7.5YR</u>	4/6	_5	_C	M	_SCL_		
9-18	<u>10YR 5/1</u>	95	<u>7.5YR</u>	4/6	5	C	M	SCL		
18-20	10YR 5/4	95	7.5YR	4/6	5	С	М	FSL		
	<u></u>									
						·				
<u> </u>						<u> </u>			,	
¹ Type: C=C	oncentration, D=Dep	etion, RM	I=Reduced N	/atrix, MS	S=Masked	Sand Gra	ains.	² Location: PL=Pore Lin	ning, M=Matrix.	
Hydric Soli			Dohava	lue Delev	v Curfaga			andicators for Problema	ATIC HYDRIC SOIIS :	
Histosol Histic Fi	ninedon (A2)		Polyva	1100 Delov	v Sunace	(30) (LR	К К,	Coast Prairie Redox	(A16) (IRRKIR)	
Black H	istic (A3)		Thin D	ark Surfa	ce (S9) (L	.RR R. MI	_RA 149B	5 cm Mucky Peat or	Peat (S3) (LRR K. L. R)	
Hydroge	en Sulfide (A4)		Loamy	Mucky N	lineral (F1	1) (LRR K	, L)	Dark Surface (S7) (L	.RR K, L)	
Stratifie	d Layers (A5)		Loamy	Gleyed N	Matrix (F2)		Polyvalue Below Sur	rface (S8) (LRR K, L)	
Deplete	d Below Dark Surface	e (A11)	_∠ Deplet	ed Matrix	(F3)			Thin Dark Surface (S	69) (LRR K, L)	
Thick Da	ark Surface (A12)		Redox	Dark Sur	face (F6)			Iron-Manganese Ma	sses (F12) (LRR K, L, R)	
Sandy N	Aucky Mineral (S1)		Deplet	ed Dark S	Surface (F	.7)		Piedmont Floodplain Soils (F19) (MLRA 149B) Mosic Spedic (TA6) (MLRA 144A 145 149B)		
Sandy G		Depress	ions (Fo)			INESIC Spould (TA0) Red Parent Material	(WILKA 144A, 143, 149D) (F21)			
Stripped	d Matrix (S6)							Very Shallow Dark Surface (TF12)		
Dark Su	urface (S7) (LRR R, N	ILRA 149	B)					Other (Explain in Remarks)		
31	f h		معاميه والمعر والمع		4 h a		مانية بسامية ما	an machtana stia		
Restrictive	a nydropnylic vegetal	ion and w	eliano nyoro	logy mus	t be prese	ent, uniess	saisturbea	or problematic.		
Type:	_ujoi (ii obooi tou)i									
Denth (in	ches).							Hydric Soil Present?	Yes ✔ No	
Remarks [.]	<u> </u>							-		
The soil	profile consist	s of a o	dark clav	/ loam	over t	hree of	her lav	ers. The middle two	o lavers are	
depleted	sandv clav lo	ams. a	nd the b	ottom	laver i	s a bro	wnish	arav fine sandv loa	m. Ředox	
concentr	ations were of	oserve	d throua	hout th	ne prof	ile.		, <u> </u>		
					- 1 2-	-				





wase1024f_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):				
wase1024	2020-05-28				
Location:	Ecological Landsca	ape:			
PLSS: sec 22 T045N R003W	Superior Mineral Ranges	3			
		-			
Lat: <u>46.370660</u> Long: <u>-90.725759</u>	Watershed:				
Country Achland Town (Oth Wills no. Achland town	LOTZ, Marengo River				
County: Ashland Town/City/village: Ashland town					
Soils:	WWI Class:				
Manned Type(s)	N/A				
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent	Wetland Type(s):				
slopes	PFO/PEM - hardwood swamp/fresh wet meadow complex				
Field Verified:					
Soil series not verified. Soils were a clay loam	Wetland Size:	Wetland Area Impacted			
over sandy clay loam over fine sandy loam, and	0.1992	0.1992			
were reduced throughout the sampled profile	Vegetation:				
	Plant Community D	Description(s):			
Hydrology:	In the hardwood swamp	component, quaking aspen is dominant, with			
The hydrologic regime is seasonally saturated.	black ash and and nannyberry are abundant. The ground layer is				
Groundwater seepage occurs throughout the forested	wild strawberry, and sensitive fern most abundant. The fresh wet				
portion of the wetland complex, and flows into the wet	meadow component is d	lominated mainly by reed canary grass.			
meadow.					

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	N	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	Y	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			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	N	N	100 m buffer – natural land cover <u>></u> 50%(south) 75% (north) intact
5	N	N	Occurs in a Joint Venture priority township
6	Y	Y	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	Y	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
	<u> </u>	·	plans
8	N	Y	Part of a large nabilal block that supports area sensitive species
9	N	N	Ephemeral pond with water present <u>>45 days</u>
10	Y	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudilats present
	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA	l		FISH and Aquatic Life Habitat
1	N	N	Vetiand is connected or contiguous with perennial stream or lake
2	Y	Y	Standing water provides nabitat 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, neavy boat traffic, erosive solis, fluctuating
2	N	NI	Densely rested emergent or weedy vegetation
<u>्</u> र	N	N	Storm and Eleadwater Storage
31	N	X	Paoin watland constricted outlet, has through flow or is adjacent to a stream
2	N N	Y Y	Water flow through wetland in NOT channelized
2		Ý V	
3	Y	Y	Evidence of floops hydrology
4	N	N N	Deint er nen neint eguree inflew
5	Y	Y	Point of hon-point source innow
7	N N	IN N	Within a watershed with <10% wetland
/ Q			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	N	v	Provides substantial storage of storm and floodwater based on previous section
2			Rasin wetland or constricted outlet
3		I V	Water flow through wetland is NOT channelized
4		N	Vegetated wetland associated with a lake or stream
5			Dense persistent vegetation
6		I I	Signs of excess nutrients, such as algae blooms, beauv macrophyte growth
7			Stormwater or surface water from agricultural land is major hydrology source
/ 8		T V	Discharge to surface water
0		I NI	Natural land cover in 100m huffer area < 50%
G\M			Groundwater Processes
300	× ×	N/	Chringe acone or indicators of groundwater present
1	Y	Y	Springs, seeps or indicators or groundwater present
2	N	<u>N</u>	Location near a groundwater divide or a headwater wetland
3	N	Y	vetiand remains saturated for an extended time period with no additional water inputs
4	N	N	
5	I N	I N	vetiand is within a weilnead protection area

WH-6: Part of a large complex of forest, meadow wetland and upland, that supports a diversity of wildlife species. FA-2: Unidentified frogs observed.

ST-1/ST-5: Seepage water flowers from the forested component to the emergent component, where it pools due to a gravel road creating depressional topography.

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	Ovenbird, rose-breasted grosbeak, veerywhite-throated sparrow, eastern gray tree frog.		
Y	Y	Frogs		
	Y	Other avian species, herpetofauna		

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

Observed	Potential	Species/Habitat
	Y	Pools of water in the wet meadow have potential to support 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)
Viburnum lentago*			PFO	Interrupted
Populus tremuloides*			PFO	Patchy
Fraxinus nigra*			PFO	Rare
Phalaris arundinacea*			PEM	Rare
Acer rubrum			PFO	Rare
Calamagrostis canadensis			PEM	Barren
Calamagrostis canadensis			PFO	Barren
rubus pubescens			PFO	Barren
Cornus alba			PFO	Barren
Equisetum sylvaticum			PFO	Barren
Onoclea sensibilis			PFO	Barren

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

Moderate diversity of native species. Invasive species are limited to the wet meadow (reed canary grass).

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
					Filling, berms (non-impounding)
Х	Х		М	UC	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		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.
					Removal of tree or shrub strata – logging,
					unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
X	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)

Gravel and dirt roads bound the wetland and impede water flow at the eastern and northern boundaries.

SUMMARY OF FUNCTIONAL VALUES

FUNCTION			SIGNIFICANC	E	
	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	Moderate diversity in the forested portion of the wetland, with reed canary grass abundant in the wet meadow.
Human Use Values	Private land. Relatively high value to those who have access.
Wildlife Habitat	Part of a large tract of forest with potential to support many wildlife species.
Fish and Aquatic Life Habitat	Small pools in the wet meadow may support aquatic invertebrates.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is small and has some discharge hydrology, but this water pools in the emergent component.
Water Quality Protection	See above. The feature is densely vegetated.
Groundwater Processes	Water table intersects the surface at multiple locations within the forested component. Water flows downslope into the emergent component.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

Project/Site: Line 5 Relocation Project	_ City/County: <u>Ashland</u>	Sampling	Date: <u>2020-</u>	<u>05-28</u>
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Samplin	g Point: wase	1024_u
Investigator(s): DMP/ARK	Section, Township, Range: <u></u>	ec 22 T045N R003V	V	
Landform (hillslope, terrace, etc.): <u>Rise</u>	Local relief (concave, convex, no	one): <u>None</u>	_ Slope (%): _	0-2%
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.3705</u>	57 Long: <u>-9</u>	0.725610	Datum: <u>WG</u>	<u>S84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Ca	thro complex, 0 to 6 percent sl	opes 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 significar	Itly disturbed? Are "Norma	al Circumstances" present? Y	es 🖌 No)
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed,	explain any answers in Remar	ˈks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No <u>v</u> No <u>v</u>	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No 🖌	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed The upland sample point observed.	dures here or in a was taken	a separate report.) within a young	g mesic forest. No wetland parameters 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 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	pils (C6) Geomorphic Position (D2)		
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)		
Field Observations:			
Surface Water Present? Yes <u>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>Unches</u>	Wetland Hydrology Present? Yes No		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:		
Remarks: No indicators of wetland hydrology were observed.			

Sampling Point: wase1024_u

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree stratum</u> (Plot size. <u>50</u>)	<u>% Cover</u>	<u>Species</u> ?		Number of Dominant Species
		 		That Are OBL, FACW, or FAC: (A)
	<u> </u>	<u>I</u>		Total Number of Dominant
3. <u>Picea giauca</u>		<u>IN</u>	<u>FACU</u>	Species Across Air Strata. D (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:
	90	= Total Co	ver	OBL species x1 =
Sapling/Shrub Stratum (Plot size: 15)	_			FACW species 55 $x^2 = 110$
1. Viburnum acerifolium	3	<u> </u>	UPL	FAC species 3 $x_3 = 15$
2. <u>Viburnum lentago</u>	3	<u> </u>	FAC	UPL species $3 \times 5 = 15$
3. <u>Diervilla Ionicera</u>	2	Y		Column Totals: 151 (A) 492 (B)
4. <u>Tilia americana</u>	2	N	<u>FACU</u>	
5. <u>Abies balsamea</u>	2	N	FAC	Prevalence Index = $B/A = \frac{3.2582781456953644}{2}$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	12	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is $\leq 3.0^{\circ}$
1. Ervthronium cf albidum	50	Y	FACU	 4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2. Anemone guinguefolia	1	N	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3.				
4				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8			. <u></u>	Sapling/shrub – Woody plants less than 3 in. DBH
9			<u> </u>	and greater than of equal to 5.26 it (1 m) tail.
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3 28 ft tall
11				
12				height.
	51	= Total Co	ver	
Woody Vine Stratum (Plot size: <u>30</u>)				
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.)	dina		a concervic a mixture of black ach
The vegetation is representative of the		ang up		ne canopy is a mixture of black ash,
sugai mapie, basswoou, and writte spr				ayer is dominated by white trout my.

SOIL

Profile Desc	cription: (Describe	to the depth	n needed to docun	nent the	indicator	or confirm	the absence of	indicators.)		
Depth (inchos)	Matrix	0/	Redo:	x Feature	S Turne ¹	1 = = 2	Tautuma	Deve evice		
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type	Loc		Remarks		
0-15	<u>7.5YR 3/2</u>	100		0						
15-20	<u>7.5YR 3/3</u>	100		0						
·					·					
					·					
							·			
							·			
¹ Type: C=C	oncentration. D=Dec	letion. RM=F	Reduced Matrix. MS	S=Maske	d Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix,		
Hydric Soil	Indicators:		,				Indicators fo	r Problematic Hydric Soils ³ :		
Histosol	(A1)		Polyvalue Belov	v Surface	(S8) (LR	R,	2 cm Muo	ck (A10) (LRR K, L, MLRA 149B)		
Histic E	oipedon (A2)		MLRA 149B)				Coast Pra	airie Redox (A16) (LRR K, L, R)		
Black Hi	stic (A3)	_	Thin Dark Surfa	ce (S9) (I	LRR R, M	LRA 149B)	5 cm Mud	cky Peat or Peat (S3) (LRR K, L, R)		
Hydroge	en Sulfide (A4)	_	Loamy Mucky N	lineral (F	1) (LRR K	, L)	Dark Sur	face (S7) (LRR K, L)		
Stratified	d Layers (A5) d Bolow Dark Surfac		Loamy Gleyed I Doploted Matrix		<u>2</u>)		Polyvalue			
Thick D	ark Surface (A12)	e (ATT) _	Depleted Math	face (F6)	1		Iron-Man	danese Masses (F12) (I RR K I R)		
Sandy N	lucky Mineral (S1)	_	Depleted Dark S	Surface (F	- -7)		Piedmon	t Floodplain Soils (F19) (MLRA 149B)		
Sandy G	Gleyed Matrix (S4)		Redox Depress	ions (F8)	,		Mesic Sp	odic (TA6) (MLRA 144A, 145, 149B)		
Sandy F	Redox (S5)						Red Pare	ent Material (F21)		
Stripped	Matrix (S6)						Very Shallow Dark Surface (TF12)			
Dark Su	rface (S7) (LRR R, I	MLRA 149B)					Other (Ex	xplain in Remarks)		
³ Indicators o	f hydrophytic yogota	tion and wot	and hydrology mus	t ha pros	ont unlos	e disturbod	or problematic			
Restrictive	aver (if observed)		and hydrology mus	t be pres	ent, unies	s distui bed				
Type										
турс. <u> </u>							Hydric Soil Pr	rosant? Vas No 🖌		
Depth (In	ches):									
Remarks:	profile conciet	o of o dr	v and brown			or loom	No hydrio	coil indicators wore		
		.5 01 a ui	y and brown	ciay ic	Jan Ov		. No nyunc	soli indicators were		
observed	J.									



wase1024_u_E



wase1024_u_SW

Project/Site: Line 5 Relocation Project	City/County: Ashla	nd Sampling) Date: <u>20</u>	<u>)20-05-28</u>
Applicant/Owner: <u>Enbridge</u>		State: <u>Wisconsin</u> Sampli	ing Point: <u>N</u>	wase1025f_w
Investigator(s): DMP/ARK	Section, Township, R	ange: <u>sec 22 T045N R003</u>	W	
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, co	nvex, none): <u>Concave</u>	Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.37	' 0394 Lo	ng: <u>-90.725632</u>	Datum:	WGS84
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-	Cathro complex, 0 to 6 per	cent slopes 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 r	eeded, explain any answers in Rema	arks.)	
SUMMARY OF FINDINGS – Attach site map sho	wing sampling point	locations, transects, import	ant feat	ures, etc.
Hydrophytic Vegetation Present? Yes 🗸 No	Is the Sample	d Area		

Hydrophytic Vegetation Present?	Yes 🖌 No	Is the Sampled Area
Hydric Soil Present?	Yes 🖌 No	within a Wetland? Yes <u> Ves No</u>
Wetland Hydrology Present?	Yes 🖌 No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedu The sample plot is located road located just to the eas wase1024_u.	res here or in a separate report.) within a hardwood swa st of the feature. This we	mp with discharge hydrology. There is a private etland point shares upland sample point

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 (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>10</u>	
Saturation Present? Yes <u>v</u> No Depth (inches): <u>8</u>	Wetland Hydrology Present? Yes 🧹 No
(Includes capillary fringe)	tions) if available:
beschibe Recorded Data (stream gauge, monitoring weil, aenai photos, previous inspec	uons), ii available.
Remarks: The feature is a discharge wetland that is seasonally satura	ated.

Sampling Point: wase1025f_w

Tree Stratum (Plot size: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1 Populus tremuloides	<u>50</u>	<u>Species</u>		Number of Dominant Species
2. Fravinus nigra	25			That Are OBL, FACW, or FAC: <u>9</u> (A)
2. <u>Flaxinus nigia</u> 3. Acer rubrum	_ <u></u>	 N	FAC	Total Number of Dominant
4			·	Percent of Dominant Species That Are OBL_FACW_or_FAC ⁻ 100 (A/B)
5			·	
0				Prevalence Index worksheet:
/				Total % Cover of: Multiply by:
45	0	= Total Co	ver	OBL species $8 \times 1 = 8$
Sapling/Shrub Stratum (Plot size: 15)	_	V		FACW species 52 x 2 - 104
1. <u>Cornus alba</u>		<u> </u>	FACW	FACU species $0 \times 4 = 0$
2. <u>Ilex verticillata</u>	2	<u> Y </u>	FACW	UPL species $0 \times 5 = 0$
3. <u>Fraxinus nigra</u>	2	<u> </u>	<u>FACW</u>	Column Totals: <u>125</u> (A) <u>307</u> (B)
4				
5			·	Prevalence index = $B/A = 2.450$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	9	= Total Co	ver	\sim 2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)				\sim 3 - Prevalence index is ≤ 3.0
1. <u>Onoclea sensibilis</u>	5	Y	FACW	data in Remarks or on a separate sheet)
2. <u>Matteuccia struthiopteris</u>	5	Y	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Athyrium angustum</u>	5	Y	FAC	1
4. <u>Equisetum sylvaticum</u>	5	Y	FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Carex stipata</u>	2	N	OBL	Definitions of Vegetation Strata
6. <u>Juncus effusus</u>	2	N	OBL	
7. <u>Epilobium ciliatum</u>	2	N	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8. Glyceria striata	2	N	OBL	Sepling/ohrub Weedy plants loss than 2 in DPH
9. Dryopteris carthusiana	2	Ν	FACW	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Solidago gigantea</u>	2	Ν	FACW	Herb – All herbaceous (non-woody) plants, regardless
11. <u>Rubus pubescens</u>	2	N	FACW	of size, and woody plants less than 3.28 ft tall.
12. <u>Scirpus microcarpus</u>	2	N	OBL	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.)			1
The vegetation is representative of the	hardwo	od swai	mp com	munity. Quaking aspen and black ash

dominate the canopy and the shrub cover is sparse. The herbaceous layer is made up of patchy cover of ferns and sedges.

SOIL

Profile Desc	ription: (D	escribe	to the dep	th needed	to docur	nent the i	ndicator	or confirm	the absence	of indicato	rs.)	
Depth		Matrix			Redo	x Feature	S					
(inches)	<u>Color (</u>	<u>moist)</u>	%	<u>Color (</u> r	noist)	%	Type ¹	Loc ²	Texture		Remarks	
0-12	<u>7.5YR</u>	3/1	98	<u>7.5YR</u>	4/6	2	C	M	<u> </u>			
12-20	5YR	5/4	100			0			FSL	_		
·												
1	. <u></u>							. <u> </u>				
Type: C=Co	ncentration	n, D=Dep	letion, RM	Reduced I	Matrix, MS	S=Masked	Sand Gr	ains.	² Location	: PL=Pore L	<u>ining, M=Matrix.</u>	
Histosol	(A 1)			Pohar		N Surfaca	(58) (1 0					
Histic Ep	ipedon (A2)		FOIyVa	RA 149B		(30) (LR	、 Γ,	2 cm w	Prairie Redo	(A16) (LRR K. L. R)	
Black His	stic (A3)	/		Thin Dark Surface (S9) (LRR R, MLRA 149B)) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)			
Hydroger	n Sulfide (A	(4)		Loamy Mucky Mineral (F1) (LRR K, L)					Dark Surface (S7) (LRR K, L)			
Stratified	Layers (A	5)		Loamy	/ Gleyed	Matrix (F2)		Polyva	lue Below S	urface (S8) (LRR K, L)	
Depleted	Below Da	k Surface	e (A11)	Deplet	ted Matrix	(F3)			Thin D	ark Surface	(S9) (LRR K, L)	
Thick Da	rk Surface	(A12)		Redox	Dark Su	rface (F6)	-7)		Iron-Manganese Masses (F12) (LRR K, L, R)			
Sandy M	leved Matri	ar (ST) x (S4)		Depier		surface (F	7)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
Sandy Re	edox (S5)	x (0+)							Red Parent Material (F21)			
Stripped	Matrix (S6)							Very Shallow Dark Surface (TF12)			
Dark Sur	face (S7) (LRR R, N	ILRA 149	3)					Other (Explain in Remarks)			
31	L l L											
Restrictive I	aver (if oh	c vegetat	ion and We	suana nyaro	nogy mus	s be prese	ent, uniess	susturbed	or proplemation			
Type												
Depth (inc	hes).								Hydric Soil	Present?	Yes 🖌 No	
Remarks:												
The soil r	orofile c	onsist	s of a c	lark loai	m ovei	r a red	fine sa	andv loa	am. Redox	k was ob	served within the	
top laver.	and Re	edox D)ark Su	irface w	as me	t.						
,						••						



wase1025f_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):			
wase1025	2020-05-28			
Location:	Ecological Landsca	ape:		
PLSS: sec 22 T045N R003W	Superior Mineral Range	S		
		-		
Lat: <u>46.370411</u> Long: <u>-90.725615</u>	Watershed:			
Country Achland Town (City) (Village, Achland town				
County: <u>Ashland</u> Town/City/Village: Ashland town				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent	Wetland Type(s):			
slopes	PFO - hardwood swamp			
Field Verified:				
Soil series not verified. Soils were a loam over	Wetland Size:	Wetland Area Impacted		
fine sandy loam.	0.0217	0.0217		
	Vegetation:			
	Plant Community Description(s):			
Hydrology:	Quaking aspen and black ash are dominant.			
Some slight groundwater seepage may be	Nannyberry and red osier dogwood are			
present. The feature is seasonally saturated with	common and th	e around laver has a diverse		
discharge hydrology.	assemblage of k	orbe		
	assemblage of I	10103.		

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	N	Visually or physically accessible to public
4	Y	Y	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas
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	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			Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
1	Ŷ	Ŷ	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	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	Ν	N	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	N	Y	Dense, persistent vegetation
4	N	N	Evidence of flashy hydrology
5	N	N	Point or non-point source inflow
6	N	N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <10% wetland
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			water Quality Protection
	N	<u>N</u>	Provides substantial storage of storm and floodwater based on previous section
2	N	N N	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
	N	Y	Stormwater or surface water from agricultural land is major hydrology source
8	Y	Y Y	Discharge to surface water
9	N	N	INatural land cover in 100m putter 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	N	Y	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

WH-6: Part of a large complex of forest, meadow wetland and upland, that supports a diversity of wildlife species. ST-3: Canopy cover is dense, but herbaceous vegetative cover is fairly sparse.

> 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	Ovenbird, white-throated sparrow, rose-breasted grosbeak, pileated woodpecker
	Y	Other avian species

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

Observed	Potential	Species/Habitat

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	Interrupted
Fraxinus nigra*			PFO	Patchy
Acer rubrum			PFO	Rare
Cornus alba			PFO	Rare
Equisetum sylvaticum			PFO	Rare
llex verticillata			PFO	Rare
Onoclea sensibilis			PFO	Rare
Carex stipata			PFO	Barren
Dryopteris carthusiana			PFO	Barren
Epilobium ciliatum			PFO	Barren
Glyceria striata			PFO	Barren
Juncus effusus			PFO	Barren
Matteuccia struthiopteris			PFO	Barren
Rubus pubescens			PFO	Barren
Scirpus microcarpus			PFO	Barren
Solidago gigantea			PFO	Barren
Viburnum lentago			PFO	Barren
Athyrium angustum			PFO	Barren

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities) The feature exhibits high diversity for its size, with an absence of non-native species.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

Several gravel roads are present in the buffer area, and some small agricultural areas are nearby.

SUMMARY OF FUNCTIONAL VALUES

FUNCTION	SIGNIFICANCE				
Ī	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	High diversity for its size.
Human Use Values	Private land. High value for owners, but the public has no access.
Wildlife Habitat	The feature is located in a large block of forested habitat, with multiple strata present.
Fish and Aquatic Life Habitat	Insufficient durations of standing water.
Shoreline Protection	N/A
Flood and Stormwater Storage	Occurs partially on a slope.
Water Quality Protection	The water table is exposed in the feature.
Groundwater Processes	Groundwater seepage may be 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: <u>Ashland</u>	Sampling Date: <u>2020-06-06</u>
Applicant/Owner: <u>Enbridge</u>	State: Wisco	nsin Sampling Point: wasd1030s_w
Investigator(s): AGG/OTG	_ Section, Township, Range: <u>Sec 15 T045</u>	5N R003W
Landform (hillslope, terrace, etc.): Depression	ocal relief (concave, convex, none): <u>Concav</u>	<u>'e</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.3752</u>	12 Long: <u>-90.722881</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Cath	nro complex, 0 to 6 percent slopes NWI classi	ification:
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 🖌 No
Are Vegetation, Soil, or Hydrology naturally p	oroblematic? (If needed, explain any answ	<i>w</i> ers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes <u> </u>	Is the Sampled Area within a Wetland? Yes <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 feature is a large basin wetland that appears to be fed by drainage from a nearby gravel pit. Meadow willow, yellow lake sedge, and Canada bluejoint are dominants. It appears there has been a failed attempt to drain the wetland with a ditch to the north. The ditch feature has filled in with water and hydrophytic vegetation. Within the ditch there is no evidence of flow and no indicators of OHWM. The ditch terminates abruptly at a man-made berm within the survey corridor.

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 (0)	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	Depth (inches): <u>0</u>	
Saturation Present? Yes <u>v</u> No (includes capillary fringe)	Depth (inches): 0 Wetla	nd Hydrology Present? Yes <u> No</u>
Describe Recorded Data (stream gauge, monito	oring well, aerial photos, previous inspections), if	available:

Remarks:

The wetland hydrology regime is seasonally saturated. Saturation and water table were observed at the surface. It appears there has been a failed attempt to drain the wetland with a ditch to the north. The ditch feature has filled in with water and hydrophytic vegetation. Within the ditch there is no evidence of flow and no indicators of OHWM.

Sampling Point: wasd1030s_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:3(A)
2				Total Number of Dominant
3		. <u></u>		Species Across All Strata: (B)
45			·	Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
6.				Devidence Index worksheet
7				Total % Cover of Multiply by
	0	= Total Co	ver	OBL species 75 x1 = 75
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>42</u> x 2 = <u>84</u>
1. Salix petiolaris	40	Y	FACW	FAC species x 3 =3
2.			<u></u>	FACU species x 4 =0
3				UPL species x 5 =
аа				Column Totals: <u>118</u> (A) <u>162</u> (B)
5				Prevalence Index = B/A = <u>1.3728813559322033</u>
6				Hydrophytic Vegetation Indicators:
7				 1 - Rapid Test for Hydrophytic Vegetation
/	40			2 - Dominance Test is >50%
	40		ver	\checkmark 3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:)	50	V	OBI	4 - Morphological Adaptations ¹ (Provide supporting
2. Calamagrostis canadonsis	<u> </u>	 		Problematic Hydrophytic Vegetation ¹ (Explain)
	<u></u>	 N		
3. <u>Equiseium sylvalicum</u>		<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
		<u> </u>	<u>FAC</u>	be present, unless disturbed or problematic.
5		·	·	Definitions of Vegetation Strata:
0				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
/				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9 10			·	
10				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	78	= Total Cov	ver	height.
Woody Vine Stratum (Plot size: 30)		rotar oo		
1				
2				
2			·	the describe of a
а Л				Vegetation
- T		- Total Co		Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	sheet)			
The feature is a shrub-carr dominated l bluejoint.	by mead	low will	ow and	yellow lake sedge with Canada
SOIL				

Profile Desc	ription: (D	escribe	to the dep	th needed to docun	nent the	indicator	or confirm	the absence	of indicators.)
Depth		Matrix		Redox	x Feature	s			
(inches)	Color (r	noist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-14	<u>10YR</u>	2/1	100		0			MP	
14-20	10YR	5/2	100		0			SICI	
	<u></u>								
			·		·				
·			·		·	·			
			·			<u> </u>			
			·		·	·			
						·			
					·				
1		_				- <u> </u>	<u> </u>	2.	
'Type: C=C	oncentration	n, D=Dep	letion, 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":
Histosol	(A1)			Polyvalue Belov	v Surface	e (S8) (LRF	RR,	2 cm M	luck (A10) (LRR K, L, MLRA 149B)
Histic Ep	bipedon (A2)		MLRA 149B)				Coast F	Prairie Redox (A16) (LRR K, L, R)
Black Hi	stic (A3)	4)		Thin Dark Surfa	ice (S9) (I Ainerel /E		LRA 149B)) 5 cm M	lucky Peat or Peat (S3) (LRR K, L, R)
Hydroge Stratifia	en Suinde (A	(4) =)		Loamy Mucky N	Anneral (F	1) (LRR R	, L)	Dark S	uriace (S7) (LRR N, L)
Stratilied	d Bolow Dar) k Surfaci	→ (Δ11)	Loany Gleyeu n	viau ix (F2 √(E3)	<u>~</u>)		Folyval Thin Dr	ark Surface (SQ) (LRR R, L)
Depleted	ark Surface	(A12)		Depleted Matinx Redox Dark Sur	face (F6)	`		Iron-Ma	and Surface (35) (ERCK, E)
Sandy M	lucky Miner	al (S1)		Depleted Dark S	Surface (F	, =7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy G	Bleved Matri	x (S4)		Redox Depressi	ions (F8)	.,		Mesic S	Spodic (TA6) (MLRA 144A. 145. 149B)
Sandy F	Redox (S5)							Red Pa	arent Material (F21)
Stripped	Matrix (S6))						Very SI	hallow Dark Surface (TF12)
Dark Su	rface (S7) (I	LRR R, N	ILRA 149E	B)				Other (Explain in Remarks)
³ Indicators o	f hydrophyti	c vegetat	ion and we	tland hydrology mus	t be pres	ent, unless	s disturbed	or problematic	
Restrictive	Layer (if ob	served):							
Туре:									
Depth (in	ches).							Hydric Soil	Present? Yes ✔ No
Bomorko:	oneo)							-	
A thick m	nucky ne	ot lov	or was	observed at th		faca T	ha saila	e are eatur	ated throughout the profile
	lucky pe	satiay			ie sui			s are satur	ated infoughout the prome.



wasd1030s_w_S



wasd1030s_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):		
wasd1030	2020-06-06		
Location:	Ecological Landsca	ape:	
PLSS: sec 15 T045N R003W	North Central Forest		
Lat: <u>46.375212</u> Long: <u>-90.722881</u>	Watershed:		
Our to Asking The Cold All to Ma	LOTZ, Marengo River		
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u>			
SITE DESCRIPTION	1		
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent	Wetland Type(s):		
slopes. Pits.	PSS - Shrub-carr		
Field Verified:			
Series not verified. Soils were a thick layer of	Wetland Size:	Wetland Area Impacted	
dark mucky peat over silty clay loam.	0.3253	0.3253	
	Vegetation:		
	Plant Community D	Description(s):	
Hydrology:	The feature is ashrub-carr dominated by meadow willow and yellow lake sedge, with		
The wetland hydrology regime is seasonally			
saturated. Saturation and water table were	Canada blueioin	it also prevalent.	
observed at the surface of the wetland.			

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	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	Ν	Ν	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	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	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	Y	Y	Vegetation is inundated in spring
SP			Shoreline Protection
1	N	N	Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable
2			Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
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	Y	Y	Dense, persistent vegetation
4	Y	Y	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	Ν	Within a watershed with <a href="mailto: 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	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	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

ST-1: The feature is a basin wetland that holds water for long periods of time. WQ-5: The feature has a near-continuous cover of sedges and Canada bluejoint.

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

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

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

Observed	Potential	Species/Habitat
	Y	Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 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 utriculata*			PSS	Interrupted
Salix petiolaris*			PSS	Patchy
Calamagrostis canadensis*			PSS	Patchy
Carex vesicaria			PSS	Rare
Carex tuckermanii			PSS	Rare
Equisetum sylvaticum			PSS	Barren
Glyceria grandis			PSS	Barren
Comarum palustre			PSS	Barren
Cornus sericea			PSS	Barren
Epilobium coloratum			PSS	Barren
Fraxinus nigra			PSS	Barren
Galium labradoricum			PSS	Barren
Glyceria striata			PSS	Barren
Lycopus uniflorus			PSS	Barren
Mentha arvensis			PSS	Barren
Persicaria sp.			PSS	Barren
Populus tremuloides			PSS	Barren
Symphyotrichum lateriflorum			PSS	Barren
Ulmus americana			PSS	Barren
Veronica scutellata			PSS	Barren

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities) The overall diversity of the wetland is very low. There were no invasive species observed.

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

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

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	Low diversity of species present, but no invasive species were observed.
Human Use Values	The feature is a wetland created by drainage from a nearby gravel pit.
Wildlife Habitat	Amphibians and birds were observed within the feature.
Fish and Aquatic Life Habitat	Marginal potential for aquatic invertebrates.
Shoreline Protection	N/A
Flood and Stormwater Storage	Basin wetland that holds runoff from the surrounding area, obtaining runoff from the nearby gravel pit/road.
Water Quality Protection	Holds and allows water to infiltrate.
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>Ashland</u>	Sampling [Date: <u>2020-06-06</u>
Applicant/Owner: Enbridge		State: Wisconsin Samplin	ıg Point: <u>wasd1030_u</u>
Investigator(s): <u>KDF/OTG</u>	Section, Township, Range:	sec 15 T045N R003W	V
Landform (hillslope, terrace, etc.): <u>Riser</u>	Local relief (concave, convex, r	none): <u>Convex</u>	_ Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.3750</u>)57 Long: -	90.723032	Datum: WGS84
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Ca	thro complex, 0 to 6 percent	slopes NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes 🖌 No	_ (If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significar	ntly disturbed? Are "Norn	nal Circumstances" present? Yo	es 🔽 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed	d, explain any answers in Remar	ˈks.)

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 proceed Northern mesic hardwood	dures here or in d forest sys	a separate report.) stem character	ized by aspen regeneration.

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	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 <u><</u> Depth (inches):	
Weter Table December 20 View New Constant (market)	
Water Table Present? Yes No _ Depth (Inches):	
Water Table Present? Yes No _ Depth (inches): Saturation Present? Yes No _ Depth (inches):	Wetland Hydrology Present? Yes No
Water Table Present? Yes No _ Depth (incnes): Saturation Present? Yes No _ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Water Table Present? Yes No Depth (incnes): 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 ctions), if available:
Water Table Present? Yes No Depth (incnes): 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 No ctions), if available:
Water Table Present? Yes No Depth (incnes): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	Wetland Hydrology Present? Yes No ctions), if available: No
Water Table Present? Yes No _ Depth (incnes): Saturation Present? Yes No _ Depth (incnes): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: The sample plot is located on a riser within a sloped area.	Wetland Hydrology Present? Yes No ctions), if available: No indicators of wetland hydrology were
Water Table Present? Yes No Depth (incnes): Saturation Present? Yes No Depth (incnes): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: The sample plot is located on a riser within a sloped area. observed.	Wetland Hydrology Present? Yes No ctions), if available: No indicators of wetland hydrology were
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 Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: Remarks: The sample plot is located on a riser within a sloped area. observed.	Wetland Hydrology Present? Yes No ctions), if available: No indicators of wetland hydrology were
Water Table Present? Yes No Depth (incnes): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: Remarks: The sample plot is located on a riser within a sloped area. observed.	Wetland Hydrology Present? Yes No ctions), if available: No indicators of wetland hydrology were
Water Table Present? Yes No Depth (incnes): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: Remarks: The sample plot is located on a riser within a sloped area. observed.	Wetland Hydrology Present? Yes No ctions), if available: No indicators of wetland hydrology were
Water Table Present? Yes No Depth (incnes): Saturation Present? Yes No Depth (incnes): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: The sample plot is located on a riser within a sloped area. observed.	Wetland Hydrology Present? Yes No ctions), if available: No indicators of wetland hydrology were
Water Table Present? Yes No Depth (incnes): Saturation Present? Yes No _ Depth (incnes): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: Remarks: The sample plot is located on a riser within a sloped area. observed.	Wetland Hydrology Present? Yes No ctions), if available: No indicators of wetland hydrology were
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 Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: The sample plot is located on a riser within a sloped area. observed.	Wetland Hydrology Present? Yes No ctions), if available: No indicators of wetland hydrology were
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 Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: Remarks: The sample plot is located on a riser within a sloped area. observed.	Wetland Hydrology Present? Yes No ctions), if available: No indicators of wetland hydrology were

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1030_u

	Abcoluto	Dominant	Indicator	
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Dominance Test worksheet:
1. <u>Populus grandidentata</u>	50	Y	FACU	That Are OBL, FACW, or FAC:(A)
2. <u>Betula papyrifera</u>	10	N	FACU	Total Number of Dominant
3. <u>Abies balsamea</u>	5	N	FAC	Species Across All Strata: <u>4</u> (B)
4. <u>Fraxinus nigra</u>	5	N	FACW	Percent of Dominant Species
5			·	That Are OBL, FACW, or FAC:(A/B)
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>14</u> x 2 = <u>28</u>
1. <u>Acer saccharum</u>	25	Y	FACU	FAC species <u>22</u> x 3 = <u>66</u>
2. <u>Tilia americana</u>	10	Y	FACU	FACU species $160 \times 4 = 640$
3. <u>Ostrya virginiana</u>	5	N	FACU	UPL species $0 \times 5 = 0$
4. <u>Fraxinus pennsylvanica</u>	5	N	FACW	$\frac{190}{100}$ (A) $\frac{134}{100}$ (B)
5. <u>Fraxinus nigra</u>	2	N	FACW	Prevalence Index = B/A = <u>3.7448979591836733</u>
6. <u>Acer rubrum</u>	2	N	FAC	Hydrophytic Vegetation Indicators:
7. <u>Abies balsamea</u>	2	N	FAC	1 - Rapid Test for Hydrophytic Vegetation
	51	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)				<u>3</u> - Prevalence Index is $\leq 3.0^1$
1. Mitchella repens	50	Y	FACU	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
2. Maianthemum canadense	5	N	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Athvrium angustum	5	N	FAC	
4. Carex pedunculata	5	N	FAC	Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic
5. Ribes cynosbati	2	N	FACU	Definitions of Vegetation Strata:
6. Fraxinus niara	2	N	FACW	
7. Abies balsamea	2	N	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8. Tilia americana	2	N	FACU	Sepling/shub Weedy plants loss than 2 in DDU
9. Acer rubrum	1	N	FAC	and greater than or equal to 3.28 ft (1 m) tall.
10. Allium tricoccum	1	N	FACU	Herb – All herbaceous (non-woody) plants, regardless
11.				of size, and woody plants less than 3.28 ft tall.
12.	·			Woody vines – All woody vines greater than 3.28 ft in
	75	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1.				
2				
3.				Hydrophytic
4.				Vegetation
	0	= Total Co	ver	Present? Yes No 🗸
Remarks: (Include photo numbers here or on a separate	sheet.)			

The vegetation at the sample plot is representative of upland. Canopy cover is interrupted to near continuous and dominated by big-tooth aspen. Ground cover is dominated by partridgeberry, with saplings of the canopy trees common throughout. Sugar maple and basswood are also abundant throughout the surrounding area.

SOIL

Profile Des	cription: (Des	scribe to	the depth	needed to document the indicator or cor	nfirm the absence of indicato	ors.)
Depth (inches)	M	atrix	%	<u>Redox Features</u>		Remarks
<u>(Interior)</u>	5VD '	3/2	100			Komarko
<u> </u>			100			
5-20	<u> 31R 4</u>	4/0	100	0		
¹ Type: C=C	oncentration.	D=Deplet	ion. RM=F	Reduced Matrix. MS=Masked Sand Grains.	² Location: PL=Pore	Lining, M=Matrix,
Hydric Soil	Indicators:			,	Indicators for Proble	matic Hydric Soils ³ :
Histoso	l (A1)		_	Polyvalue Below Surface (S8) (LRR R,	2 cm Muck (A10)	(LRR K, L, MLRA 149B)
Histic E	pipedon (A2)			MLRA 149B) Thin Dark Surface (SQ) (LPD P. MLPA 1	Coast Prairie Red	ox (A16) (LRR K, L, R)
Hydroge	en Sulfide (A4))	_	Loamy Mucky Mineral (F1) (LRR K, L)	Dark Surface (S7)	(LRR K, L)
Stratifie	d Layers (A5)		_	Loamy Gleyed Matrix (F2)	Polyvalue Below S	Surface (S8) (LRR K, L)
Deplete	d Below Dark	Surface (A11) _	Depleted Matrix (F3)	Thin Dark Surface	(S9) (LRR K, L)
Thick D	ark Sufface (A Jucky Mineral	.12) (S1)	_	Redox Dark Surface (F6) Depleted Dark Surface (E7)	Iron-Manganese N Piedmont Floodol	/lasses (F12) (LRR K, L, R) ain Soils (F19) (MI RA 149B)
Sandy (Gleyed Matrix ((S4)	_	Redox Depressions (F8)	Mesic Spodic (TA	6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)	. ,	_		Red Parent Mater	ial (F21)
Stripped	d Matrix (S6)				Very Shallow Darl	Surface (TF12)
Dark St	Ifface (S7) (LF	KR R, ML	RA 149B)		Other (Explain in I	Remarks)
³ Indicators o	of hydrophytic	egetatior	n and wetl	and hydrology must be present, unless distu	rbed or problematic.	
Restrictive	Layer (if obse	erved):				
Туре:						
Depth (in	ches):				Hydric Soil Present?	Yes No
Remarks:				No indicatore of building stiller		
Solis are	e loam abo	ove sil	t ioam.	No indicators of hydric soll we	ere observed.	



wasd1030_u_E



wasd1030_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	_ City/County: <u>Ashland</u>	Sampling	Date: <u>2020</u>	-06-06
Applicant/Owner: Enbridge		State: Wisconsin Samplir	ng Point: <u>waso</u>	1031e_w
Investigator(s): <u>AGG/OTG</u>	Section, Township, Range: <u>Se</u>	<u>c 15 T045N R003V</u>	V	
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none	e): <u>Concave</u>	Slope (%):	0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.3762	. <u>30</u> Long: <u>-90</u> .	721646	Datum: WC	<u>3884</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Cat	hro complex, 0 to 6 percent slop	es NWI classification:		
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes No (I	f no, explain in Remarks.)		
Are Vegetation, Soil, or Hydrology significar	tly disturbed? Are "Normal (Circumstances" present? Y	′es 🖌 N	o
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, ex	plain any answers in Rema	rks.)	
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point locatio	ns, transects, importa	ant feature	s, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes <u>v</u> No Yes <u>v</u> No Yes <u>v</u> No	o o	Is the Sampled Area within a Wetland? Yes <u>v</u> No If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced The feature is a wet meac by man-made berming an	ures here or in a sep dow dominated ad excavation.	arate report.) d by sedge	s. The feature is highly disturbed in multiple areas

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 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)	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 <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> Wetland (includes capillary fringe)	Hydrology Present? Yes <u><</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if a	vailable:
Remarke:	
The wetland hydrology regime is seasonally saturated. There are	small excavated pockets where
there is standing water present	

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1031e_w

Trace Streture (Dist size) 20	Absolute	Dominant	Indicator	Dominance Test worksheet:		
<u>Tree Stratum</u> (Plot size: <u>50</u>)	% Cover	<u>Species</u> ?	Status	Number of Dominant Species		
1				That Are OBL, FACW, or FAC:		(A)
2			·	Total Number of Dominant	0	(=)
3				Species Across All Strata:	2	(B)
4	<u></u>		. <u></u>	Percent of Dominant Species	50	
5	<u> </u>		·	That Are OBL, FACVV, or FAC:	50	(A/B)
6			. <u> </u>	Prevalence Index worksheet:		
7			. <u> </u>	Total % Cover of: M	ultiply by:	
	0	= Total Co	/er	OBL species <u>35</u> x 1 =	35	_
Sapling/Shrub Stratum (Plot size:15)				FACW species <u>10</u> x 2 =	20	_
1.				FAC species x 3 =	0	_
2				FACU species <u>5</u> x 4 =	20	_
2				UPL species x 5 =	0	_
3				Column Totals: <u>50</u> (A)	75	_ (B)
4	<u> </u>			Prevalence Index = B/A =	15	
5				Hydrophytic Vegetation Indicators		
0			·	1 - Rapid Test for Hydrophytic V	eretation	
7				2 - Dominance Test is >50%	egetation	
	0	= Total Co	/er	\sim 3 - Prevalence Index is $\leq 3.0^{1}$		
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide sup	portina
1. <u>Carex sp.</u>	50	Y	. <u> </u>	data in Remarks or on a sep	arate sheet)	1 3
2. <u>Scirpus cyperinus</u>	25	Y	OBL	Problematic Hydrophytic Vegeta	ition ¹ (Expla	in)
3. <u>Juncus effusus</u>	10	N	OBL	1		
4. Tanacetum vulgare	5	Ν	FACU	be present, unless disturbed or prob	l hydrology r lematic.	nust
5. Solidago gigantea	5	N	FACW	Definitions of Venetation Strate:		
6 Carex intumescens	5	N		Definitions of Vegetation Strata:		
7				Tree – Woody plants 3 in. (7.6 cm) of	or more in di	ameter
·			·	at breast height (DBH), regardless o	r neight.	
o				Sapling/shrub – Woody plants less and greater than or equal to 3.28 ft (than 3 in. D 1 m) tall	BH
9			·		, i iii) tail.	
10				Herb – All herbaceous (non-woody) of size, and woody plants less than 3	plants, rega 3.28 ft tall.	rdless
11			·			0.4 :
12			·	height.	ater than 3.2	28 π In
	100	= Total Co	/er			
Woody Vine Stratum (Plot size: <u>30</u>)						
1						
2						
3				Hydrophytic		
4.				Vegetation		
	0	= Total Co	/er	Present? Yes <u>~</u> N	io	
Remarks: (Include photo numbers here or on a separate s	sheet.)					
The feature is a wet meadow dominate	d bý seo	dge spe	cies. Th	ne most abundant sedge o	ould not	t be
identified; however, its associates are c	listinctly	' hydrop	hytic.			

SOIL

Profile Des	cription: (E	Describe	to the de	oth needed	to docur	nent the i	ndicator	or confirm	the absence	of indicato	rs.)	
Depth		Matrix			Redo	x Features	S _					
(inches)	Color (moist)	%	<u>Color (</u> r	<u>moist)</u>	%	Type ¹	Loc ²	Texture		Remarks	
0-6	5YR	4/2	95	5YR	5/6	5	С	Μ	SCL			
6-20	5VR	4/3	95	5VR	5/6	5	C	M	501			
	<u> </u>				5/0							
<u> </u>												
						·		·				
						·		·				
						·	<u> </u>	·				
						·						
						·		·				
¹ Type: C=C	oncentratio	n, D=Dep	letion, RM	=Reduced I	Matrix, MS	S=Masked	Sand Gra	ains.	² Location:	PL=Pore L	ining, M=Mati	rix.
Hydric Soil	Indicators:				,				Indicators	for Problen	natic Hydric S	Soils ³ :
Histosol	(A1)			Polyva	alue Belov	w Surface	(S8) (LRF	RR,	2 cm N	luck (A10) (I	LRR K, L, ML	RA 149B)
Histic E	pipedon (A2	2)		ML	RA 149B))			Coast I	Prairie Redo	x (A16) (LRR	K, L, R)
Black H	istic (A3)			Thin D	0ark Surfa	ice (S9) (L	.RR R, MI	LRA 149B)	5 cm N	lucky Peat c	or Peat (S3) (L	.RR K, L, R)
Hydroge	en Sulfide (A	44)		Loam	y Mucky N	/lineral (F1) (LRR K	, L)	Dark S	urface (S7)	(LRR K, L)	
Stratifie	d Layers (A	.5)	()	Loam	y Gleyed I	Matrix (F2)		Polyval	lue Below S	urface (S8) (L	RR K, L)
Deplete	d Below Da	rk Surfac	e (A11)	Deple	ted Matrix	(F3) face (F6)			Thin Dark Surface (S9) (LRR K, L)			
Thick D	Ark Surface Aucky Miner	(A12) ral (S1)			ted Dark Su	Surface (F0)	7)		ITOIT-IVIA Diedma	anganese ivi ont Floodola	in Soils (F12) (I	$(\mathbf{M} \mathbf{R} \mathbf{A} \mathbf{149R})$
Sandy C	Gleved Matr	ix (S4)		Redox	Depress	ions (F8)	,,		Mesic S	Spodic (TA6) (MLRA 144/	(MERA 140B) A. 145. 149B)
Sandy F	Redox (S5)	()				(-)			Red Parent Material (F21)			
Stripped	d Matrix (S6	i)							Very Shallow Dark Surface (TF12)			
Dark Su	ırface (S7) ((LRR R, M	/ILRA 149	B)					Other (Explain in Remarks)			
°Indicators o	f hydrophyt	ic vegetat	tion and w	etland hydro	ology mus	t be prese	ent, unless	s disturbed o	or problematic			
Restrictive	Layer (if ob	oserved):										
Туре:												
Depth (in	ches):								Hydric Soil	Present?	Yes 🖌	No
Remarks:												
A deplet	ed matri	ix with	redox	concent	trations	s was o	observ	ed.				
1												



wasd1031e_w_E



wasd1031e_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):			
wasd1031	2020-06-06			
Location:	Ecological Landsca	ape:		
PLSS: sec 15 T045N R003W	North Central Forest			
Lat: <u>46.376176</u> Long: <u>-90.721641</u>	Watershed:			
	LS12, Marengo River			
County: <u>Ashland</u> Town/City/Village: <u>Ashland town</u>				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Gogebic, very stony-Pence, very stony-Cathro complex, 0 to 6 percent	Wetland Type(s):			
slopes	PEM - Fresh wet meadow			
Field Verified:				
Series not verified. Soils were a reduced sandy	Wetland Size:	Wetland Area Impacted		
clay loam throughout the profile.	0.0525	0.0525		
	Vegetation:			
	Plant Community D	Description(s):		
Hydrology:	The feature is a	disturbed wet meadow		
The wetland hydrology regime is seasonally	dominated by sedge species			
saturated. There are small excavated pockets	dominated by 50	age species.		
where there is standing water 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	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	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	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>>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	N	Part of a large habitat block that supports area sensitive species
9	Y	Y	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	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aguatic species within aguatic system
4	Y	Y	Vegetation is inundated in spring
SP		-	Shoreline Protection
1	N	N	Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable
2			Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
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	Y	Y	Dense, persistent vegetation
4	Ν	N	Evidence of flashy hydrology
5	Ν	Y	Point or non-point source inflow
6	Ν	N	Impervious surfaces cover >10% of land surface within the watershed
7	Ν	N	Within a watershed with <a href="mailto: 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	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	Ν	N	Discharge to surface water
9	Ν	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

WQ-2: The feature is a small shallow basin feature. WH-9: There are small areas with standing water.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Amphibians (frogs, tadpoles)
Y	Y	Insects
	Y	Birds
	Y	Mammals

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

Observed	Potential	Species/Habitat
	Y	Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 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	Patchy
Juncus effusus*			PEM	Patchy
Scirpus cyperinus			PEM	Rare
Tanacetum vulgare			PEM	Rare
Carex intumescens			PEM	Rare
Solidago gigantea			PEM	Rare

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

There is a low diversity of species, and there are invasive species present.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The area is very disturbed by human uses, and is located at the edge of a gravel pit.

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 area has a low diversity of species, and invasive species are present.
Human Use Values	No observed human uses.
Wildlife Habitat	Supports amphibians, and offers potential for other species.
Fish and Aquatic Life Habitat	The feature contains standing water for sufficient durations to support frogs and tadpoles.
Shoreline Protection	N/A
Flood and Stormwater Storage	Very shallow basin that does not hold a large amount of water, but is densely vegetated.
Water Quality Protection	The feature is a small recharge wetland.
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 [Date: <u>2020-06-06</u>
Applicant/Owner: Enbridge		State: Wisconsin Samplin	g Point: <u>wasd1031_u</u>
Investigator(s): <u>KDF/OTG</u>	Section, Township, Range: <u>Se</u>	c 15 T045N R003W	/
Landform (hillslope, terrace, etc.): Talf	Local relief (concave, convex, none	e): <u>None</u>	_ Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.3764	413 Long: <u>-90</u> ,	.721500	Datum: <u>WGS84</u>
Soil Map Unit Name: Gogebic, very stony-Pence, very stony-Ca	athro complex, 0 to 6 percent slop	es NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes 🖌 No (I	f no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? Are "Normal	Circumstances" present? Yo	es 🖌 No
Are Vegetation, Soil, or Hydrology naturally	/ problematic? (If needed, ex	xplain any answers in Remar	ks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No <u>r</u> No <u>r</u> No <u>r</u>	Is the Sampled Area within a Wetland? Yes No //
Remarks: (Explain alternative proceed Northern mesic hardwood regeneration.	Jures here or in a J forest loca	a separate report.) ated adjacent	to a quarry. Area is characterized by aspen

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? Ves No 🖌 Depth (inches):	Watland Hydrology Present? Vas No 🗸
(includes capillary fringe)	
(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:
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(includes capillary fringe) res No Bepti (includes) 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)	ions), if available:
(includes capillary fringe)	ions), if available:
Includes capillary fringe) 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: wasd1031_u

Trace Streture (Dist size) 20	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>Populus tremuloides</u>	<u></u>	<u> </u>		That Are OBL, FACW, or FAC: (A)						
2. <u>Betula papyrilera</u>	<u> </u>	<u> </u>		Total Number of Dominant						
	10			Species Across All Strata. D (B)						
4. <u>I suga canadensis</u>		<u>IN</u>	FACU	Percent of Dominant Species						
5			·							
6			·	Prevalence Index worksheet:						
7			·	Total % Cover of: Multiply by:						
	<u>100</u> = Total Cover			OBL species $0 \times 1 = 0$						
Sapling/Shrub Stratum (Plot size:15)		Ň		FACW species 4 $x_2 = 8$						
1. <u>I Ilia americana</u>	25	<u> Y </u>	FACU	FACU species $147 \times 4 = 588$						
2. <u>Corylus cornuta</u>	25	<u> </u>	FACU	UPL species $0 \times 5 = 0$						
3. <u>Fraxinus nigra</u>	2	<u> N</u>	FACW	Column Totals: <u>217</u> (A) <u>794</u> (B)						
4. <u>Acer rubrum</u>	2	N	FAC	Proveloped Index = P/A = -2.6590961751152072						
5			·	$\frac{1}{2} = \frac{1}{2} = \frac{1}$						
6				Hydrophytic Vegetation Indicators:						
7				1 - Rapid Test for Hydrophytic Vegetation						
	54	= Total Co	ver	2 - Dominance Test is >50%						
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting						
1. <u>Corylus cornuta</u>	25	<u> </u>	<u>FACU</u>	data in Remarks or on a separate sheet)						
2. <u>Mitchella repens</u>	15	Y	<u>FACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)						
3. <u>Rubus idaeus</u>	5	N	FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.						
4. <u>Athyrium angustum</u>	5	N	FAC							
5. <u>Maianthemum canadense</u>	5	N	FACU	Definitions of Vegetation Strata:						
6. <u>Carex pedunculata</u>	2	N	FAC	Tree Weedy plants 2 in (7.6 cm) or more in diameter						
7. <u>Trientalis borealis</u>	2	N	FAC	at breast height (DBH), regardless of height.						
8. <u>Fraxinus nigra</u>	2	N	FACW	Sapling/shrub – Woody plants less than 3 in DBH						
9. <u>Ribes cynosbati</u>	2	N	<u>FACU</u>	and greater than or equal to 3.28 ft (1 m) tall.						
10. <u>Diervilla Ionicera</u>	2	N		Herb – All herbaceous (non-woody) plants, regardless						
11				of size, and woody plants less than 3.28 ft tall.						
12				Woody vines – All woody vines greater than 3.28 ft in						
	65	= Total Co	ver	height.						
Woody Vine Stratum (Plot size: <u>30</u>)										
1										
2.										
3.			·	Hydrophytic						
4.				Vegetation Present? Yes No						
	0	= Total Co	ver							
Remarks: (Include photo numbers here or on a separate sheet.)										
The vegetation at the sample plot is rep	presenta	ative of	upland c	dominated by quaking aspen and						
paper birch, with ground cover dominat	ed by b	eaked h	nazelnut	saplings and partridgeberry. Fern						
species are abundant throughout the s	urroundi	ing area	a.							

SOIL

Profile Desc	cription: (D	escribe	to the dept	h needed to docum	ent the	indicator	or confirm	the absence	of indicators.)	
Depth Matrix Redox Features										
(inches)	Color (n	<u>noist)</u>	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-10	<u>10YR</u>	3/2	100		0					
10-20	7.5YR	3/3	100		0			SIL		
·										
¹ Type: C=C		, D=Dep	etion, RM=	Reduced Matrix, MS	-Maske	d Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix.	
Hydric Soli				Debaseles Deba	0			Indicators for Problematic Hydric Solis :		
HISLOSOI	(AI) ninedon (A2)			Polyvalue Below MI PA 1/9B)	/ Surface	e (58) (LRI	К ,	2 cm Muck (A10) (LRR K, L, MLRA 149B)		
Black Hi	istic (A3)			Thin Dark Surfa	ce (S9) (LRR R. MI	LRA 149B)	5 cm M	lucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A	4)		Loamy Mucky M	lineral (F	1) (LRR K	L, L)	Dark S	urface (S7) (LRR K, L)	
Stratified	d Layers (A5)		Loamy Gleyed N	/latrix (F2	2)		Polyval	ue Below Surface (S8) (LRR K, L)	
Deplete	d Below Darl	k Surface	e (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 N	Aucky Minera	al (S1)		Depleted Dark S	Surface (I	F7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)	
Sandy Gleyed Matrix (S4) Redox Depressions (F8)								Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Derent Material (E21)		
Sandy Redox (S5) Stripped Matrix (S6)							Verv Shallow Dark Surface (TF12)			
Dark Surface (S7) (LRR R, MLRA 149B)								Other (Explain in Remarks)		
³ Indiactora a	fbydropbytic	vogotot	ion and wa	tland budralagu muat	the pres	ant unload	diaturbad	or problematic		
Restrictive	aver (if ob	vegetat	ion and we	liand hydrology mus	t be pres	ent, unless	saisturbea			
Type		serveu).								
туре								Hydric Soil	Prosent? Vas No 🗸	
Depth (in	ches):							Hyunc Son		
Remarks:	loom of		ilt loom	No indicator	o of by	udria ac	sil woro	abaanvad	Soile are well drained	
Solis are loam above slit loam. No indicators of hydric soll were observed. Solis are well-drained.										



wasd1031_u_E



wasd1031_u_W