Wetland Index			
County	Feature ID	Survey Map Page	Datasheet Part Number
Ashland	wasa039e_x	7	14
Ashland	wasa1001e	4	8
Ashland	wasa1002s	4	8
Ashland	wasa1003e	4	8
Ashland	wasa1003s	4	8
Ashland	wasa1004f	18	26
Ashland	wasa1005s	18	26
Ashland	wasa1006f	18	26
Ashland	wasa1007e	4	8
Ashland	wasa1008s	4, 5	8
Ashland	wasa1009e	5	8
Ashland	wasa1010e	5	9
Ashland	wasa1010s	5	9
Ashland	wasa1011e	5	9
Ashland	wasa1012e	5	9
Ashland	wasa1013e	5	9
Ashland	wasa1014e	5	9
Ashland	wasa1015e	5	9
Ashland	wasa1016e	5	9
Ashland	wasa1017e	5	10
Ashland	wasa1018e	5	9
Ashland	wasa1019e	5	10
Ashland	wasa1020e	5	10
Ashland	wasa1021e	5	10
Ashland	wasa1022e	5	10
Ashland	wasa1023e	5	10
Ashland	wasa1024e	5	10
Ashland	wasa1025e	5	10
Ashland	wasa1026e	5	11
Ashland	wasa1027e	5, 6	11
Ashland	wasa1028e	5, 6	11
Ashland	wasa1029e	5, 6	11
Ashland	wasa1030e	5, 6	11
Ashland	wasa1031e	5, 6	11
Ashland	wasa1032e	6	11
Ashland	wasa1033e	6	12
Ashland	wasa1034e	6	12
Ashland	wasa1035e	6	13
Ashland	wasa1036e	6	13

Wetland Index			
County	Feature ID	Survey Map Page	Datasheet Part Number
Ashland	wasa1037e	6	13
Ashland	wasa1038e	5, 6	11
Ashland	wasa1039e	6	12
Ashland	wasa1040e	6, 7	14
Ashland	wasa1041e	7	14
Ashland	wasa1042e	7	14
Ashland	wasa1043e	7	14
Ashland	wasa1044e	7	14
Ashland	wasa1045e	7	14
Ashland	wasa1046e	7	14
Ashland	wasa1047e	8	15
Ashland	wasa1048e	8	15
Ashland	wasa1048s	8	15
Ashland	wasa1049e	8	15
Ashland	wasa1050e	8	15
Ashland	wasa1050s	8	15
Ashland	wasa1051e	8, 9	15
Ashland	wasa1051f	8, 9	15
Ashland	wasa1051s	8, 9	15
Ashland	wasa1052e	8, 9	15
Ashland	wasa1053e	8, 9	15
Ashland	wasa1054f	9	16
Ashland	wasa1055f	9	16
Ashland	wasa1057f	9	16
Ashland	wasa1058f	9	16
Ashland	wasa1059f	9	16
Ashland	wasa1060f	9, 10	17
Ashland	wasa1061f	9, 10	17
Ashland	wasa1063f	10	17
Ashland	wasa1064e	10	17
Ashland	wasa1065e	9	16
Ashland	wasa1066e	9	16
Ashland	wasa1067e	10	17
Ashland	wasa1068e	10	18
Ashland	wasa1069e	10	18
Ashland	wasa106e_x	6	13
Ashland	wasa1070f	20, 21	34
Ashland	wasa1071e	19	28
Ashland	wasa1072f	19	27

Wetland Index			
County	Feature ID	Survey Map Page	Datasheet Part Number
Ashland	wasa1073e	19	28
Ashland	wasa110e_x	6	13
Ashland	wasa112e_x	6	12
Ashland	wasa112s_x	6	12
Ashland	wasa114e_x	15	20
Ashland	wasa115e_x	15	20
Ashland	wasa139e_x	23	36
Ashland	wasa139f_x	23	36
Ashland	wasa139s_x	23	36
Ashland	wasb014f_x	27	39
Ashland	wasb1001e	20	33
Ashland	wasb1002e	20	33
Ashland	wasb1003s	20	33
Ashland	wasb1004e	20	33
Ashland	wasb1004e	20, 21	33
Ashland	wasb1004f	20, 21	33
Ashland	wasb1004s	20	33
Ashland	wasb1005e	20	33
Ashland	wasb1006s	20	33
Ashland	wasb1007f	20, 21	33
Ashland	wasb1008e	20, 21	34
Ashland	wasb1009e	20, 21	34
Ashland	wasb1009s	20, 21	34
Ashland	wasb1010e	20, 21	34
Ashland	wasb1011e	20, 21	34
Ashland	wasb1011f	20, 21	34
Ashland	wasb1012e	22	34
Ashland	wasc032e_x	20	33
Ashland	wasc034e_x	20	33
Ashland	wasc035e_x	20	33
Ashland	wasc065e_x	11	19
Ashland	wasc1001e	20	31
Ashland	wasc1002e	20	31
Ashland	wasc1003e	20	31
Ashland	wasc1004e	20	31
Ashland	wasc1005e	20	31
Ashland	wasc1005s	19, 20	31
Ashland	wasc1006e	19, 20	31
Ashland	wasc1007e	19	30

Wetland Index			
County	Feature ID	Survey Map Page	Datasheet Part Number
Ashland	wasc1008e	19	30
Ashland	wasc1009e	19	30
Ashland	wasc1010e	19, 20	30
Ashland	wasc1010s	19	30
Ashland	wasc1010s	19, 20	30
Ashland	wasc1011e	19	30
Ashland	wasc1011s	19	30
Ashland	wasc1012e	19	30
Ashland	wasc1013e	19	30
Ashland	wasc1014f	19	29
Ashland	wasc1015e	19	28
Ashland	wasc1016e	19	28
Ashland	wasc1017e	19	29
Ashland	wasc1018e	19	29
Ashland	wasc1019e	19	29
Ashland	wasc1020e	19	29
Ashland	wasc1021e	19	29
Ashland	wasc1022e	19	29
Ashland	wasc1023e	19	29
Ashland	wasc1024e	18, 19	27
Ashland	wasc1025s	18, 19	27
Ashland	wasc1026e	18, 19	27
Ashland	wasc1027e	18, 19	27
Ashland	wasc1028e	18, 19	26
Ashland	wasc1029f	18	26
Ashland	wasc1030e	18	26
Ashland	wasc1031e	18, 19	27
Ashland	wasc1032e	18, 19	27
Ashland	wasc1033e	18, 19	27
Ashland	wasc1033s	18, 19	27
Ashland	wasc1034e	19	28
Ashland	wasc1035e	19	28
Ashland	wasc1036s	19	28
Ashland	wasc1037e	20	31
Ashland	wasc1038e	20	31
Ashland	wasc1039e	20	32
Ashland	wasc1040f	20	32
Ashland	wasc1041f	20	32
Ashland	wasc1042e	20	32

Wetland Index			
County	Feature ID	Survey Map Page	Datasheet Part Number
Ashland	wasc1043e	20	32
Ashland	wasc1044s	20	32
Ashland	wasc1045e	20	32
Ashland	wasc1045f	20	32
Ashland	wasc1046e	20	32
Ashland	wasc1046f	20	32
Ashland	wasc1047e	19, 20	30
Ashland	wasc1050f	18	26
Ashland	wasc1051f	18	26
Ashland	wasc1052e	18	25
Ashland	wasc1052s	18	25
Ashland	wasc1053e	18	25
Ashland	wasc1054e	18	25
Ashland	wasc1055f	18	25
Ashland	wasc1056f	18	25
Ashland	wasc1057e	18	25
Ashland	wasc1058e	3	4
Ashland	wasc1058s	3	4
Ashland	wasc1059e	3	4
Ashland	wasc1060e	3	4
Ashland	wasc1061e	3	4
Ashland	wasc1062e	3	4
Ashland	wasc1063e	3	4
Ashland	wasc1064e	3	4
Ashland	wasc1065e	3	6
Ashland	wasc1066e	3	6
Ashland	wasc1067s	3	6
Ashland	wasc1068e	3	6
Ashland	wasc1068f	3	6
Ashland	wasc1070e	3	7
Ashland	wasd008f_x	27, 28	39
Ashland	wasd019e_x	10	17
Ashland	wasd021f_x	9	16
Ashland	wasd1001e	25	37
Ashland	wasd1002e	25	37
Ashland	wasd1003e	25, 26	38
Ashland	wasd1004e	25	38
Ashland	wasd1005e	25	38
Ashland	wasd1006e	27	38

Wetland Index			
County	Feature ID	Survey Map Page	Datasheet Part Number
Ashland	wasd1007e	27	38
Ashland	wasd1008f	27	39
Ashland	wasd1009f	28	40
Ashland	wasd1010f	28	39
Ashland	wasd1011e	28	39
Ashland	wasd1012e	28	39
Ashland	wasd1013f	28	39
Ashland	wasd1014e	27	39
Ashland	wasd1015e	31	41
Ashland	wasd1015s	31	41
Ashland	wasd1016e	31	41
Ashland	wasd1017s	31	41
Ashland	wasd1018e	33	40
Ashland	wasd1019e	33	40
Ashland	wasd1020e	33	42
Ashland	wasd1021e	33	40
Ashland	wasd1022e	33	42
Ashland	wasd1023e	33	40
Ashland	wasd1024e	22	35
Ashland	wasd1024f1	22	35
Ashland	wasd1024s	22	35
Ashland	wasd1025f	22	35
Ashland	wasd1026f	22	35
Ashland	wasd1027f	22	35
Ashland	wasd1028f	22	35
Ashland	wasd1029s	22	35
Ashland	wasd1030s	22	35
Ashland	wasd1031e	22	35
Ashland	wasd1032e	22, 23	36
Ashland	wasd1033f	22, 23	36
Ashland	wasd1033s	22, 23	36
Ashland	wasd1034f	22, 23	36
Ashland	wasd1035s	22, 23	36
Ashland	wasd1036e	10	18
Ashland	wasd1037e	10	18
Ashland	wasd1038e	10	18
Ashland	wasd1039e	3	4
Ashland	wasd1039f	3	4
Ashland	wasd1039s	3	4

Wetland Index			
County	Feature ID	Survey Map Page	Datasheet Part Number
Ashland	wasd1040e	3	5
Ashland	wasd1041e	3	5
Ashland	wasd1042e	3	5
Ashland	wasd1043e	3	6
Ashland	wasd1044e	3	6
Ashland	wasd1044f	3	6
Ashland	wasd1045e	10	18
Ashland	wasd1046e	10	17
Ashland	wasd1047e	18	24
Ashland	wasd1048e	18	24
Ashland	wasd1049f	11	19
Ashland	wasd1050f	18	24
Ashland	wase015e_x	5	8
Ashland	wase016e_x	4	8
Ashland	wase057f_x	28	40
Ashland	wase066f_x	27, 28	39
Ashland	wase073f_x	11	19
Ashland	wase074f_x	11, 12	19
Ashland	wase080f_x	9, 10	17
Ashland	wase081f_x	10	17
Ashland	wase1001e	12	19
Ashland	wase1002e	12	19
Ashland	wase1003e	14	20
Ashland	wase1004e	14	20
Ashland	wase1005e	14	20
Ashland	wase1006e	14	19
Ashland	wase1008e	15	20
Ashland	wase1009e	15	20
Ashland	wase1010e	15	20
Ashland	wase1010s	15	20
Ashland	wase1011e	15	21
Ashland	wase1012f	15	21
Ashland	wase1012s	15	21
Ashland	wase1013e	15, 16	21
Ashland	wase1013f	15	21
Ashland	wase1013s	15	21
Ashland	wase1014s	15	21
Ashland	wase1015e	16	21
Ashland	wase1016e	16	22

Wetland Index			
County	Feature ID	Survey Map Page	Datasheet Part Number
Ashland	wase1016f	16	22
Ashland	wase1017f	16	21
Ashland	wase1020f	16	22
Ashland	wase1021e	16	22
Ashland	wase1021f	16	22
Ashland	wase1021s	16	22
Ashland	wase1022e	16	21
Ashland	wase1023e	16	22
Ashland	wase1024e	22, 24	35
Ashland	wase1024f	22, 24	35
Ashland	wase1025f	22, 24	35
Ashland	wase1026e	22, 24	36
Ashland	wase1027e	24	36
Ashland	wase1028f	24	36
Ashland	wase1029f	24	36
Ashland	wase1030e	24	37
Ashland	wase1031f	24	37
Ashland	wase1032f	24	37
Ashland	wase1033f	24	37
Ashland	wase1034e	24	37
Ashland	wase1034f	24	37
Ashland	wase1035f	24	37
Ashland	wase1036f	16	22
Ashland	wase1038e	16	23
Ashland	wase1039e	17	23
Ashland	wase1039f	17	23
Ashland	wase1040e	17	23
Ashland	wase1041e	17	23
Ashland	wase1042e	16	22
Ashland	wase1043f	17	23
Ashland	wase1044e	17	23
Ashland	wase1045e	17	23
Ashland	wase1046f	15	21
Ashland	wase1047f	11	18
Ashland	wase1048e	17	24
Ashland	wase1049s	17	24
Ashland	wase1050e	17	23
Ashland	wase1051e	17	24
Ashland	wase1052e	17	24

Wetland Index			
County	Feature ID	Survey Map Page	Datasheet Part Number
Ashland	wase1053e	17	24
Ashland	wase1054s	18	24
Ashland	wase1055e	16	22
Ashland	wase1055f	16	22
Ashland	wase1056f	16	22
Ashland	wase1058e	18	24
Ashland	wase1059f	18	25
Ashland	wase1060e	18	25
Ashland	wase1060f	18	25
Ashland	wase1061e	3	7
Ashland	wase1061f	3	7
Ashland	wase1061s	3	7
Ashland	wase1062f	3	6
Ashland	wasv032f_x	29	40
Ashland	wasv035f_x	29	40
Ashland	wasw033f_x	20, 21	34
Ashland	wasw034e_x	20, 21	34
Ashland	wasw034f_x	20, 21	34
Ashland	wasw034s_x	20, 21	34
Bayfield	wbaa1001e	1	3
Bayfield	wbaa1001f	1	3
Bayfield	wbad1001e	1	3
Bayfield	wbad1002e	1	3
Bayfield	wbad1002f	1	3
Bayfield	wbad1003e	1	3
Bayfield	wbad1003f	1	3
Bayfield	wbad1004e	1	3
Bayfield	wbad1005e	1	1
Bayfield	wbad1006e	1	1
Bayfield	wbad1007e	1	1
Bayfield	wbad1007s	1	1
Bayfield	wbad1008e	1	1
Bayfield	wbad1008s	1	1
Bayfield	wbad1009e	1	1
Bayfield	wbad1010s	1	2
Bayfield	wbad1011e	1	2
Bayfield	wbad1011f	1	2
Bayfield	wbae1001e	2	2
Bayfield	wbae1002e	2	2

Wetland Index			
County	Feature ID	Survey Map Page	Datasheet Part Number
Bayfield	wbae1003e	2	2
Bayfield	wbae1004e	2	2
Bayfield	wbae1005e	2	2
Iron	wira001f_x	40, 42	47
Iron	wira002e_x	42	48
Iron	wira006e_x	40, 42	47
Iron	wira006f_x	40, 42	47
Iron	wira008e_x	40	46
Iron	wira008f_x	40	46
Iron	wira010e_x	42	48
Iron	wira012e_x	42	49
Iron	wira013f_x	42, 43	49
Iron	wira017f_x	39	45
Iron	wira1002f	35	43
Iron	wira1003f	35	43
Iron	wira1004f	35	43
Iron	wira1005e	48	52
Iron	wira1005s	48	52
Iron	wira1006f	46	52
Iron	wira1007f	45, 46	52
Iron	wira1007s	45, 46	52
Iron	wira1008f	45, 46	51
Iron	wira1009f	45, 46	51
Iron	wirb009f_x	32	42
Iron	wirb037f_x	38	44
Iron	wirb040f_x	37	44
Iron	wirb051e_x	35	42
Iron	wirb1001e	45, 46	52
Iron	wirb1002f	31	41
Iron	wirb1003f	31	41
Iron	wirb1004f	31	41
Iron	wirb1005f	31	41
Iron	wirb1006f	31, 32	41
Iron	wirb1007f	32	42
Iron	wirc006f_x	39, 40	46
Iron	wirc013f_x	38, 39	44
Iron	wirc014f_x	39	45
Iron	wirc022f_x	38	44
Iron	wirc023f_x	38	44

Wetland Index			
County	Feature ID	Survey Map Page	Datasheet Part Number
Iron	wirc024f_x	38	43
Iron	wirc1001e	44, 45	50
Iron	wirc1003e	42	49
Iron	wirc1003f	42	49
Iron	wirc1004f	42	49
Iron	wirc1005f	42	49
Iron	wirc1006f	42	48
Iron	wirc1007f	42	48
Iron	wirc1008e	42	48
Iron	wirc1008f	42	48
Iron	wirc1009e	42	48
Iron	wirc1010e	42	48
Iron	wirc1010f	42	48
Iron	wirc1011f	42	48
Iron	wirc1012e	40, 42	47
Iron	wirc1013e	40	47
Iron	wirc1013f	40	47
Iron	wirc1014f	40	46
Iron	wirc1015e	40	46
Iron	wirc1016f	39	45
Iron	wirc1017f	39, 40	45
Iron	wirc1018f	39	45
Iron	wirc1019f	39	45
Iron	wirc1020f	39	45
Iron	wirc1021f	38, 39	44
Iron	wirc1022f	39	44
Iron	wirc1023f	39	45
Iron	wirc1024f	43, 44	50
Iron	wirc1025f	43, 44	50
Iron	wirc1026e	43	50
Iron	wird001f_x	43	49
Iron	wird015e_x	44, 45	50
Iron	wird015f_x	44, 45	50
Iron	wird016e_x	45	51
Iron	wird021f_x	45	51
Iron	wird030f_x	45	51
Iron	wird1001f	32	42
Iron	wird1002f	32	42
Iron	wird1003e	41	49

Wetland Index			
County	Feature ID	Survey Map Page	Datasheet Part Number
Iron	wird1004e	41	50
Iron	wird1005e	41	49
Iron	wird1007f	45, 46	52
Iron	wird1008f	45	50
Iron	wird1009e	45	51
Iron	wird1010f	45	51
Iron	wird1011f	45	51
Iron	wird1012e	45	50
Iron	wire1001e	37	43
Iron	wire1001f	37	43
Iron	wire1002f	37	43
Iron	wire1003f	35, 37	44
Iron	wire1004f	35	43
Iron	wire1005f	35	43
Iron	wire1006f	35	43
Iron	wire1007f	35	42
Iron	wire1008f	35	42

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> </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) • Dark Surface (S7) (LRR K, L, R) • Sandy Rucky Mineral (S1) • Poleted Dark Surface (F7) • Theoremont Floodplain Sing (F19) (MLRA 148) • Sandy Rucky Mineral (S1) • Depleted Dark Surface (F7) • Heist Spadici (F19) (MLRA 148) • Sandy Rucky Mineral (S1) • Depleted Dark Surface (F7)	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) Starlied Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Thick Dark Surface (A12) Redox Dark Surface (F7) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depletesions (F8) Sandy Redox (S5) Urery Shallow Dark Surface (F7) Sandy Redox (S5) Urery Shallow Dark Surface (F7) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) "Indicator (S4) Redox Depressions (F8) Hesic Spordc (TA6) (MLRA 144A, 145, 149B) Sandy Gleax Matrix (S4) Redox Depresent, unless disturbed or problematic. Remarks: Depleted Matrix (S4) Hydric Soil Present? Yes v No							
Image:					·		
Image:							
Image:							
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) Other (Explain in Remarks) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Reserved (F 20) Type: Dept (inches): Hydric Soil Present? Yes V No_							
"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)							
"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, Histo Epipedon (A2) MLRA 149B) Black Histo (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Plack Histo (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 orm Muck/ Natro (S7) (LRR K, L, R) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S7) (LRR K, L) Dark Surface (A12) Z Redox Dark Surface (F6) Trino-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) Red ox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (T71) Stripped Matrix (S4) Depleted 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. Remarks: Type:							
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Location: PL=Pore Lining, M=Matrix. Hydros Soil Indicators: Indicators for Problematic Hydric Soils ² : Indicators for Problematic Hydric Soils ² : Histic Eppedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) S or Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sullide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S3) (LRR K, L, R) Thick Dark Surface (A12) ✓ Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Rockx (S15) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Rockx (S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 145, 149B) Sandy Rockx (S5) Sandy Rockx (S6) Red Parent Material (F11) 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: Depleted Intervegitation and wetland hydrology must be present, unless disturbed or problematic.							
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 : Histic Epipedon (A2) MLRA 149B) Black Histic (A3)							
'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 K, 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 K, L, R)
Learner Loss Carlos Carlos (Carlos (Carlo	Stratified Lavers (A5)	Loamy Gleved N	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 No 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)	Depleted Dark S	Surface (F	7)		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)	Redox Depressi	ons (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 149	B)				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 A 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 (hillslope terrace etc.): Depression							
eauling (LKK 01 MLRA).	Subtraction (LDB or MLDA). Northcentral Forests Let. $A6.277954$							
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	Subregion (LRR or MLRA): Lat: <u>40.377634</u> Long: <u>-90.733791</u> Datum: <u>VVG364</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 If yes, optional Wetland Site ID:	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 sa	ampling point locations, transects, important features, etc.						
Wetland Hydrology Present? Tes	Hydrophytic Vegetation Present? Yes v No Hydric Soil Present? Yes v 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> Surface Water (A1) Water-Stained Lea</td> <td>ves (B9) Drainage Patterns (B10)</td>	Surface Water (A1) Water-Stained Lea	ves (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: 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) Yes No Depth (inches): 9 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 (includes capillary fringe) Wetland Hydrology Present? Yes 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.								

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	 N	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	S=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	κ,	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 sa	()	Loamy	Gleyed I	Matrix (F2)		Polyva	lue 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 surface layer with redox concentrations was observed.										



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 Sea	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 cloppo 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) Challens Assisted (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>	N		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>							
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 V No Is the Sampled Area within a Wetland? Yes V No If yes, optional Wetland? Yes V No If yes, optional Wetland Site ID: <				
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) Marl 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%
	00		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		·		
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	erleat.	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)	Wesic 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 vegetatior				
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 cl	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 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	duaking aspen, green ash, and black ash, a fresh wet meadow dominated by Canada bluejoint and woolgrass, a coniferous bog dominated by black spruce, and an open bog dominated by		
likely influenced hydrology in this part of the wetland. The majority of the feature,			
water table (though this water table may draw down later in the growing season).	leatherleaf and bog wiregrass 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 sh	nowing sampling	point locations, t	ransects, import	ant 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? Ves No 🖌 Depth (inches):	
Saturation Present? Yes No V Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches) (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches). Saturation Present? Yes No Depth (inches). (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches). Saturation Present? Yes No Depth (inches). (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No ions), 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 inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inclus). (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _v Depth (inches): Saturation Present? Yes No _v Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No _
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
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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	_ City/County: <u>Ashland</u>	Sampling	Date: <u>2020</u>)-06-05
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 No Depth (inclues) (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? 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:

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				Deveent of Deminent Species
5				That Are OBL, FACW, or FAC: <u>20</u> (A/B)
6			<u> </u>	
7				Prevalence Index worksheet:
/·	75	- Total Ca		OBL species 0 v1 = 0
Openie v/Ohmeth Other terror (Distriction of F	_75		ver	$\begin{array}{c c} OBL \text{ species} & 0 \\ FACW \text{ species} & 0 \\ \end{array} \times 2 = 0 \\ \end{array}$
Sapling/Snrub Stratum (Plot size: 15)				FAC species $27 \times 3 = 81$
1			·	FACU species $80 \times 4 = 320$
2			·	UPL species x 5 =
3			<u> </u>	Column Totals: <u>107</u> (A) <u>401</u> (B)
4		. <u> </u>		$Provalance \left[pdex - P/A - 2.7476625514049602 \right]$
5				$FIEVAIETICE ITILIEX - D/A = \frac{3.1410033314010092}{2}$
6			·	Hydrophytic Vegetation Indicators:
7			. <u> </u>	1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. Oryzopsis asperifolia	10	<u> </u>		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	
4. Gaultheria procumbens	5	N	FACU	be present, unless disturbed or problematic.
5. Mitchella repens	5	Y	FACU	Definitions of Vegetation Strata
6. Uvularia sessilifolia	5	N	FACU	Deminions of Vegetation offata.
7. Carex pedunculata	2	N	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8.				
9			·	and greater than or equal to 3.28 ft (1 m) tall.
10				Harb - 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
12.	/2	- Total Ca		height.
Weather Strating (Distaire)	<u> 42 </u>		ver	
(Plot size. <u>50</u>)				
1			<u> </u>	
2			<u> </u>	
3			<u> </u>	Hydrophytic Vegetation
4			<u> </u>	Present? Yes No 🗸
	0	= Total Co	ver	
The sample point is located within a sta	sheet.) and of a	spen re	generati	ion
			90	

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>			
		·		
. <u></u>		·		
		. <u> </u>		
		·		
		·		
		·		
. <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	ion 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, ravir	es and escarpment	ts, 25 to 60 percent slop	<u>es</u> 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 _

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{mat 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				$\begin{array}{c} \text{UPL species} \underline{0} x \text{ 5 = } \\ \text{Column Totale:} 110 (A) 261 (B) \end{array}$
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>	<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> </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				
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	v 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	Cork 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 Parent Material (F21)			
Stripped	l Matrix (S6)							Very Sha	allow 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	Ν	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Y	Y	Wetland and contiguous habitat >10 acres
2	Y	Y	3 or more strata present (>10% cover)
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	Y	Y	100 m buffer – natural land cover <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			SIGNIFICANC	E	
	Low	Medium	High	Exceptional	NA
Floristic Integrity		 ✓ 			
Human Use Values	~				
Wildlife Habitat		 ✓ 			
Fish and Aquatic Life Habitat	~				
Shoreline Protection					~
Flood and Stormwater Storage		 ✓ 			
Water Quality Protection		 ✓ 			
Groundwater Processes		~			

FUNCTION	RATIONALE
Floristic Integrity	The feature has 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 N	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 inspective 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

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: (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 🗸
Demostron (Include abote some base base of an 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.

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	_ <u></u> 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 Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth Matrix Redox Features									
(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	Μ	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 143D)	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 F	Redox (S5)							Red Pa	arent Material (F21)
Stripped	d Matrix (S6)							Very S	hallow Dark Surface (TF12)
Dark Su	irface (S7) (LRR R, M	ILRA 1498	3)					Other	(Explain in Remarks)
³ Indicators o	f hydrophytic vegetat	ion and we	atland bydr		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 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	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>2020-06-</u>	·05
Applicant/Owner: Enbridge		State: Wisconsin Sampli	ng Point: wasd102	7_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 (%): <u>0-2</u>	%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.3761	26 Long: -	90.730213	Datum: WGS84	4
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 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, et	c.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes 🖌	No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No 🖌	If yes, optional Wetland Site ID:
Remarks: (Explain alternative 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 (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No 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
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) 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: wasd1027_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1 Picca dauca	<u>50</u>	<u> </u>		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 =
S			·	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: <u>5</u>)				3 - Prevalence Index Is ≤3.0°
1. Carex pedunculata	10	Y	FAC	data in Remarks or on a separate sheet)
2. Athvrium angustum	10	Y	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Mitchella repens	5	N	FACU	
A Trillium sp	 1	 N	17.00	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				at breast height (DBH), regardless of height.
8			·	Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	26	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1				
2				
2			·	Under a britte
			·	Vegetation
4			·	Present? Yes <u>v</u> No
		= Total Co	ver	
The area is dominated by conifers inclu	idina wł	nite sori	ice and	balsam fir
	ading m	nto opre		

SOIL

Profile Desc	ription: (Describe t	o the dept	h 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> 1-20 </u>	<u>7.511 5/5</u>			<u> </u>
		<u> </u>		
¹ Type: C=Co	oncentration, D=Depl	etion, RM=I	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:		Debuselus Balay 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 1496)
Black Hi	stic (A3)	-	Thin Dark Surface (S9) (LRR R, MLRA 149B)	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
<u> </u>	n Sulfide (A4)	-	Loamy Mucky Mineral (F1) (LRR K, L)	Dark Surface (S7) (LRR K, L)
Stratilied Depleted	d Below Dark Surface	- (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 Mineral (S1)	-	Depleted Dark Surface (F7)	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy G	Bleyed Matrix (S4)	-	Redox Depressions (F8)	Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Perent Meterial (E21)
Sandy R	Matrix (S6)			Very Shallow Dark Surface (TE12)
Dark Su	rface (S7) (LRR R, M	LRA 149B)	1	Other (Explain in Remarks)
³ Indiantora at	f hydrophytic ycgototi	on and wat	land hydrology must be present, uplace disturbed	n problematic
Restrictive I	Laver (if observed):	on and wet	land hydrology must be present, unless disturbed o	
Type:	,			
Depth (inc	ches):			Hydric Soil Present? Yes No
Remarks:				
The soils	are well drain	ed 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>	<u>Species</u> V		Number of Dominant Species
1. <u>Traxinus nigra</u>				That Are OBL, FACW, or FAC:6 (A)
2. <u>Aples palsamilea</u>	_ <u>10</u>	 		Total Number of Dominant
4. Fravinus poppsylvanica	_ <u>10</u>			
				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
0				
7				Prevalence Index worksheet:
/·	 	- Total C		Total % Cover of:Multiply by:
Sopling/Shrub Stratum (Distaiza: 15)			Jvei	FACW species $57 \times 2 = 114$
<u>Saping/Shub Shatun</u> (Plot size. 15)	F	V		FAC species $44 \times 3 = 132$
1. <u>Fraxinus nigra</u>	<u>_</u>	<u> </u>		FACU species x 4 =8
2. <u>Ables balsamea</u>	_ <u></u>	<u> </u>		UPL species x 5 =
3. <u>Fraxinus pennsylvanica</u>	5	<u> Y </u>	FACW	Column Totals: <u>103</u> (A) <u>254</u> (B)
4				Provolonco Indox = P/A = -2.466019417475728
5				Frevalence index – B/A – <u>2.40001941/4/3/26</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	15	= Total Co	over	\sim 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. Matteuccia struthiopteris	25	<u> </u>	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	
4. <u>Doellingeria umbellata</u>	2	N	FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Caulophyllum thalictroides	2	Ν		Definitions of Vegetation Strata:
6. Maianthemum racemosum	2	N	FACU	Definitions of Vegetation Strata.
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8				
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb. All herbesseus (nen weedu) plante, regerdiese
10				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3 28 ft in
12.	35	- Total C		height.
			over	
<u>Woody Vine Stratum</u> (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate The feature is a floodplain forest domin	sheet.) Nated by	black	ash and	green ash
		biaon		

SOIL

Profile Desc	cription: (Describe t	o the dept	h needed to docun	nent the i	indicator	or confirm	the absence of	indicators.)
Depth	Matrix		Redox	<u>k Feature</u>	<u>s</u> 1	. 2		
(inches)	Color (moist)		Color (moist)		Туре	Loc		Remarks
0-12	<u>5YR 4/3</u>	100		0			<u> </u>	
12-20	<u>7.5YR 3/2</u>	100		0			LS	
		·			·			
		·			·			
·		·						
·		·						
·		·						
·		·						
·		·						
		ation DM-	Reduced Matrix MS	Mookor	d Sand Cr	aina	² Location:	DI-Doro Liping M-Matrix
Hydric Soil	Indicators:		Reduced Matrix, Mc		a Sanu Gr		Indicators fo	r Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Belov	v Surface	(S8) (LRI	RR,	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		LRA 149B)) 5 cm Muo	cky Peat or Peat (S3) (LRR K, L, R)
Hydroge Stratified	n Sullide (A4)		Loamy Nucky IV	nnerai (⊢ Matrix (F2	1) (LRR N ?)	, L)	Dark Sur	Below Surface (S8) (LRR K I)
Deplete	d Below Dark Surface	(A11)	Depleted Matrix	(F3)	-)		Thin Dark	k Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)		Redox Dark Sur	face (F6)			Iron-Man	ganese Masses (F12) (LRR K, L, 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 Depressi	ions (F8)			Mesic Sp	odic (TA6) (MLRA 144A, 145, 149B)
Sandy F	(edox (S5) I Matrix (S6)						Red Pare	ent Material (F21) Illow Dark Surface (TE12)
Dark Su	rface (S7) (LRR R, M	LRA 149B)				✓ Other (E)	xplain in Remarks)
			/					, ,
³ Indicators o	f hydrophytic vegetati	on and we	land hydrology mus	t be prese	ent, unles	s disturbed	or problematic.	
Restrictive	Layer (if observed):							
lype:								
Depth (in	ches):						Hydric Soli Pr	resent? res <u>v</u> No
Remarks:	aro paturally	nrohlon	natic due to th		tion w	ithin a f	loodolain T	be soils of the area are
sondy de		problem				umai		
Sanuy ue	posits.							



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 Landsca	ape:	
PLSS: sec 15 T045N R003W	North Control Foract		
	North Central Polest		
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):	T3/5K		
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	by block och on	d groop ach and is appointed	
flooded. The feature meets geomorphic position	by black ash and		
due to its leastion within a fleadalain	with the adjacent 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	~				
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	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
/	- <u></u>			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>		
				·			
					·		
·						;;	
					·		
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	Sandy Mucky Mineral (S1)Depleted Dark Surface (F7)Piedmont Floodplain Soils (F19) (MLRA 149						
Sandy Gieyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149)							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)	✓ Surface Water (A1)	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) bipedon (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)	`							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				
Notifi Central Porest				
Watershed:				
LS12, Marengo River				
WWI Class:				
N/A	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 a	n alder seenade wetland			
dominated by speckled alder.				
	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	N	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	N	N	3 or more strata present (>10% cover)
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	Y	Y	100 m buffer – natural land cover <a>>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			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	No invasive species were observed in the area. The feature is small and 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: No indscape 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 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 lanconvex 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

		<u> </u>		
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 Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix		Redo	x Feature	s1	. 2				
<u>(inches)</u>	Color (moist)	%	Color (moist)	%	Type'	Loc ²	Texture	Remarks		
0-20	<u>5YR 3/2</u>	100		0			LS			
·					·		<u> </u>			
·					·					
					·					
					·					
					·					
					·					
·										
	ncentration D-Der	letion RM-	Reduced Matrix MS	-Maskor		aine	² Location:	PL-Pore Lining M-Matrix		
Hydric Soil I	ndicators:					ams.	Indicators fo	r Problematic Hydric Soils ³		
Histosol	(A 1)		Polyvaluo Bolov	v Surfaco	(58) /1 0		2 cm Mur			
Histic Er	(AT) binedon (A2)	-	MI DA 1/9B)	v Sunace	(30) (LR	、 Γ,	2 cm wide	pirie Redox (A16) (I PP K I P)		
Black His	stic (Δ 3)		Thin Dark Surfa	ce (SQ) (I		RA 1498	5 cm Muchy Post or Post (\$3) (LRR K, L, R)			
Hvdroge	n Sulfide (A4)	-	Loamy Mucky M	lineral (F	1) (I RR K		Dark Sur	face $(S7)$ (I RR K I)		
Stratified	Lavers (A5)	-	Loamy Gleved I	Matrix (F2	·) (_	, _/	Polyvalue	Below Surface (S8) (LRR K. L)		
Depleted	Below Dark Surfac	e (A11) -	Depleted Matrix	(F3)	·)		Thin Dark	Surface (S9) (LRR K. L)		
Thick Da	ark Surface (A12)		Redox Dark Su	face (F6)			Iron-Man	ganese Masses (F12) (LRR K. L. R)		
Sandv M	luckv Mineral (S1)	-	Depleted Dark S	Surface (F	7)		Piedmont	t Floodplain Soils (F19) (MLRA 149B)		
Sandy G	ileved Matrix (S4)	-	Redox Depress	ions (F8)	,		Mesic Sp	odic (TA6) (MLRA 144A, 145, 149B)		
Sandy R	edox (S5)	-		()			Red Pare	ent Material (F21)		
Stripped	Matrix (S6)						Very Shallow Dark Surface (TF12)			
Dark Sur	face (S7) (LRR R, I	MLRA 149B)				Other (Ex	plain in Remarks)		
³ Indicators of	hydrophytic vegeta	tion and wet	land hydrology mus	t be prese	ent, unless	s disturbed	or problematic.			
Restrictive L	ayer (if observed)	:								
Type:										
Danth (inc	- h						Hydric Soil Pr	asant? Yas No v		
Depth (Inc	cnes):									
Remarks:					н.,					
Soils are loamy sand throughout the profile. No indicators of hydric soil were observed. Soils are										
well-drained.										





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 \checkmark 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)	Wetland Hydrology Present? Yes <u>v</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	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		<u> </u>		Column Totals. <u>144</u> (A) <u>200</u> (D)			
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	N	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				Hydrophytic Vegetation			
4				Present? Yes <u>v</u> No			
U = Total Cover							
The feature is a hardwood swamp dominated by black ash and vellow birch.							
1							

SOIL

Profile Desc	cription: (Describe	to the depth	needed to document the indicat	or or confirm the a	bsence of indicato	rs.)
Depth (inchos)	Matrix	0/.	Redox Features	$\frac{1}{1}$ Lop ² To	vturo	Pomorko
						Remains
0-12	<u>10YR 2/1</u>	100		N		
12-20	<u>7.5YR 3/2</u>	100	0		<u>S</u>	
		<u> </u>	· · ·			
¹ Type: C=C	oncentration, D=Dep	etion, RM=Re	educed Matrix, MS=Masked Sand	Grains. ²	Location: PL=Pore L	_ining, M=Matrix.
Hydric Soil	Indicators:			Inc	licators for Problen	natic Hydric Soils':
Histosol	(A1)		Polyvalue Below Surface (S8) (L	.RR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
HISTIC EP Black Hi	stic (A3)		MLRA 149B) Thin Dark Surface (SQ) (I PP P	MI PA 1/98)	5 cm Mucky Peat of	DX (A16) (LKK K, L, K) or Peat (S3) (LPP K \downarrow P)
Hydroge	en Sulfide (A4)	_	Loamy Mucky Mineral (F1) (LRF	R K, L)	Dark Surface (S7)	(LRR K, L)
Stratified	d Layers (A5)	_	Loamy Gleyed Matrix (F2)	. ,	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)
Thick Da	ark Surface (A12)		Redox Dark Surface (F6)		Iron-Manganese M	lasses (F12) (LRR K, L, R)
Sandy M	Nucky Mineral (S1)		Depleted Dark Surface (F7)		Piedmont Floodpla	in Soils (F19) (MLRA 149B)
Sandy G	Bleyed Matrix (S4)		_ Redox Depressions (F8)		_ Mesic Spodic (TAb	o) (MLKA 144A, 145, 149B)
Sandy R	Matrix (S6)				Verv Shallow Dark	Surface (TF12)
Dark Su	rface (S7) (LRR R, N	ILRA 149B)			Other (Explain in F	Remarks)
		,				
³ Indicators o	f hydrophytic vegetat	ion and wetla	nd hydrology must be present, unl	ess disturbed or pro	blematic.	
Restrictive I	Layer (if observed):					
Туре:			_			
Depth (in	ches):		_	Hyd	Iric Soil Present?	Yes 🖌 No
Remarks:						
A mucky	mineral layer	was obse	erved over a layer of sa	and.		



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 Ó					
File #:	Date of visit(s):					
wasd1028	2020-06-06					
Location:	Ecological Landscape:					
PLSS: sec 15 T045N R003W	North Central Forest	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						
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 by black ash and yellow birch. Eastern rough sedge and fowl manna grass are common in the herbaceous layer.					
The wetland hydrology regime is seasonally						
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	Ň	Ň	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth				
7	N	N	Stormwater or surface water from agricultural land is major hydrology source				
8	Y	Y	Discharge to surface water				
9	N	N	Natural land cover in 100m buffer area < 50%				
GW			Groundwater Processes				
1	V	v	Springs seeps or indicators of groundwater present				
2		I NI	Location near a groundwater divide or a boddwater wotland				
2			Wotland remains saturated for an extended time period with ne additional water insute				
3	N V		Wetland remains saturated for an extended time period with no additional water inputs				
4	Y	Y	Wetland is within a wellhand protection area				
l D	I N	N	wellahu is willilli a welliteau 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)

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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 (00).	
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 (B16)		
Saturation (A3) Marl Dep	osits (B15)	Dry-Season Water 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 absorved		
	15 OF WElland Hyur	blogy were observed	1.	

VEGETATION – Use scientific names of plants.

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 representative of an upland 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>			
·					
		·			
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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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>rro 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	98): <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

VEGETATION – Use scientific names of plants.

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

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: <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.

VEGETATION – Use scientific names of plants.

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 hardwood swamp community. The canopy is dominated by					
quaking aspen. The shrub layer is a mix of nannyberry, winterberry, and red-osier dogwood. The					
herbaceous layer is dominated by dwa	rf raspbe	erry and	d Canad	a bluejoint.	

SOIL

Profile Desc	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix			Redox	x Features	s 1	. 2	— .	D
(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	Solls (F19) (MLRA 149B)
Sandy G	Sedox (S5)			Depress	ions (Fo)			INESIC Spould (TA0) Red Parent Material	(WILKA 144A, 143, 149D) (F21)
Stripped	d Matrix (S6)							Verv Shallow Dark S	Gurface (TF12)
Dark Su	urface (S7) (LRR R, N	ILRA 149	B)					Other (Explain in Re	marks)
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:									
The soil profile consists of a dark clay loam over three other lavers. The middle two lavers are									
depleted sandy clay loams, and the bottom layer is a brownish gray fine sandy loam. Redox									
concentrations were observed throughout the profile.									
					- 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): PFO/PEM - hardwood swamp/fresh wet meadow complex		
slopes			
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 black ash and and nannyberry are abundant. The ground layer is		
The hydrologic regime is seasonally saturated.			
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
2		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	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)
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	SIGNIFICANCE							
	Low	Medium	High	Exceptional	NA			
Floristic Integrity		 ✓ 						
Human Use Values		~						
Wildlife Habitat			~					
Fish and Aquatic Life Habitat	v							
Shoreline Protection					~			
Flood and Stormwater Storage		~						
Water Quality Protection		~						
Groundwater Processes		 ✓ 						

FUNCTION	RATIONALE
Floristic Integrity	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

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>05-28 0</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.	

VEGETATION – Use scientific names of plants.

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 <u>0</u> x1 = <u>0</u>
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				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		ie 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 Turn a 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)		Piedmont 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	suistuibeu				
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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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:
Describe Recorded Data (stream gauge, monitoring weil, aenai photos, previous inspec	uoris), ii available.
Remarks: The feature is a discharge wetland that is seasonally satura	ated.

VEGETATION – Use scientific names of plants.

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> 5	 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>	FACW	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	
4. <u>Equisetum sylvaticum</u>	5	Y	FACW	be present, unless disturbed or problematic.
5. <u>Carex stipata</u>	2	Ν	OBL	Definitions of Vegetation Strata:
6. <u>Juncus effusus</u>	2	N	OBL	
7. <u>Epilobium ciliatum</u>	2	N	FACW	at breast height (DBH), regardless of height.
8. <u>Glyceria striata</u>	2	N	OBL	Sanling/chrub - Woody plants less than 3 in DBH
9. Dryopteris carthusiana	2	Ν	FACW	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Solidago gigantea</u>	2	N	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.)			
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 Description: (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) Color (n	noist)	%	<u>Color (</u> r	noist)	%	Type ¹	Loc ²	Texture		Remarks
<u>0-12</u> 7.5YR	3/1	98	<u>7.5YR</u>	4/6	2	C	M	L		
<u>12-20</u> 5YR	5/4	100			0			FSL		
· · ·										
·										
								<u> </u>		
'Type: C=Concentration	, D=Deplet	ion, RM:	Reduced N	Aatrix, MS	S=Masked	Sand Gr	ains.	Location	PL=Pore l	_ining, M=Matrix.
			Pohar		N Surfaco	(58) (1 0				
Histic Epipedon (A2)			MLRA 149B)				、 Γ,	Coast Prairie Redox (A16) (LRR K, L, MLRA 1496)		
Black Histic (A3)			Thin Dark Surface (S9) (LRR R, MLRA 149B)				LRA 149B)) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
Hydrogen Sulfide (A4)			Loamy Mucky Mineral (F1) (LRR K, L)				, L)	Dark Surface (S7) (LRR K, L)		
Stratified Layers (A5)			Loamy Gleyed Matrix (F2)					Polyvalue Below Surface (S8) (LRR K, L)		
Depleted Below Dark Surface (A11)			Depleted Matrix (F3)					Thin Dark Surface (S9) (LRR K, L)		
Thick Dark Surface (A12)			Redox Dark Surface (F6)					Iron-Manganese Masses (F12) (LRR K, L, R)		
Sandy Mucky Mineral (S1)			Depleted Dark Surface (F7) Redox Depressions (F8)					Pleamont Floodplain Solis (F 19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy Redox (S5)							Red Parent Material (F21)			
Stripped Matrix (S6)								Very S	hallow Dark	Surface (TF12)
Dark Surface (S7) (L	.RR R, ML	RA 1498	3)					Other (Explain in F	Remarks)
31			411							
Restrictive Laver (if ob	served).	n and We	ana nyaro	nogy mus	s be prese	ent, uniess	suisturbed	or proplemation	•	
Type [.]										
Depth (inches):								Hydric Soil	Present?	Yes 🖌 No
Remarks:										
The soil profile co	onsists	of a d	lark loai	n ovei	r a red	fine sa	andv loa	am. Redox	k was ob	served within the
top laver, and Re	dox Da	ark Su	rface 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	ARK/DMP			
File #:	Date of visit(s):				
wase1025	2020-05-28				
Location:	Ecological Landscape:				
PLSS: sec 22 T045N R003W	Superior Mineral Ranges				
		-			
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 D	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 the ground layer has a diverse				
discharge hydrology.	assemblage of herbs				
	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	N	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
1	N	N	Provides substantial storage of storm and floodwater based on previous section
2	N	N	Basin wetland <u>or</u> constricted outlet
3	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	Discharge to surface water
9	N	<u>N</u>	Natural land cover in 100m buffer 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
Ilex 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	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		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

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: <u>Enbridge</u>	State: Wisco	nsin Sampling Point: wasd1030s_w
Investigator(s): AGG/OTG	_ Section, Township, Range: <u>sec 15 T045</u>	N 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	fication:
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	problematic? (If needed, explain any answ	vers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes _ ✔ No Yes _ ✔ No	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 procedu	res here or in a separate repor	t.)

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	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) <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 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	and Hydrology Present? Yes <u><</u> No		
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.

VEGETATION – Use scientific names of plants.

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.				Developes Index workshoet
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.			····	FACU species x 4 =0
3				UPL species x 5 =
0				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)
2. Equipotum pylyotioum	<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):							
Type:									
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:		
O we to Achieve the Third (O'th A / 11 and Achieve 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 as	shrub-carr dominated by	
The wetland hydrology regime is seasonally	meadow willow and yellow lake sedge, with Canada blueioint also prevalent.		
saturated. Saturation and water table were			
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	N	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	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: <u>WGS84</u>
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	lures 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 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 (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	Senling/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>(Intences)</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>	c 15 T045N R003V	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	
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>		·	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			<u> </u>	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			·			
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	th Matrix Redox Features											
(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>												
						·		·				
						·		·				
						·		·				
						·						
						·		·				
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	Dark 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)			I hin Da	ark Surface	(S9) (LRR K,	
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 Pa	arent Materia	al (F21)	, , , ,
Stripped	d Matrix (S6	i)							Very S	hallow Dark	Surface (TF1:	2)
Dark Su	ırface (S7) ((LRR R, M	/ILRA 149	B)					Other (Explain in R	lemarks)	
°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 se	adre 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
Х	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?	Yes Yes	No No	Is the Sampled Area within a Wetland? Yes <u>No</u>
Wetland Hydrology Present?	Yes	No 🔽	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceen Northern mesic hardwood regeneration.	dures here or in d forest loc	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:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	ions), if available:
(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:
(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:
(includes capillary fringe) res Novert Deput (includes). Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	ions), if available:
(includes capillary fringe) 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:
(includes capillary fringe) res No Depth (inclus) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	ions), if available:
(includes capillary fringe) res No Depth (inclus) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	ions), if available:
(includes capillary fringe)	ions), if available:
(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
3. <u>Thia americana</u>	10			Species Across All Strata. D (B)
4. <u>I suga canadensis</u>	10		FACU	Percent of Dominant Species
5			·	
6			·	Prevalence Index worksheet:
7			·	Total % Cover of: Multiply by:
45	100	= Total Co	ver	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> Y </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 wotland hydrology must
4. <u>Athyrium angustum</u>	5	N	FAC	be present, unless disturbed or problematic.
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
	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	presenta	ative of	upland c	dominated by quaking aspen and
paper birch, with ground cover dominat	paper birch, with ground cover dominated by beaked hazelnut saplings and partridgeberry. Fern			
species are abundant throughout the s	urroundi	ing area	a.	

SOIL

Profile Desc	cription: (Describe t	to the dept	h needed to docum	nent the	indicator of	or confirm	the absence of	of indicators.)	
Depth	Matrix		Redox	K Feature	s				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-10	<u>10YR 3/2</u>	100		0			<u> </u>		
10-20	7.5YR 3/3	100		0			SIL		
·									
		·			- <u> </u>				
		·		·		. <u> </u>			
	oncontration D-Don	otion PM-	Poducod Matrix MS	Macko	d Sand Cra	inc	² Location:	PL-Pore Lining M-Matrix	
Hydric Soil	Indicators:		Reduced Matrix, Mc			aii 15.	Indicators f	for Problematic Hydric Soils ³	
Histosol	(A1)		Polyvalue Below	v Surface		D	2 cm Mi	uck (A10) (I PP K I MI PA 149B)	
Histic F	ninedon (A2)		MI RA 149R)	Vounace		х IX,	Coast Prairie Redox (A16) (IRR K I R)		
Black H	istic (A3)		Thin Dark Surfa	ce (S9) (LRR R. ML	RA 149B)	5 cm Mucky Peat or Peat (S3) (IRR K I R)		
Hydroge	en Sulfide (A4)		Loamy Mucky M	lineral (F	1) (LRR K ,	, L)	Dark Su	Inface (S7) (LRR K, L)	
Stratifie	d Layers (A5)		Loamy Gleyed N	Aatrix (F2	<u>2)</u>	,	Polyvalı	Polyvalue Below Surface (S8) (LRR K, L)	
Deplete	d Below Dark Surface	e (A11)	Depleted Matrix	(F3)			Thin Da	Thin Dark Surface (S9) (LRR K, L)	
Thick Da	ark Surface (A12)		Redox Dark Sur	face (F6))		Iron-Ma	nganese Masses (F12) (LRR K, L, R)	
Sandy M	/lucky Mineral (S1)		Depleted Dark S	Surface (I	F7)		Piedmo	nt Floodplain Soils (F19) (MLRA 149B)	
Sandy C	Gleyed Matrix (S4)		Redox Depressi	ons (F8)			Mesic S	podic (TA6) (MLRA 144A, 145, 149B)	
Sandy F	Redox (S5)						Red Pa	rent Material (F21)	
Stripped Matrix (S6)						Very Sh	iallow 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	land hydrology mus	t be pres	ent unless	disturbed	or problematic		
Restrictive	Laver (if observed):								
Type:									
турс. <u> </u>							Hydric Soil E	Prosont? Yos No 1/	
Depth (in	ches):						Hyune Son P		
Remarks:			NU 11 11 1			.,		<u> </u>	
Soils are	loam above s	lit Ioam	. No indicator	s of h	yarıc so	oll were	observed.	Solls are well-drained.	



wasd1031_u_E



wasd1031_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/C	ounty: Bayfield Sampling Date: 2020-07-09								
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wbad1010s_w								
Investigator(s): DMP/AGG Section	n Township Range: Sec 05 T047N R005W								
Landform (hillslope terrace etc.): Depression	of (conceive convex none): CONCEIVE Slope (%): 0-2%								
Landionn (ninsiope, terrace, etc.). <u>Depression</u> Locartein	Silpe (%). <u>0-276</u>								
Subregion (LRR or MLRA): Lat: Lat:	Long: <u>-91.022216</u> Datum: <u>VVGS84</u>								
Soil Map Unit Name: <u>Superior-Sedgwick complex, 0 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 disturb	Ded? Are "Normal Circumstances" present? Yes <u>v</u> No								
Are Vegetation, Soil, or Hydrology naturally problema	tic? (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 Ves No	within a Wetland? Yes <u>v</u> No								
Wetland Hydrology Present? Yes <u> Ves No</u>	If yes, optional Wetland Site ID:								
Remarks: (Explain alternative procedures here or in a separate report.)									
The alder thicket is located within a roadside ditch.	An ATV trail to the south divides the wetland.								
There are two culverts under Mesik Road that hydr	ologically connect this wetland to wbad1011e.								
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 Odd	or (C1) Crayfish Burrows (C8)								
Sediment Deposits (B2) Oxidized Rhizosphere	s on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)								
Drift Deposits (B3) Presence of Reduced	Iron (C4) Stunted or Stressed Plants (D1)								
Algal Mat or Crust (B4) Recent Iron Reduction	n in Tilled Soils (C6) Geomorphic Position (D2)								
Iron Deposits (B5) Thin Muck Surface (C	7) Shallow Aquitard (D3)								
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rem	arks) Microtopographic Relief (D4)								
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)								
Field Observations:									
Surface Water Present? Yes No 🖌 Depth (inches):									
Water Table Present? Yes No 🗸 Depth (inches):									
Saturation Present? Yes No 🖌 Depth (inches):	Wetland Hydrology Present? Yes <u>v</u> No								
(includes capillary fringe)	rique inspections), if available:								
Describe Recorded Data (stream gauge, monitoring weil, aenai photos, pres	nous inspections), il available.								
Remarks:									
The hydrologic regime is seasonally saturated. The	re is standing water throughout the feature from a								
recent rain event.									

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wbad1010s_w</u>

Tree Stratum (Plot cize: 30)	Absolute % Cover	Dominant	Indicator	Dominance Test worksheet:				
1 Acer rubrum	<u>10</u>	V	FAC	Number of Dominant Species				
2 Populus tromulaidas	<u> </u>			That are OBL, FACW, of FAC: <u>b</u> (A)				
3. Fravinus nigra	<u> </u>			Total Number of Dominant Species Across All Strata: 6 (B)				
		I						
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)				
5								
o				Prevalence Index worksheet:				
1				<u>Total % Cover of:</u> <u>Multiply by:</u>				
45		= Total Co	ver	OBL species 55 $x_1 = 55$				
Sapling/Shrub Stratum (Plot size: 15)				FACW species 30 $x^2 = 172$				
1. <u>Alnus incana</u>	50	<u> </u>	FACW	FACU species $0 \times 4 = 0$				
2. <u>Ilex verticillata</u>	2	<u> N</u>	<u>FACW</u>	UPL species $0 \times 5 = 0$				
3				Column Totals: 163 (A) 293 (B)				
4								
5				Prevalence Index = B/A = <u>1.80</u>				
6				Hydrophytic Vegetation Indicators:				
7				1 - Rapid Test for Hydrophytic Vegetation				
	52 = Total Cover			∠ 2 - Dominance Test is >50%				
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹				
1 Carex crinita	50	Y	OBI	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)				
2 Phalaris arundinacea	<u> </u>	Ŷ	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)				
3 Glyceria striata	<u> </u>	 N	OBI					
A Rubus idaeus	<u> </u>	 N		¹ Indicators of hydric soil and wetland hydrology must				
5. Equisetum anyense	2	 N	FAC					
6. Erovinus piaro	<u> </u>	N		Definitions of Vegetation Strata:				
0. <u>Flaxinus nigra</u>		N		Tree – Woody plants 3 in. (7.6 cm) or more in diameter				
		IN	<u>FACVV</u>	at breast height (DBH), regardless of height.				
8 9.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.				
10				Herb – All herbaceous (non-woody) plants, regardless				
11				of size, and woody plants less than 3.28 ft tall.				
12				Woody vines – All woody vines greater than 3.28 ft in				
	91 = Total Cover			neight.				
Woody Vine Stratum (Plot size: <u>30</u>)								
1								
2.								
3.				Hydrophytic				
4				Vegetation				
· ··		= Total Co	ver	Present? Yes <u>~</u> No				
Remarks: (Include photo numbers here or on a separate	sheet)		VCI					
The sample vegetation is representative of the wetland. The tree species are overhanging the								

The sample vegetation is representative of the wetland. The tree species are overhanging the wetland. Speckled alder is the dominant shrub, and fringed sedge and reed canary grass dominate the ground layer.
Inches) Color (moist) % Type? Loc' Texture Remarks Image: Color (moist) % Color (moist) % Type? Loc' Texture Remarks Image: Color (moist) % Color (moist) % Type? Type? Type? Type? Type? Image: Color (moist) % Type? Type? Image: Color (moist) Imag	(inches) Color (moist) % Color (moist) % Type! Loc* Texture Remarks	nches) Color (moist) % Type ¹ Loc ⁴ Texture Remarks	(inches) Color (moist) % Type ¹ Loc ¹ Texture Remarks Image: Second S	Jepth	Matrix		Redo	x Features	3				
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'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, L) 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, D) - Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) - Stratified Layers (A5) Loamy Gleyed Matrix (F3) - Thin Dark Surface (F6) - Thick Dark Surface (A11) Depleted Matrix (F3) - Thin Dark Surface (S9) (LRR K, L) - Sandy Gleyed Matrix (S4) Redox Dark Surface (F7) - Piedmont Floodplain Soils (F19) (MLRA 144A, 145, 14 - Sandy Gleyed Matrix (S4) Redox Depressions (F8) - Mesic Spodic (TA6) (MLRA 144A, 145, 14 - Sandy Redox (S5) - Very Shallow Dark Surface (T12) - Other (Explain in Remarks) - 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. - Other (Explain in Remarks)	Fype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 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) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Stratified Layers (A5) Loamy Gleyed Matrix (F3) Thin Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) 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) ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	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, Histosol (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Loamy Gleyed Matrix (F3) Thin Dark Surface (F6) Inon-Manganese Masses (F12) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Stripped Matrix (S4) Redox Depressions (F8) Stripped Matrix (S6) Very Shallow Dark Surface (TF1) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Very Shallow Dark Surface	Image: Stripped Matrix (S4) Redox Dark Surface (F6) Indicator (F12) Stripped Matrix (S6) Redox Dark Surface (F7) Polyvalue Below Surface (F7) Stripped Matrix (S6) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLR A 144B) Stripped Matrix (S6) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLR A 144B) Stripped Matrix (S6) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLR A 144B) Stripped Matrix (S6) Coast Praint Redox (TF12) Polyvalue Below Surface (S7) (LRR K, L) Match Matrix (S6) Coast Praint Redox (S7) (LRR K, L) Dark Surface (S8) (LRR K, L) Match Matrix (S6) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144A, 145, 148, 148, 148, 148, 148, 148, 148, 148			·			·	· ·			
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wbad1010s_w_N



wbad1010s_w_S

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

WETLAND IDENTIFICATION		
Project name:	Evaluator(s):	
Line 5 Relocation Project	DMP/AGG	
File #:	Date of visit(s):	
wbad1010	2020-07-09	
Location:	Ecological Landsca	ape:
PLSS: sec 05 T047N R005W	Superior Coastal Plain	
Lat: <u>46.574935</u> Long: <u>-91.022226</u>	Watershed:	
	LOUO, FISH CIEEK	
SITE DESCRIPTION		
Soils:	WWI Class:	
Mapped Type(s):	N/A	
Superior-Sedawick complex 0 to 6 percent slopes	Wetland Type(s)	
	PSS - Alder thic	ket
Field Verified:		
The soils were not verified. The soils were not sampled due to	Wetland Size	Wetland Area Impacted
the location of the wetland within a roadside ditch. The soils	0.1484	0.1484
are assumed to be hydric due to the presence of hydrophytic	Vegetation:	
vegetation and hydrologic indicators.	Plant Community	Description(s)
Hydrology:	Red maple and d	uaking aspen were overhanging
The hydrologic regime is seasonally saturated.	the wotland Snot	cklod alder was the dominant
There was standing water throughout the feature	abrub and fringe	
from a report role event	sinub, and innge	u seuge and reed canary grass
	dominated the gr	ound layer.

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	Ν	N	Used for recreation (hunting, birding, hiking, etc.). List:
2	Ν	Ν	Used for educational or scientific purposes
3	Y	Y	Visually or physically accessible to public
4	Ν	Ν	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	N	Supports or provides habitat for endangered, threatened or special concern species
7	N	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Ν	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	N	N	Occurs in a Joint Venture priority township
6	Y	Y	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
-		•	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
	Y	Y	plans
8	Ν	N	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present > 45 days
10	N	Ý	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	Ň	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	N	N	Wetland is connected or contiguous with perennial stream or lake
2	N	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
-			Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
2	N	N	water levels or high flows – if no, not applicable
3	N	N	Densely rooted emergent or woody vegetation
ST			Storm and Floodwater Storage
1	N	Y	Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Y	Ý	Water flow through wetland is NOT channelized
3	Ý	Ý	Dense, persistent vegetation
4	N	Ň	Evidence of flashy hydrology
5	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	N	Ý	Basin wetland or constricted outlet
3	Y	Ý	Water flow through wetland is NOT channelized
4	N	Ň	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	Ň	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	Y	Y	Stormwater or surface water from agricultural land is major hydrology source
8	Ň	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			Leastion near a groundwater divide or a beadwater watland
2	N N	N N	Wetland remains a sturated for an extended time period with no additional water insuite
3	N N	N N	Wetland soils are organic
4	IN N	N N	Wetland is within a wellbased protection area
5	I N	I N	vveuanu is within a weilnead protection area

Section 1 Comments (Refer to Section 1 numbers)

HU-3: The feature is adjacent to a public road and an ATV trail. People traveling on these roads can see the wetland.

FA-2: There was standing water within the wetland during the field visit. There was a significant storm event the night before, but it is likely that the feature is inundated after most significant rain events and after snow melt. Aquatic insects and amphibians can utilize the feature during those times.

ST-5: The feature is located near a hay field, roads, and an ATV trail. It is likely that non-point pollutants enter the feature from these land uses. Several culverts are also present in the feature. WQ-3: The feature occurs within a roadside ditch. Water flows 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	Veery, American redstart, common yellow throat, American robin observed in the vicinity
	Y	Mammals, herpetofauna

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

Observed	Potential	Species/Habitat
	Y	Aquatic insects

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Alnus incana*			PSS	Interrupted
Phalaris arundinacea*			PSS	Interrupted
Carex crinita			PSS	Patchy
Equisetum arvense			PSS	Rare
Acer rubrum			PSS	Rare
Fraxinus nigra			PSS	Rare
Populus tremuloides			PSS	Rare
Glyceria striata			PSS	Barren
Onoclea sensibilis			PSS	Barren
Osmunda claytoniana			PSS	Barren
Rubus pubescens			PSS	Barren
Solidago gigantea			PSS	Barren
Athyrium filix-femina			PSS	Barren
Fragaria virginiana			PSS	Barren
Glyceria canadensis			PSS	Barren
Hemerocallis fulva			PSS	Barren
llex verticillata			PSS	Barren
Osmunda cinnamomea			PSS	Barren
Rubus idaeus			PSS	Barren
Typha sp.			PSS	Barren

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

The floristic integrity is low due the the dominant presence of reed canary grass and the low diversity.

SECTION 3: Condition Assessment of Wetland Assessment	: Area (AA) and Bu	iffer (100 m)
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Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
X	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
	Х		L	С	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
	Х		L	С	Sediment input
	X		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	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
	Х		L	С	Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is adjacent to two roads and an ATV tail. The ATV trail is south of the wetland. There is a gravel road to the east and a paved road to the north. The ATV trail acts as a berm to the feature. There are also hay fields to the south past the trail. It is likely that non-point inputs and sediment enter the feature form the nearby land use. Two culverts are present in the feature. Non-native species were common throughout the wetland.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The floristic integrity is low due the the dominant presence of reed canary grass and the low diversity.
Human Use Values	The feature is located near two roads and an ATV trail. The feature is located on private property, but people can see it from the roads.
Wildlife Habitat	The feature is located within a roadside ditch and near an ATV trail. A few bird species were heard in the immediate area, but there is not much potential for other animals to utilize the feature.
Fish and Aquatic Life Habitat	There was not much standing water within the feature during the field survey and there was a significant storm in the area the night before. The associated culverts likely play a role in allowing water to travel laterally out of the feature. It is unlikely that this feature plays a significant role for aquatic life.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a narrow linear flow through wetland that occurs within a roadside ditch. It is densely vegetated and associated with several culverts, but likely only holds minimal stormwater.
Water Quality Protection	The feature is a narrow linear flow through wetland that occurs within a roadside ditch. It is unlikely that it plays much of a role in water quality protection.
Groundwater Processes	Groundwater recharge feature.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Bayfield Sampling Date: 2020-07-09						
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wbad1010_u						
Investigator(s): <u>DMP/AGG</u>	Section, Township, Range: <u>sec 05 T047N R005W</u>						
Landform (hillslope, terrace, etc.): Rise	ocal relief (concave, convex, none): <u>None</u> Slope (%): <u>0-2%</u>						
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.57499	0Long: <u>-91.022202</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 ye	ear? Yes 🖌 No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes 🖌 No						
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes No 🗸	Is the Sampled Area						
Hydric Soil Present? Yes No 🖌	within a Wetland? Yes <u>No</u>						
Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID:						
Remarks: (Explain alternative procedures here or in a separate report The upland sample plot was taken on a road of	prt.) grade. The upland has been recently mowed and no						
wetland indicators were observed.							

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: wbad1010_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1.	<u>/// Cover</u>			Number of Dominant Species
2			·	
3.			·	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
4.				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6			·	Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
	0	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =0
1				FAC species x 3 =
2			·	FACU species <u>46</u> x 4 = <u>184</u>
2			·	UPL species x 5 =
3			·	Column Totals: <u>46</u> (A) <u>184</u> (B)
4 5.			·	Prevalence Index = $B/A = 4.0$
6			- <u> </u>	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
/·			·	2 - Dominance Test is >50%
		= Total Co	ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>5</u>)	05	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Poa pratensis</u>	25	<u> </u>	FACU	data in Remarks or on a separate sheet)
2. <u>Plantago major</u>	10	<u> </u>	<u>FACU</u>	Problematic Hydrophytic Vegetation' (Explain)
3. <u>Ambrosia artemisiifolia</u>	5	N	FACU	¹ Indicators of hydric soil and watland hydrology must
4. <u>Trifolium repens</u>	2	N	<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Medicago Iupulina</u>	2	N	<u>FACU</u>	Definitions of Vegetation Strata:
6. Anthemis cotula	2	N	FACU	Tree Weedy 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			·	Woody vines – All woody vines greater than 3.28 ft in height.
	46	= Total Co	ver	
Woody Vine Stratum (Plot size: <u>30</u>)				
1			·	
2				
3				Hydrophytic
4	<u> </u>		<u>.</u>	Vegetation Present? Ves No v
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			
The plot vegetation is representative of	the upla	and. Th	e area h	has been recently mowed.

Depth	 Matrix		Redo	x Feature	s			,
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
					·			
		·						
		·			·			
		- <u> </u>			·			
					·			
		·			·			
					·			
Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	d Sand Gr	ains.	² Location: PL=P	ore Lining, M=Matrix.
Hydric Soil	Indicators:	,	,				Indicators for Pro	blematic Hydric Soils ³ :
Histoso	l (A1)		Polyvalue Belo	w Surface	(S8) (LR	RR.	2 cm Muck (A1	10) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)		MLRA 149B)	. , .		Coast Prairie F	Redox (A16) (LRR K, L, R)
Black H	istic (A3)		Thin Dark Surfa	ace (S9) (I	LRR R, MI	LRA 149B)	5 cm Mucky P	eat or Peat (S3) (LRR K, L, R)
Hydrog	en Sulfide (A4)		Loamy Mucky M	Mineral (F	1) (LRR K	, L)	Dark Surface (S7) (LRR K, L)
Stratifie	d Layers (A5)		Loamy Gleyed	Matrix (F2	2)		Polyvalue Belo	ow Surface (S8) (LRR K, L)
Deplete	d Below Dark Surfac	e (A11)	Depleted Matrix	k (F3)			Thin Dark Surf	ace (S9) (LRR K, L)
Thick D	ark Surface (A12)		Redox Dark Su	rface (F6)			Iron-Manganes	se Masses (F12) (LRR K, L, R)
Sandy I	Mucky Mineral (S1)		Depleted Dark	Surface (F	-7)		Piedmont Floo	dplain Soils (F19) (MLRA 149E
Sandy (Gleyed Matrix (S4)		Redox Depress	sions (F8)			Mesic Spodic	(TA6) (MLRA 144A, 145, 149B
Sandy I	Redox (S5)						Red Parent Ma	aterial (F21)
Stripped	d Matrix (S6)		•				Very Shallow L	Dark Surface (TF12)
Dark Su	irface (S7) (LRR R, N	ILRA 149E	3)				Other (Explain	in Remarks)
Indicators of	of hydrophytic yeaetat	tion and we	atland hydrology mus	et ha nrae	ant unless	e disturbod	or problematic	
Restrictive	l aver (if observed):		and hydrology mus	st be pres	ent, unicos	s distui bed		
Tunoi	Layer (il observeu).							
Type.								
Depth (ir	iches):						Hydric Soll Presen	t? Yes No
Remarks:							•	
The soils	s were not san	npled d	ue to the loca	tion wi	thin a r	oadside	e area. The soi	Is are assumed to be
non-hyd	ric based on th	ne lands	scape positior	n and c	lomina	nt vege	tation.	
,			• •			Ŭ		



wbad1010_u_N



wbad1010_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Polecation Project	City/County: Bayfield Sampling Date: 2020-07-09						
And Section of Ender	_ City/County. <u>DayITetu</u> Sampling Date. <u>ZUZU-01-03</u>						
Applicant/Owner: EIIDIIQE	State: <u>Wisconsin</u> Sampling Point: <u>Wbad10111_</u>						
Investigator(s): <u>DMP/AGG</u>	_ Section, Township, Range: <u>SEC 05 104/N R005W</u>						
Landform (hillslope, terrace, etc.): Depression	.ocal relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>						
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.5749</u>	54 Long: <u>-91.021969</u> Datum: <u>WGS84</u>						
Soil Map Unit Name: Superior-Sedgwick complex, 0 t	o 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	ly disturbed? Are "Normal Circumstances" present? Yes No						
Are Vegetation, Soil, or Hydrology naturally p	problematic? (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 within a Wetland? Yes ✓ No If yes, optional Wetland Site ID:						
The wetland is a wet meadow and hardwood	swamp complex that occurs alongside a road within a						
ditch. The feature extends to the east outside	of the survey corridor. There are roads bordering the						
feature to the west and north, and an ATV tra	il to the south. There are two culverts under the road						
that connect the feature to wbad1010s.							
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-Staine	d Leaves (B9) Drainage Patterns (B10)						
High Water Table (A2) Aquatic Faun	a (B13) Moss Trim Lines (B16)						
Saturation (A3) Marl Deposits	s (B15) Drv-Season Water Table (C2)						
Water Marks (B1) Hvdrogen Su	Ifide Odor (C1) Cravfish Burrows (C8)						
Sediment Deposits (B2) Oxidized Rhi	zospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)						
Drift Deposits (B3)	Reduced Iron (C4) Stunted or Stressed Plants (D1)						
Algal Mat or Crust (B4)	Reduction in Tilled Soils (C6)						
Iron Deposits (B5)	Inface (C7) Shallow Aquitard (D3)						
Inundation Visible on Aerial Imagery (B7) Other (Explain	n in Remarks) Microtopographic Relief (D4)						
Sparsely Vegetated Concave Surface (B8)	EAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? Yes No 🗸 Depth (inche	is):						
Water Table Present? Yes No V Depth (inche	s):						
Saturation Present? Yes No 🖌 Depth (inche	es): Wetland Hydrology Present? Yes No						
(includes capillary fringe) Describe Recorded Data (stream gauge monitoring well aerial pho	otos, previous inspections), if available:						
Remarks:							
The hydrologic regime is seasonally saturate	d. There is standing water in some areas of the						
wetland. A heavy rain event occurred the nigl	nt before the site visit.						

VEGETATION – Use scientific names of plants.

Sampling Point: wbad1011f_w

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Dominance Test worksheet:
1. <u>Populus tremuloides</u>	25	Y	FAC	That Are OBL, FACW, or FAC:7 (A)
2. <u>Fraxinus nigra</u>	10	Y	FACW	Total Number of Dominant
3. <u>Acer rubrum</u>	5	N	FAC	Species Across All Strata: <u>7</u> (B)
4. <u>Quercus rubra</u>	2	N	FACU	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6.				Provelence Index worksheets
7.				Total % Cover of: Multiply by:
	42	= Total Co	ver	$\frac{1}{1} \frac{1}{1} \frac{1}$
Sapling/Shrub Stratum (Plot size: 15)				FACW species 79 $x^2 = 158$
1 Fravinus nigra	5	V	FACW	FAC species <u>32</u> x 3 = <u>96</u>
2 llox vorticillata	<u> </u>	 		FACU species x 4 =8
	 			UPL species x 5 =
3. <u>Alfus incana</u>		<u> </u>	FACW	Column Totals: <u>138</u> (A) <u>287</u> (B)
4			·	Prevalence index = $B/A = 2.079710144927536$
5			·	Hydrophytic Vegetation Indicators:
o			·	1 - Rapid Test for Hydrophytic Vegetation
/			·	2 - Dominance Test is >50%
		= Total Co	ver	\sim 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: 5)				 4 - Morphological Adaptations¹ (Provide supporting
1. <u>Onoclea sensibilis</u>	50	<u> Y </u>	FACW	data in Remarks or on a separate sheet)
2. <u>Calamagrostis canadensis</u>	25	<u> </u>	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Equisetum arvense</u>	2	N	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Solidago gigantea</u>	2	N	FACW	be present, unless disturbed or problematic.
5. <u>Ribes cf hirtellum</u>	2	N	FACW	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	<u> </u>			Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10			·	Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	81	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1.				
2				
3			·	Hudronhutio
0			·	Vegetation
*·		- Total Ca	- <u> </u>	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	U		vei	<u> </u>
The sample vegetation is representativ	e of the	hardwo	od swai	mp. Aspen, black ash, and red maple
dominate the canopy. Speckled alder a	nd winte	erberry	were mo	ore common along the road. Canada
bluejoint and sensitive fern dominate th	e groun	d layer.		-

Profile Des	cription: (Describe	to the dep	th needed to docu	ment the	indicator	or confirm	the absence o	f indicators.)
Depth	Matrix		Redo	ox Feature	S1	. 2		
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc	Texture	Remarks
	·							<u> </u>
	· .							
1							2	
'Type: C=C	Concentration, D=Dep	etion, RM	=Reduced Matrix, M	S=Masked	d Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators for	or Problematic Hydric Soils ³ :
Histoso	l (A1)		Polyvalue Belo	w Surface	(S8) (LRI	RR,	2 cm Mu	ıck (A10) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)		MLRA 149B	;)	. , .	•	Coast P	rairie Redox (A16) (LRR K. L. R)
Black H	listic (Δ 3)		Thin Dark Surf	, ace (SQ) (I		RA 149B)	<u> </u>	icky Peat or Peat (S3) (I RR K I R)
	an Sulfida (A4)			Minoral (E		LIXA 1430) (I)	Och Nit	r_{1}
					1) (LKK N	.,∟)	Dark Su	
Stratifie	ed Layers (A5)		Loamy Gleyed	Matrix (F2	<u>2</u>)		Polyvalu	ie Below Surface (S8) (LRR K, L)
Deplete	ed Below Dark Surface	e (A11)	Depleted Matri	x (F3)			Thin Da	rk Surface (S9) (LRR K, L)
Thick D	ark Surface (A12)		Redox Dark Su	urface (F6))		Iron-Mar	nganese Masses (F12) (LRR K, L, R)
Sandy I	Mucky Mineral (S1)		Depleted Dark	Surface (F	=7)		Piedmor	nt Floodplain Soils (F19) (MLRA 149B)
Sandy	Gleved Matrix (S4)		Redox Depress	sions (F8)	,		Mesic S	podic (TA6) (MLRA 144A, 145, 149B)
Sandy I	Reday (S5)						Red Par	ent Material (E21)
Sanuy i	d Matrix (SC)							allow Dark Surface (TE12)
Suippe								
Dark Si	urface (S7) (LRR R, N	ILRA 149E	3)				Other (E	xplain in Remarks)
_								
³ Indicators of	of hydrophytic vegetat	ion and we	etland hydrology mu	st be pres	ent, unless	s disturbed	or problematic.	
Restrictive	Layer (if observed):							
Type								
Type.								
Depth (ir	nches):						Hydric Soil P	resent? Yes <u><</u> No
Remarks:								
	o wara nat aan	م امام	ua ta tha laaa	tion of	thow		ithin a road	daida ditab. Tha aaila ara
The solis	s were not san	ipied d	ue to the loca		the we	elianu w	ithin a road	uside ditch. The solis are
assume	d to be hydric l	based o	on the landsc	ape po	sition a	and dom	ninant vege	etation.
	,			• •			Ŭ	
1								
l								
1								



wbad1011f_w_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: <u>Bayfield</u>	Samplir	ng Date: <u>2020-07-09</u>			
Applicant/Owner: Enbridge		State: Wisconsin Sam	pling Point: <u>wbad1011e_w</u>			
Investigator(s): AGG/DMP	Section, Township, Range: <u>S</u>	ec 05 T047N R00	5W			
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, no	ne): <u>Concave</u>	Slope (%): 0-2%			
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.5750)71 Long: <u>-9</u>	1.022135				
Soil Map Unit Name: <u>Superior-Sedawick complex.</u> 0	to 6 percent slopes	NWI classification:				
Are climatic / hydrologic conditions on the site typical for this time o	fyear? Yes 🖌 No	(If no, explain in Remarks.))			
Are Vegetation , Soil , or Hydrology significa	ntly disturbed? Are "Norma	Il Circumstances" present?	Yes 🖌 No			
Are Vegetation Soil or Hydrology naturally	problematic? (If needed.	explain anv answers in Rer	marks.)			
		· · · · · · · · · · · · · · · · · · ·				
SUMMARY OF FINDINGS – Attach site map show	ing sampling point location	ons, transects, impo	rtant features, etc.			
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area					
Hydric Soil Present? Yes <u>v</u> No	within a Wetland?	Yes 🖌 No				
Wetland Hydrology Present? Yes <u> Ves No</u>	If yes, optional Wetlan	d Site ID:				
Canada bluejoint.						
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary Indicators (mir	nimum of two required)			
Primary Indicators (minimum of one is required; check all that app	ly)	Surface Soil Cracks (B6)			
Surface Water (A1) Water-Stain	ed Leaves (B9)	(B9) Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fau	ına (B13)	Moss Trim Lines (B16	6)			
Saturation (A3) Marl Depos	its (B15)	Dry-Season Water Ta	able (C2)			
Water Marks (B1) Hydrogen S	ulfide Odor (C1)	Crayfish Burrows (C8)			
Sediment Deposits (B2) Oxidized Rh	nizospheres on Living Roots (C3)	Saturation Visible on	Aerial Imagery (C9)			
Drift Deposits (B3) Presence of	f Reduced Iron (C4)	Stunted or Stressed F	Plants (D1)			
Algal Mat or Crust (B4) Recent Iron	Reduction in Tilled Soils (C6)	Geomorphic Position	(D2)			
Iron Deposits (B5) Thin Muck S	Surface (C7)	Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7) Other (Explanation Content of	ain in Remarks)	Microtopographic Rel	ief (D4)			
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)	5)				

Field Observations:

Saturation Present?

Surface Water Present? Water Table Present? Yes _____ No ___ Depth (inches): _ Yes _____ No _ r ___ Depth (inches): _____ Yes _____ No ____ Depth (inches): _____ Wetland Hydrology Present? Yes <u>v</u> No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

The wetland hydrology regime is seasonally saturated. The feature meets geomorphic position due to its location in a roadside ditch.

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wbad1011e_w</u>

Trop Stratum (Plot size: 30)	Absolute %	Dominan	t Indicator	Dominance Test worksheet:
(FIOLSIZE. <u>50</u>)		<u>Species</u> :	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		. <u></u>	<u> </u>	That Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
7			<u> </u>	Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species x 1 =77
Sapling/Shrub Stratum (Plot size: 15)				FACW species $2 \times 2 = 4$
1				FAC species x 3 =6
··				FACU species x 4 =8
2				UPL species x 5 =
3				Column Totals: <u>83</u> (A) <u>95</u> (B)
4			·	
5				Prevalence Index = $B/A = 1.144578313253012$
6			. <u> </u>	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				\checkmark 3 - Prevalence Index is ≤3.0 ¹
1. Colomograptic considencia	75	V		4 - Morphological Adaptations ¹ (Provide supporting
		<u> </u>		Droblomatic Hydrophytic Vagatation ¹ (Evaluation)
2. <u>Carex crinita</u>		<u> </u>		
3. <u>Athyrium angustum</u>	2	<u> N </u>	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Pteridium aquilinum</u>	2	N	<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Fraxinus nigra</u>	2	<u>N</u>	FACW	Definitions of Vegetation Strata:
6			<u> </u>	
7.				at breast height (DBH), regardless of height.
8.				Contract by Manda alarta lass than 0 in DDU
Q			. <u> </u>	and greater than or equal to 3.28 ft (1 m) tall.
0				
				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11			. <u> </u>	
12			<u> </u>	height.
	83	= Total Co	ver	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3.				Hydrophytic
4			<u> </u>	Vegetation
		- Total Co	vor	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate				
The sample plot is dominated by Cana	da bluei	oint.		
	,			

Depth	Matrix		Redo	x Features	3					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
				·						
				·						
	·			·						
					·	·				
		·								
				·						
Type: C=C	Concentration D=Den	etion RM=	Reduced Matrix M	S=Masked	Sand Gr	ains	² Location:	PI = Pore I i	nina M=Mat	riv
vdric Soil	Indicators:					um3.	Indicators fo	or Problem	atic Hvdric	Soils ³ :
Histoso	Ι (Δ 1)		Polyvalue Belov	v Surface	(S8) (I RE	R	2 cm Mu	ick (A10) (I		RA 149R)
Histic F	ninedon (A2)		MI RA 149B)	Vounace	(00) (EI	、 ι、,	Coast Pi	rairie Redox	(A16) (I RR	K.I.R)
Black H	listic (A3)		Thin Dark Surfa	ce (S9) (L	RR R. MI	LRA 149B)	5 cm Mu	icky Peat or	Peat (S3) (L	_RR K. L. R
Hvdroa	en Sulfide (A4)	•	Loamv Muckv N	/lineral (F1) (LRR K	L)	Dark Su	rface (S7) (I	LRR K. L)	
Stratifie	d Lavers (A5)		Loamy Gleved I	Matrix (F2)	, ,	Polyvalu	e Below Su	, , rface (S8) (L	.RR K, L)
Deplete	d Below Dark Surface	e (A11)	Depleted Matrix	(F3)			Thin Dar	k Surface (S9) (LRR K ,	L)
Thick D	ark Surface (A12)	. ,	Redox Dark Su	face (F6)			Iron-Mar	nganese Ma	isses (F12) (LRR K, L, R
Sandy I	Mucky Mineral (S1)		Depleted Dark \$	Surface (F	7)		Piedmor	nt Floodplair	n Soils (F19)	(MLRA 149
Sandy (Gleyed Matrix (S4)		Redox Depress	ions (F8)			Mesic S	podic (TA6)	(MLRA 144	A, 145, 149E
Sandy I	Redox (S5)						Red Par	ent Material	(F21)	
Stripped	d Matrix (S6)						Very Sha	allow Dark S	Surface (TF1	2)
Dark Sι	urface (S7) (LRR R, M	LRA 149B	5)				_∠ Other (E	xplain in Re	emarks)	
ndicators c	of hydrophytic vegetat	on and we	tland hydrology mus	t be prese	nt, unless	s disturbed o	or problematic.			
Restrictive	Layer (if observed):									
Туре:										
Depth (ir	nches):						Hydric Soil P	resent?	Yes 🖌	No
emarks.										
he soil	s were not sam	nnled di	le to the locat	tion of	the we	tland wi	thin a road	tih ehizh	ch The	soils are
	d to bo bydric k	acod o	n the landses		vition o	and dom	inant vogo	totion		
SSUME		Jaseu U		the hos			mant vege			



wbad1011e_w_N



wbad1011e_w_S

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

WETLAND IDENTIFICATION					
Project name:	Evaluator(s):				
Line 5 Relocation Project	DMP/AGG				
File #:	Date of visit(s):				
wbad1011	2020-07-09				
Location:	Ecological Landsca	ape:			
PLSS: sec 05 T047N R005W	Currenier Cenetal Disia				
	Superior Coastal Plain				
Lat: 46.574964 Long: -91.021969	Watershed:				
• •	LS08, Fish Creek				
County: Bayfield Town/City/Village: Eileen town					
, , ,					
SITE DESCRIPTION					
Soils:	WWI Class:				
Mapped Type(s):	N/A				
Superior-Sedgwick complex, 0 to 6 percent slopes	Wetland Type(s):				
	PFO/PEM - Hardwood swamp/Fresh wet meadow				
Field Verified:	complex				
The soils were not verified. The soils were not sampled due to	Wetland Size	Wetland Area Impacted			
the wetland being located within a roadside ditch. The soils	0.036				
are assumed to be hydric due to the presence of hydrophytic	Vegetation:	0.000			
vegetation and hydrologic indicators.	Plant Community Description(s):				
Hydrology:	The experience deminated by experienced marks and				
The hydrologic regime is seasonally saturated. There	The canopy was dominated by aspen, red maple and				
was standing water within some areas of the wetland	Diack asn. Speckled alder and winterberry were more				
There was a beauty rain event the night before the site	common near the road. Canada bluejoint and				
vioit	sensitive fern dominated the herbaceous layer.				
ขอแ.					

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	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	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	Y	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	N	N	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present > 45 days
10	Y	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	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	Ý	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	Ν	Y	Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Y	Y	Water flow through wetland is NOT channelized
3	Y	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 <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	Y	Basin wetland or constricted outlet
3	Y	Y	Water flow through wetland is NOT channelized
4	N	N	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	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	Ν	N	Discharge to surface water
9	Ν	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	Ν	Ν	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

HU-3: The feature is adjacent to a public road and an ATV trail. People traveling on these roads can see the wetland.

FA-2: There was standing water within the wetland during the field visit. There was a significant storm event the night before, but it is likely that the feature is inundated after most significant rain events and after snow melt. Aquatic insects and amphibians can utilize the feature during those times.

ST-5: The feature is located near a hay field, roads, and an ATV trail. It is likely that non-point pollutants enter the feature from these land uses. Several culverts are also associated with the feature.

WQ-3: The feature occurs within a roadside ditch. Water flows 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	Y	American redstart, veery, common yellow throat, American robin, red eyed verio
	Y	Mammals, herpetofauna

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

Observed	Potential	Species/Habitat
	Y	Aquatic 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) or bare due to	All strata present but	All strata present	All strata present,
		species	native 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)
Calamagrostis canadensis*			PFO/PEM	Interrupted
Populus tremuloides*			PFO	Rare
Acer rubrum			PFO	Rare
Alnus incana			PFO	Rare
Fraxinus nigra			PFO	Rare
Onoclea sensibilis			PFO	Rare
Osmunda claytoniana			PFO	Rare
Athyrium filix-femina			PFO	Barren
Equisetum arvense			PFO/PEM	Barren
llex verticillata			PFO	Barren
Quercus rubra			PFO	Barren
Solidago gigantea			PFO/PEM	Barren
Anthoxanthum odoratum			PEM	Barren
Eurybia macrophylla			PFO	Barren
Fragaria virginiana			PFO	Barren
Hemerocallis fulva			PEM	Barren
Juncus effusus			PFO	Barren
Phleum pratense			PEM	Barren
Poa palustris			PFO	Barren
Potentilla sp.			PEM	Barren
Pteridium aquilinum			PFO/PEM	Barren
Ranunculus acris			PEM	Barren
Ribes cf. hirtellum			PFO	Barren
Rubus pubescens			PFO	Barren

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

The floristic integrity was moderate due to moderate diversity and minimal cover of non-native species.

SECTION 3: Condition Assessment of Wetland Assessmen	nt Area (AA) and Buffer (100 m)
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Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
X	Х		L	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	C	Polluted runoff
					Pond construction
					Agriculture – row crops
	Х		L	C	Agriculture – hay
					Agriculture – pasture
	Х		Н	С	Roads or railroad
					Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
	Х		L	С	Sediment input
	x		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	Х		L	С	Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
	Х		L	UC	Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is adjacent to two roads and an ATV tail. The ATV trail is south of the wetland. There is a gravel road to the west and a paved road to the north. The ATV trail acts as a berm to the feature. There are also hay fields to the south past the trail. It is likely that non-point inputs and sediment enter the feature form the near by land uses. Two culverts are also associated with the feature. Non-native species were present within the wetland, but their cover was sparse.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The floristic integrity was moderate due to moderate diversity and minimal cover of non-native species.
Human Use Values	The feature is located near two roads and an ATV trail. The feature is located on private property, but people can see it from the roads.
Wildlife Habitat	The feature is mostly located within a roadside ditch. A few bird species were heard in the immediate area. Other animals may use the feature, but it isn't very likely.
Fish and Aquatic Life Habitat	There wasn't much standing water within the feature, but it is possible that amphibians and aquatic insects could use the wetland.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a small and mostly linear flow-through wetland. It has fairly dense vegetation, and functions to some capacity as a roadside ditch.
Water Quality Protection	The feature is a rather small and mostly linear flow through wetland. It is able to filter some polluted road runoff.
Groundwater Processes	No significant groundwater interactions.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Bayfield	Sampli	ng Date: <u>2020-06-10</u>			
Applicant/Owner: Enbridge		State: Wisconsin Sam	pling Point: <u>wbae1001e_w</u>			
Investigator(s): ARK/DMP	Section, Township, Range: <u>Se</u>	<u>ec 10 T047N R00</u>	5W			
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, nor	ie): <u>Concave</u>	Slope (%): <u>0-2%</u>			
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.5</u>	63749 Long: <u>-90</u>	.976535	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 tin	ne of year? Yes 🗹 No (If no, explain in Remarks.)			
Are Vegetation, Soil, or Hydrology sign	ificantly disturbed? Are "Normal	Circumstances" present?	Yes 🖌 No			
Are Vegetation, Soil, or Hydrology natu	rally problematic? (If needed, e	xplain any answers in Re	marks.)			
SUMMARY OF FINDINGS – Attach site map sh	owing sampling point locatio	ns, transects, impo	rtant features, etc.			
Hydrophytic Vegetation Present? Yes <u>Ves</u> No	Is the Sampled Area					
Hydric Soil Present? Yes <u>v</u> 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 report.)						
The leader is a wet meadow in the botton	n of a readside ditch.					

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	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 <u>v</u> Depth (inches):	
Water Table Present? Yes <u>Ves</u> No <u>v</u> Depth (inches):	
Saturation Present? Yes No V Depth (inches):	Wetland Hydrology Present? Yes <u>v</u> No
Saturation Present? Yes No V Depth (inches): (includes capillary fringe)	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 inspect	Wetland Hydrology Present? Yes
Saturation Present? Yes No V Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes <u>v</u> No <u></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: Seasonally saturated ditch bottom. Receives runoff from the	wetland Hydrology Present? Yes <u>v</u> No <u>tions</u>), if available: e adjacent field and paved road.
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Seasonally saturated ditch bottom. Receives runoff from the	wetland Hydrology Present? Yes <u>v</u> No tions), if available: e adjacent field and paved road.
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Seasonally saturated ditch bottom. Receives runoff from the	Wetland Hydrology Present? Yes <u>v</u> No tions), if available: e adjacent field and paved road.
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Seasonally saturated ditch bottom. Receives runoff from the	Wetland Hydrology Present? Yes <u>v</u> No tions), if available: e adjacent field and paved road.
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Remarks: Seasonally saturated ditch bottom. Receives runoff from the	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 inspect Remarks: Seasonally saturated ditch bottom. Receives runoff from the	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> tions), if available: e adjacent field and paved road.
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Seasonally saturated ditch bottom. Receives runoff from the	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> tions), if available: e adjacent field and paved road.
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Seasonally saturated ditch bottom. Receives runoff from the	wetland Hydrology Present? Yes <u>v</u> No <u>v</u> tions), if available: e adjacent field and paved road.
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Seasonally saturated ditch bottom. Receives runoff from the	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: Seasonally saturated ditch bottom. Receives runoff from the	Wetland Hydrology Present? Yes <u>v</u> No <u>tions</u>), if available: e adjacent field and paved road.

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wbae1001e_w</u>

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominar	It Indicator	Dominance Test worksheet:
1		Opecies		Number of Dominant Species 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	over	OBL species <u>8</u> x 1 = <u>8</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>32</u> x 2 = <u>64</u>
1				FAC species <u>17</u> x 3 = <u>51</u>
2				FACU species x 4 =36
3				UPL species x 5 =
3				Column Totals: <u>66</u> (A) <u>159</u> (B)
4 5				Prevalence Index = B/A = <u>2.40909090909090909</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
/				2 - Dominance Test is >50%
_		= Total Co	over	\sim 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Phalaris arundinacea</u>	30	<u> </u>	<u>FACW</u>	data in Remarks or on a separate sheet)
2. <u>Alopecurus pratensis</u>	15	Y	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Poa pratensis</u>	5	N	<u>FACU</u>	
4. <u>Scirpus cyperinus</u>	5	N	OBL	be present, unless disturbed or problematic.
5. <u>Cirsium arvense</u>	2	N	FACU	Definitions of Vegetation Strata:
6. <u>Juncus effusus</u>	2	N	OBL	
7. Solidago gigantea	2	Ν	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8. Carex tenera	2	N	FAC	Contract by Manda alarta lass than 0 in DDU
9. Agrimonia cf. striata	1	N	FACU	and greater than or equal to 3.28 ft (1 m) tall.
10 Lotus corniculatus	1	N	FACU	Herb - All herbaceous (non-woody) plants, regardless
11. Carex stipata	1	N	OBL	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				Heater sheets
				Vegetation
4				Present? Yes <u>v</u> No
Demorto: (Includo photo numboro horo or on o conorato	<u> </u>	= Total Co	over	
The vegetation is uniform throughout the	sneet.) ne wetla	nd		

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redo	x Features	S1	. 2		
(inches)	Color (moist)	%	Color (moist)	%	lype		lexture	Remarks
						·		
				·				
¹ Type: C=C	oncentration D=Depl	etion RM=F	Reduced Matrix MS	S=Masked	Sand Gr	ains	² Location.	PI =Pore Lining M=Matrix
Hydric Soil	Indicators:						Indicators	for Problematic Hydric Soils ³ :
Histosol	(Δ1)		Polyvalue Belov		(S8) (I PI	DD	2 cm M	uck (A10) (I PP K I MI PA 149B)
Listic E	$(\Lambda 1)$				(50) (ER	х х ,		$\frac{1}{2} \frac{1}{2} \frac{1}$
	otic (Λ^2)		Thin Dork Surf) 200 (SO) (I			Coast P	uelay Dept or Dept (S2) (LRR R, L, R)
	SIIC (AS)	_		Aliporal (E		LKA 149D) ' I)		ucky Peal of Peal (SS) (LRR R, L, R)
Hyuroge	H Sullide (A4)			Motrix (F2) (LKK K	., ⊑)	Dalk St	
Stratilied	Layers (A5)	(6.4.4)	_ Loamy Gleyed	Matrix (F2)		Polyval	
	Below Dark Surface	e (A11)	_ Depleted Matrix	((+3)				ark Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)	_	_ Redox Dark Su	fface (F6)	_			anganese Masses (F12) (LRR K, L, R)
Sandy N	lucky Mineral (S1)	-	Depleted Dark	Surface (F	-7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy G	Gleyed Matrix (S4)	_	_ Redox Depress	ions (F8)			Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)						Red Pa	rent Material (F21)
Stripped	Matrix (S6)						Very Sł	nallow Dark Surface (TF12)
Dark Su	rface (S7) (LRR R, M	LRA 149B)					_∠ Other (I	Explain in Remarks)
³ Indicators o	f hydrophytic vegetati	on and wetl	and hydrology mus	st be prese	ent, unles	s disturbed	or problematic.	
Restrictive	Layer (if observed):							
Type [.]								
- Type:								Dressent? Ves v Na
Depth (in	ches):						Hydric Soll	Present? Yes <u>v</u> No
Remarks:								
The soils	were not sam	ub bəla	e to the loca	tion of	the we	etland w	ithin a roa	dside ditch. The soils are
assumer	to be hydric h	asod or	the landse	no no	sition a	and dom	vent ven	etation
assumed				ape pos			iniant veg	



wbae1001e_w_S

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

WETLAND IDENTIFICATION						
Project name:	Evaluator(s):					
Line 5 Relocation Project	DMP/ARK					
File #:	Date of visit(s):					
wbae1001	2020-06-10					
Location:	Ecological Landscape:					
PLSS: sec 10 T047N R005W	Superior Coastal Plain					
Lat: <u>46.563740</u> Long: <u>-90.976537</u>	Watershed:					
	LSUO, FISH Creek					
County: <u>Bayfield</u> Town/City/Village: <u>Cileen town</u>						
SITE DESCRIPTION						
Soils:	WWI Class:					
Mapped Type(s):	N/A					
Portwing-Herbster complex, 0 to 6 percent slopes	Wetland Type(s):					
	PEM - Wet meadow					
Field Verified:						
The soils were not verified. The profile was not examined due to the	Wetland Size:	Wetland Area Impacted				
assumed to be hydric based on the presence of hydrophytic	0.0680	0.0680				
vegetation and the dominance of wetland vegetation.	Vegetation:	·				
	Plant Community Description(s):					
Hydrology:	The wetland is within a ditch is dominated by					
The hydrologic regime is seasonally saturated.	meadow foxtail reed capary grass Kentucky					
The wetland collects surface water from the	the groop and wool groop					
surrounding landscapo	blue grass, and	wool grass.				

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	N	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	Ν	N	In or adjacent to RED FLAG areas List:
6	Ν	Ν	Supports or provides habitat for endangered, threatened or special concern species
7	Ν	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Ν	N	Wetland and contiguous habitat >10 acres
2	N	N	3 or more strata present (>10% cover)
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	N	N	100 m buffer – natural land cover <a>>50% (south) 75% (north) intact
5	N	N	Occurs in a Joint Venture priority township
6	N	N	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	Ν	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	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 Eleadwater Storage
51	NI	NI	Basin watland constricted outlet, has through flow or is adjacent to a stream
2	IN N	N N	Water flew through wetland is NOT channelized
2	IN N	Y NI	
3	IN N		Evidence of flashy hydrology
5			Point or non-point source inflow
6	T N	T N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <10% wetland
8	N	N	Potential to hold $>10\%$ of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	N	N	Provides substantial storage of storm and floodwater based on previous section
2	N	N	Basin wetland or constricted outlet
3	N	Y	Water flow through wetland is NOT channelized
4	N	N	Vegetated wetland associated with a lake or stream
5	N	N	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	Y	Y	Stormwater or surface water from agricultural land is major hydrology source
8	Ν	N	Discharge to surface water
9	Ν	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	N	N	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

WH-7: The wetland could potentially provide habitat for some bird species. We did not hear or observe many species during the field visit. FA-2: The feature was not inundated during the field survey, however it could potentially have standing water after a heavy rain or in the early spring. In those cases, it could provide habitat for amphibians and aquatic insects. ST-2: The feature occurs within a ditch between a road and a hayfield and has a slight slope and is not impounded on either end. ST-5/WQ-7: The feature receives most of its water from surface runoff off the nearby hay field, and non-point inputs could enter the feature from those land uses.

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	Bobolinks, red wing blackbird, common yellowthroat			
	Y	Mammals, reptiles			

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

Observed	Potential	Species/Habitat
	Y	Amphibians and aquatic insects

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata	All strata present	All strata present,
	invasive species	reduced native	assemblage of	represented
	,	species	native species	•
NHI plant community	S4	S3	S2	S1-S2 (S2 high quality)
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,
			DEM	Abundance
Alopecurus pratensis"			PEM	Rare
Phalaris arundinacea [*]			PEM	Rare
Poa pratensis			PEM	Rare
Scirpus cyperinus			PEM	Barren
Carex stipata			PEM	Barren
Carex tenera			PEM	Barren
Cirsium arvense			PEM	Barren
Solidago gigantea			PEM	Barren
Agrimonia striata			PEM	Barren
Cornus alba			PEM	Barren
Juncus effusus			PEM	Barren
Lonicera tatarica			PEM	Barren
Lotus corniculatus			PEM	Barren
Prunus virginiana			PEM	Barren
Ranunculus acris			PEM	Barren

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

The floristic integrity is low due to the dominance of non native species and the low diversity.
SECTION 3: Condition Assessment of Wetland Assessment Area (AA) and Buffer (100 m)

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is located between a hayfield and a road, and receives non-point runoff from those landuses. The feature is dominated by 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 low due to the dominance of non native species and the low diversity.
Human Use Values	The wetland is within a roadside ditch.
Wildlife Habitat	The feature occurs within a roadside ditch with no persistent vegetation. It's unlikely that wildlife would utilize this wetland. However it is possible that ground nesting birds could nest here.
Fish and Aquatic Life Habitat	There was no standing water during the field survey. There is potential for amphibians and aquatic insects to use the feature in early spring if it is inundated.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature can store water runoff from the adjacent road and hayfield.
Water Quality Protection	The feature does not have much potential to protect water quality because it is a flow through feature and it is very small. However, dense vegetation could provide some filtration.
Groundwater Processes	The wetland serves as groundwater recharge.

Section 4: Project Impact Assessment

Brief Project Description Enbridge Line 5 pipeline route analysis.

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary trenching, soil storage, and backfilling.	Low
Secondary Impacts (including impacts which are indirectly attributable to the project)	Vegetation removal for construction.	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: Bavfield Sampling Date: 2020-06-10
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wbae1001_u
Investigator(s): ARK/DMP	Section Township Range: Sec 10 T047N R005W
Landform (hillslone terrace etc.): Talf	$\frac{1}{2}$
Subassian (I DD as MI DA); Northcentral Forests Let. 46 5626	64 Sope (70). <u>0-276</u>
Call 40.3030	<u>54</u> Long. <u>-90.970057</u> Datum. <u>W6504</u>
Soil Map Unit Name: <u>PORWING-HERDSTER COMPLEX, U TO</u>	b 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 significant	ly disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally p	oroblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showir	ig 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
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-Staine	d Leaves (B9) Drainage Patterns (B10)
High water Table (A2) Aquatic Faun	a (B13) Moss Trim Lines (B16)
Water Marks (B1)	Ifide Odor (C1) Cravfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhiz	zospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of I	Reduced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron F	Reduction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck St	urface (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explai	n in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No</u> Depth (inche	'S):
Water Table Present? Yes <u>No</u> Depth (inche	·s):
Saturation Present? Yes No _ Depth (inche (includes capillary fringe)	IS): Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial pho Remarks: No indicators of wetland hydrology were obse	itos, previous inspections), if available: ≱rved.

VEGETATION – Use scientific names of plants.

Sampling Point: wbae1001_u

Tree Stratum (Plot size: 30)	Absolute	Dominar	t Indicator	Dominance Test worksheet:
		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
5				That Are OBL, FACW, or FAC: <u>50</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	over	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =
1				FAC species <u>12</u> x 3 = <u>36</u>
2				FACU species <u>35</u> x 4 = <u>140</u>
2				UPL species <u>35</u> x 5 = <u>175</u>
3				Column Totals: <u>82</u> (A) <u>351</u> (B)
4				Prevalence Index = $B/A = 4.280487804878049$
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. Bromus inermis	35	Y	UPL	data in Remarks or on a separate sheet)
2 Poa pratensis	10	N	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Trifolium pratense	10	N	FACU	
A Alonecurus pratensis	<u> 10 </u> 10	<u></u>		¹ Indicators of hydric soil and wetland hydrology must
+. <u>Alopeculus platensis</u>	<u> </u>	 N		be present, unless disturbed or problematic.
5. <u>Lotus corniculatus</u>	<u> </u>	<u> </u>		Definitions of Vegetation Strata:
6. <u>Vicia americana</u>		<u> </u>		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Laraxacum officinale</u>		<u> N </u>	FACU	at breast height (DBH), regardless of height.
8. <u>Medicago Iupulina</u>	2	<u> N</u>	<u>FACU</u>	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Ranunculus acris</u>	2	<u> N</u>	FAC	and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	82	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30)				
1				
2				
2				
S				Hydrophytic Vegetation
4				Present? Yes No 🗸
	0	= Total Co	over	
Hav mixture	sneet.)			

SOIL

Profile Description: (Describe to the de	oth needed to docur	ment the indicator or	confirm the absen	ce of indicators.)
Depth Matrix	Redo	x Features		
(inches) Color (moist) %	Color (moist)	<u>% Type¹</u>	Loc ² Texture	Remarks
0-20 5YR 3/3 100		None	SCI	
·				
·				
· ·				
<u> </u>			2	
Type: C=Concentration, D=Depletion, RN	Reduced Matrix, M	S=Masked Sand Grain	is. ⁻ Locati	on: PL=Pore Lining, M=Matrix.
Hydric Soll Indicators:			Indicato	rs for Problematic Hydric Solls":
Histosol (A1)	Polyvalue Belo	w Surface (S8) (LRR I	R, 2 cn	n Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	MLRA 149B)	Coa	st Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3)	Thin Dark Surfa	ace (S9) (LRR R, ML R	A 149B) 5 cn	n Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)	Loamy Mucky I	Vineral (F1) (LRR K, L	.) Darl	< Surface (S7) (LRR K, L)
Stratified Layers (A5)	Loamy Gleyed	Matrix (F2)	Poly	value Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11)	Depleted Matrix	x (F3)	Thin	Dark Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	Redox Dark Su	ırface (F6)	Iron	-Manganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1)	Depleted Dark	Surface (F7)	Piec	Imont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4)	Redox Depress	sions (F8)	Mes	ic 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 149	B)		Othe	er (Explain in Remarks)
³ Indicators of hydrophytic vegetation and w	etland hydrology mus	st be present, unless c	listurbed or problema	atic.
Restrictive Layer (if observed):				
Type:				
Donth (inches);			Hydric Se	oil Present? Yes No 🗸
Depth (Inches):			Tryano o	
Remarks:	<i></i>			
Soil is uniform throughout the	e profile.			



wbae1001_u_E



wbae1001_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Bavfield	Sampling Date: 2020-06-10
Applicant/Owner: Enbridge		State: Wisconsin Sampling Point: wbae1002e_w
Investigator(s): ARK/DMP	Section, Township, Range; S	ec 10 T047N R005W
Landform (hillslone terrace etc.): Depression	Local relief (concave, convex, no	$\frac{1}{10000000000000000000000000000000000$
Northcentral Forests		
Subregion (LRR or MLRA): Lat: <u>40.0037</u>	<u>38</u> Long: <u>-9(</u>	Datum: VVG584
Soil Map Unit Name: Portwing-Herbster complex, U t	o 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 significan	tly disturbed? Are "Norma	I Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, e	explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point locatio	ons, transects, important features, etc.
Hydronhytic Vegetation Present? Ves 🖌 No	Is the Sampled Area	
Hydrophytic Vegetation resent?	within a Wetland?	Yes 🖌 No
Wetland Hydrology Present? Yes V No	If ves, optional Wetland	d Site ID:
Remarks: (Explain alternative procedures here or in a separate re	port.)	
Wet meadow feature, much of which is locate	ed in a ditch, but it also	o extends into a low area of the
adjacent hay field. Shares upland point wbac	e1001_u with wbae100)1e.
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that appl	V)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Staine	ed Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fau	na (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposit	ts (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen St	ulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rh	izospheres 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 S	Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Expla	iin in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No _ Cepth (inch	es):	
Water Table Present? Yes No _ Cepth (inch	es):	
Saturation Present? Yes No Depth (inch	es): Wetland H	Hydrology Present? Yes _ ✓ No
(Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial ph	otos previous inspections) if ava	ailable:
Remarks:		
Seasonally saturated.		

VEGETATION – Use scientific names of plants.

Sampling Point: wbae1002e_w

Tree Stratum (Plot size: <u>30</u>)	Absolute <u>% Cover</u>	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
3.			·	Total Number of Dominant Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species <u>13</u> x 1 = <u>13</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =80
1				FAC species x 3 =2
2				FACU species <u>10</u> x 4 = <u>40</u>
2			·	UPL species x 5 =0
3				Column Totals: <u>67</u> (A) <u>145</u> (B)
4				Prevalence Index = B/A = 2.1641791044776117
6				Hydrophytic Vegetation Indicators:
7				 Y 1 - Rapid Test for Hydrophytic Vegetation
/:			·	2 - Dominance Test is >50%
_		= Total Co	ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Phalaris arundinacea</u>	40	<u> </u>	<u>FACW</u>	data in Remarks or on a separate sheet)
2. <u>Scirpus cyperinus</u>	10	<u> N</u>	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Poa pratensis</u>	5	N	<u>FACU</u>	¹ Indiantom of hydria apil and watland hydrology must
4. Lotus corniculatus	5	N	FACU	be present, unless disturbed or problematic.
5. <u>Alopecurus pratensis</u>	3	N	FAC	Definitions of Vegetation Strata:
6. <u>Carex stipata</u>	3	N	OBL	
7. Equisetum arvense	1	N	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8		_		Sapling/chrub Woody plants loss 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 3.20 it tail.
12				Woody vines – All woody vines greater than 3.28 ft in height
	67	= Total Co	ver	noight.
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
Some areas of the ditch are dominated	by woo	lgrass.	Outside	of the ditch, to the south, there are
areas dominated by FAC species with	scattere	u comn	ion rusr	i iniougnoui.

Profile Desc	cription: (Describe	o the depth	n needed to docur	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redo	x Features	s1	. 2		
(inches)	Color (moist)		Color (moist)	%	Type	Loc	Texture	Remarks
				·			·	
				·		<u> </u>		
·				·				
				·			·	
				·				
				·				
¹ Type: C=C	oncentration, D=Depl	etion, RM=F	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)		Polyvalue Belov	v Surface	(S8) (I RE	R R.	2 cm M	Muck (A10) (I RR K. I. MI RA 149B)
Histic Er	ninedon ($\Delta 2$)	-	MIRA 1498			,	<u> </u>	Prairie Redox ($\Delta 16$) (IRR K I R)
Black Hi	stic (A3)		Thin Dark Surfa	/ / (02) /I		PA 140B)	00031	Aucky Peat or Peat (S3) (IPP K I P)
Black Th	an Sulfide (ΔA)	-	_ Loamy Mucky M	/lineral (E1		CIX 1430) (I)	Dark S	μ (33) (LRR R, E, R)
Tryatoge		-	_ Loamy Gloved	Matrix (E2		, ∟)	Daix 3	lue Below Surface (S8) (I PP K I)
Stratilied	d Delevi Derk Surfeer		_ Loany Gleyeu	viau ix (FZ)		Fulyva	ark Surface (SO) (LRR R, L)
Depieted		(ATT) _	_ Depleted Matrix	(F3) faar (FC)				
	ark Surface (A12)	-	_ Redox Dark Su	nace (F6)			Iron-Ivia	anganese Masses (F12) (LRR K, L, R)
		-	_ Depleted Dark :	Surface (F	.7)		Pleam	
Sandy G	Bleyed Matrix (S4)	_	_ Redox Depress	ions (F8)			Mesic	Spodic (1A6) (MLRA 144A, 145, 149B)
Sandy H	Redox (S5)						Red Pa	arent Material (F21)
Stripped	Matrix (S6)						Very S	hallow Dark Surface (TF12)
Dark Su	rface (S7) (LRR R, N	ILRA 149B)					_∠ Other ((Explain in Remarks)
³ Indicators of	f hydrophytic vegetat	ion and wetl	and hydrology mus	t be prese	ent, unless	s disturbed	or problematic	
Restrictive	Layer (if observed):							
Type:								
5 / <i>"</i>							Hydric Soil	Present? Ves 🗸 No
Depth (in	cnes):						Tryune 30	
Remarks:								
The soils	s were not sam	npled du	e to the loca	tion of	the we	etland w	vithin a roa	adside ditch. The soils are
assumed	to he hydric h	based or	h the landsca	ne nos	sition a	and dom	hinant veo	letation
doodmoo				po po			initiant vog	
1								



wbae1002e_w_W

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	DMP/ARK		
File #:	Date of visit(s):		
wbae1002	2020-06-10		
Location:	Ecological Landsca	ape:	
PLSS: sec 10 T047N R005W	Superior Coastal Plain		
Lat: <u>46.563746</u> Long: <u>-90.976796</u>	Watershed:		
a i a filoso tours	LS06, FISH Creek		
County: <u>Bayfield</u> Town/City/Village: <u>Elleen town</u>			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Portwing-Herbster complex, 0 to 6 percent slopes	Wetland Type(s):		
	PEM - We meadow		
Field Verified:			
The soils were not verified.	Wetland Size:	Wetland Area Impacted	
	0.1542	0.1542	
	Vegetation:		
	Plant Community D	Description(s):	
Hydrology:	The wetland is a	a wet meadow located within a	
The wetland is seasonally saturated and located	ditch botwoon a road and a bayfield. It is		
within a roadside ditch. It receives runoff from the	deminated by graningide such as we share a		
adjacent road and havfield	dominated by graminoids such as woolgrass		
aujacent roau anu nayneiu.	and reed canary	grass.	

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	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	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	N	N	Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
2			water levels or high flows – If no, hot applicable
<u>ः</u>	N	N	Storm and Eleadwater Storage
51	NI	NI	Basin watland, constricted outlet, has through flow or is adjacent to a stream
2	IN N	N	Water flow through wetland is NOT channelized
2	IN N	Y NI	
3	IN N		Evidence of flashy hydrology
5			Point or non-point source inflow
6	T N	T NI	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <10% wetland
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	N	N	Provides substantial storage of storm and floodwater based on previous section
2	N	N	Basin wetland or constricted outlet
3	N	Y	Water flow through wetland is NOT channelized
4	N	N	Vegetated wetland associated with a lake or stream
5	N	N	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	Y	Y	Stormwater or surface water from agricultural land is major hydrology source
8	Ν	Ν	Discharge to surface water
9	Ν	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	N	N	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

WH-7: The wetland could potentially provide habitat for some bird species. We did not hear or observe many species during the field visit.

FA-2: The feature was not inundated during the field survey, however it could potentially have standing water after a heavy rain or in the early spring. In those cases, it could provide habitat for amphibians and aquatic insects.

```
ST-2: The feature occurs within a ditch that has a slight slope and is not impounded on either end.
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ST-5: The feature occurs between a road and a hay field. Non-point inputs could enter the feature from those land uses.

WQ-7: The feature receives most of its water from surface runoff off of the nearby hay field.

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

Observed	Potential	Species/Habitat/Comments							
	Y	Mammals, reptiles							
Y	Y	Bobolinks, Red-winged black birds, common yellowthroat							

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

Observed	Potential	Species/Habitat
	Y	Amphibians and aquatic insects.

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
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)
			<u> </u>	
Relative frequency of	Abundant 🖌			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,
Dhalaria arrustina a a *				Abundance)
Phalaris arundinacea			PEM	Patchy
Carex stipata^			PEM	Patchy
Poa pratensis			PEM	Rare
Alopecurus pratensis			PEM	Rare
Carex tenera			PEM	Rare
Scirpus cyperinus			PEM	Rare
Equisetum arvense			PEM	Barren
Lotus corniculatus			PEM	Barren
Solidago gigantea			PEM	Barren
Ranunculus acris			PEM	Barren

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

The floristic integrity is low due to low diversity and the dominance of non native species.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is located between a hayfield and a road. The feature could receive non point inputs from each of those landuses. The feature is dominated by 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 low due to low diversity and the dominance of non native species.
Human Use Values	
Wildlife Habitat	The feature is located between a road and a hayfield. It is unlikely that wildlife would utilize this wetland, however there is a chance that ground nesting birds would nest there.
Fish and Aquatic Life Habitat	There was no standing water during the field survey. It is possible that amphibians and aquatic insects would utilize the feature in the early spring if it is inundated.
Shoreline Protection	
Flood and Stormwater Storage	The feature is unable to store much water.
Water Quality Protection	The feature is small and it is a flow through wetland.
Groundwater Processes	The wetland likely serves as groundwater recharge.

Section 4: Project Impact Assessment

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

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)		
Direct Impacts	Temporary ditching/fill impacts/logging	Medium		
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low		
Cumulative Impacts	Temporary construction impacts	Low		
Spatial/Habitat Integrity	Temporary construction impacts	Low		
Rare Plant/Animal Communities/ Natural Areas	N/A	N/A		

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Bayfield Sampling Date: 2020-06-10
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wbae1004e_w
Investigator(s): <u>ARK/DMP</u>	Section, Township, Range: <u>Sec 10 T047N R005W</u>
Landform (hillslope, terrace, etc.): Depression Lo	ocal relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.56139</u>	1 Long: <u>-90.976622</u> Datum: <u>WGS84</u>
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 ye	ear? Yes 🔽 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally pre-	oblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes <u>✓</u> No If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate repo Wet meadow in a swale within a hay field. Sha	brt.) ares upland point wbae1003_u with wbae1003e.
HYDROLOGY	

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

VEGETATION – Use scientific names of plants.

Sampling Point: wbae1004e_w

Trac Stratum (Diat aiza: 20)	Absolute	Dominan	Indicator	Dominance Test worksheet:
<u>Thee Stratum</u> (Plot size: <u>50</u>)	% Cover	<u>Species</u>	<u>Status</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: <u>100</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	over	$\frac{1}{\text{OBL species } 0} \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15)				FACW species 50 x 2 = 100
1				FAC species <u>42</u> x 3 = <u>126</u>
1				FACU species <u>5</u> x 4 = <u>20</u>
2				UPL species x 5 =
3				Column Totals: <u>97</u> (A) <u>246</u> (B)
4				Development in development in the second sec
5				Prevalence index = $B/A = \frac{2.536082474226804}{2.536082474226804}$
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)				\sim 3 - Prevalence Index is $\leq 3.0^1$
1 Alonecurus pratensis	40	V	FAC	4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Alopeculus praterisis</u>	40	 		Problematic Hydronbytic Vegetation ¹ (Explain)
	<u>40</u>			
3. <u>Carex cf. annectens</u>	10	<u> </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Poa pratensis</u>	5	<u> N</u>	FACU	be present, unless disturbed or problematic.
5. <u>Carex tenera</u>	1	<u>N</u>	FAC	Definitions of Vegetation Strata:
6. <u>Ranunculus acris</u>	1	N	FAC	Tree Woody plants 3 in (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sanling/shrub – Woody plants less than 3 in DBH
9.				and greater than or equal to 3.28 ft (1 m) tall.
10.				Herb – All 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	07			height.
		= Total Co	over	
Woody Vine Stratum (Plot size: 30)				
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.)			
The southeastern end of the wetland is	domina	ted by	wheat se	edge.

SOIL

Profile Desc	cription: (Describe t	o the de	oth needed	to docur	nent the i	indicator	or confirm	the absence	of indicators.)	
Depth Matrix Redox Features										
(inches)	Color (moist)	%	Color (n	noist)	%	Type'	Loc ²	Texture	Remarks	
0-12	<u>5YR 2.5/2</u>	95	5YR	4/6	5	C	M	SCL		
12-20	5YR 2.5/2	95	7.5YR	5/6	5	С	Μ	CL		
	<u> </u>			0,0						
						·				
	. <u> </u>									
						·				
						·				
¹ Type: C=C	oncentration, D=Deple	etion, RM	I=Reduced N	Aatrix, 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	w Surface	(S8) (LRF	RR,	2 cm N	luck (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	ace (S9) (I Minoral (E		LRA 149B)	5 cm N	lucky Peat or Peat (S3) (LRR K, L, R)	
Hyuruge Stratifie	d Lavers (A5)			Gleved I	Matrix (F2	1) (LKK K 7)	, L)	Dark 3 Polyva	lue Below Surface (S8) (LRR K. I.)	
Deplete	d Below Dark Surface	(A11)	Deplet	ed Matrix	(F3)	.)		Thin D	ark Surface (S9) (LRR K, L)	
Thick Da	ark Surface (A12)	. ,	_∠ Redox	Dark Su	rface (F6)			Iron-M	anganese Masses (F12) (LRR K, L, R)	
Sandy N	/lucky Mineral (S1)		Deplet	ed 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) Matrix (S6)							Red Pa	arent Material (F21)	
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	ology mus	st be prese	ent, unless	s disturbed	or problematic).	
Restrictive	Layer (if observed):									
Туре:										
Depth (in	ches):							Hydric Soil	Present? Yes <u>~</u> No	
Remarks:			_	_		_				
Redox fe	eatures observ	ed thre	oughout	the sc	pil profi	le.				



wbae1004e_w_NW



wbae1004e_w_SE

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	DMP/ARK		
File #:	Date of visit(s):		
wbae1004	2020-06-10		
Location:	Ecological Landsca	ape:	
PLSS: sec 10 T047N R005W	Superior Coastal Plain		
Lat: <u>46.561392</u> Long: <u>-90.976630</u>	Watershed:		
	LS08, Fish Creek		
County: <u>Bayfield</u> Town/City/Village: <u>Eileen town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Portwing-Herbster complex, 0 to 6 percent slopes	Wetland Type(s):		
	PEM - Wet meadow		
Field Verified:			
Soils were not verified. Soil profile was not	Wetland Size:	Wetland Area Impacted	
sampled due to the feature being located	0.4216	0.4216	
between marked utilities	Vegetation:	1	
	Plant Community Description(s):		
Hydrology:	The wetland is a w	vet meadow dominated by meadow	
The hydrologic regime is seasonally saturated.	foxtail and reed ca	nary grass. There was an area	
The feature collects water from the surrounding	that was dominate	d by quaking aspen common	
houfield	buckthorn and tartarian honeysuckle		
nayneiu.			

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	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	N	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	Y	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	N	N	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present <u>> 4</u> 5 days
10	Ν	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	N	N	Wetland is connected or contiguous with perennial stream or lake
2	N	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	Y	Vegetation is inundated in spring
SP			Shoreline Protection
1	N	N	Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable
2	Ν	N	water levels or high flows – if no. not applicable
3	N	N	Densely rooted emergent or woody vegetation
ST			Storm and Floodwater Storage
1	Ν	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	N	Dense, persistent vegetation
4	Ν	N	Evidence of flashy hydrology
5	Y	Y	Point or non-point source inflow
6	N	N	Impervious surfaces cover >10% of land surface within the watershed
7	Ν	N	Within a watershed with <10% wetland
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	N	N	Provides substantial storage of storm and floodwater based on previous section
2	N	N	Basin wetland or constricted outlet
3	Y	Y	Water flow through wetland is NOT channelized
4	N	N	Vegetated wetland associated with a lake or stream
5	N	N	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
	Y	Y	Stormwater or surface water from agricultural land is major hydrology source
8	N	N	Discharge to surface water
9	N	N	Installation cover in 100m putter area < 50%
GW			
1	N	N	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	I N	Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

WH-7: The wetland could potentially provide habitat for some bird species. We did not hear or observe many species during the field visit, but bobolinks were active in the immediate area. FA-2: The feature was not inundated during the field survey, however it could potentially have standing water after a heavy rain or in the early spring. In those cases, it could provide habitat for amphibians and aquatic insects.

ST-2/5, WQ-5: The feature occurs within a swale in a hayfield and receives non point inputs from the surrounding landscape.

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

Observed	Potential	Species/Habitat/Comments
	Y	Mammals and reptiles
Y	Y	Bobolinks, savannah sparrows, red-winged blackbirds

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

Observed	Potential	Species/Habitat
	Y	Amphibians and aquatic insects

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata	All strata present	All strata present,
	invasive species	reduced native	assemblage of	represented
	'	species	native species	•
NHI plant community	S4	S3	S2	S1-S2 (S2 high quality)
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,
			DEM	Abundance)
Atnynum IIIX-iemina			PEM	Barren
Alopecurus pratensis*			PEM	Patchy
Phalaris arundinacea*			PEM	Patchy
Carex atherodes			PEM	Rare
Lonicera tatarica			PEM	Rare
Poa pratensis			PEM	Rare
Populus tremuloides			PEM	Rare
Rhamnus cathartica			PEM	Rare
Carex cf annectens			PEM	Rare
Eurybia macrophylla			PEM	Rare
Abies balsamea			PEM	Barren
Carex stipata			PEM	Barren
Carex tenera			PEM	Barren
Galium aparine			PEM	Barren
Ranunculus acris			PEM	Barren
Rubus idaeus			PEM	Barren
Taraxacum officinale			PEM	Barren
Thalictrum dasycarpum			PEM	Barren
Toxicodendron rydbergii			PEM	Barren
Trifolium pratense			PEM	Barren

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

The floristic integrity is low due to the dominance of non native species and the low diversity.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
,					Filling, berms (non-impounding)
					Drainage – tiles, ditches
					Hydrologic changes - high capacity wells.
					impounded water, increased runoff
					Point source or stormwater discharge
Х	Х		М	С	Polluted runoff
					Pond construction
					Agriculture – row crops
Х	Х		М	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
					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
					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 linear wetland that occurs within a swale in a hayfield. There is a field road just to the west of the feature. The wetland could potentially receive non point inputs from the hayfield. There were also marked utilities to the south and north of the feature. The feature is dominated by 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 low due to the dominance of non native species and the low diversity.
Human Use Values	
Wildlife Habitat	We observed active bobolinks and savannah sparrow in the immediate area. It is unlikely that many other wildlife species would utilize the feature. However, there was a patch of trees/shrubs just outside of the corridor in which the wetland is a part of. More species might utilize that area.
Fish and Aquatic Life Habitat	Potential spring flooding and heavy rain events could provide habitat for amphibians and aquatic insects.
Shoreline Protection	
Flood and Stormwater Storage	The feature is a small liner flow through wetland that can hold runoff from the adjacent uplands.
Water Quality Protection	The feature is a small linear flow through wetland that occurs within a hay field.
Groundwater Processes	The wetland likely serves as groundwater recharge.

Section 4: Project Impact Assessment

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

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	Low
Spatial/Habitat Integrity	Temporary construction impacts	Low
Rare Plant/Animal Communities/ Natural Areas	N/A	N/A

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	_ City/County: <u>Bayfield</u>	Sampling	Date: <u>2020-06-10</u>
Applicant/Owner: Enbridge		State: Wisconsin Sampli	ng Point: <u>wbae1005e_w</u>
Investigator(s): <u>ARK/DMP</u>	Section, Township, Range:	sec 10 T047N R005W	N
Landform (hillslope, terrace, etc.): Rise	Local relief (concave, convex,	none): <u>None</u>	Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.5621</u>	<u>92</u> Long: -	90.976603	Datum: WGS84
Soil Map Unit Name: Portwing-Herbster complex, 0 t	o 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 significar	tly disturbed? Are "Norr	mal Circumstances" present?	′es No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needer	d, explain any answers in Rema	rks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes <u> </u>	Is the Sampled Area within a Wetland? Yes <u>v</u> No
Wetland Hydrology Present?	Yes 🖌 No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced Wetland located in a swal	lures here or in a separate report.) le 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 (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	pils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No. 14 Dopth (inches):	
Water Table Present? res No Depth (inches)	
Saturation Present? Yes No V Depth (inches):	Wetland Hydrology Present? Yes <u></u>
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)	Wetland Hydrology Present? Yes <u>~</u> 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	Wetland Hydrology Present? Yes <u>~</u> 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	Wetland Hydrology Present? Yes <u>~</u> 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: Socoopally capturated swale	Wetland Hydrology Present? Yes <u>v</u> No <u></u> 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: Seasonally saturated swale.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> 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: Seasonally saturated swale.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> 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: Seasonally saturated swale.	Wetland Hydrology Present? Yes <u>~</u> 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: Seasonally saturated swale.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> 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: Seasonally saturated swale.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> 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: Seasonally saturated swale.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> tions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: Seasonally saturated swale.	Wetland Hydrology Present? Yes <u>v</u> No <u>tions</u>), 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: Seasonally saturated swale.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> 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: Seasonally saturated swale.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> 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: Seasonally saturated swale.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> tions), if available:

VEGETATION – Use scientific names of plants.

Sampling Point: wbae1005e_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan Species?	t Indicator Status	Dominance Test worksheet:
1.				Number of Dominant Species That Are OBL EACW or EAC: 2 (A)
2				
3.				Total Number of Dominant Species Across All Strata: 2 (B)
4				Porcent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6.				
7				Total % Cover of:
··	0	= Total Co		$\begin{array}{c c} \hline 10tal \% Cover 01. \\ \hline 00tal \% Cov$
Sapling/Shrub Stratum (Plot size: 15)				EACW species $31 \times 2 = 62$
<u>Saping/Shiub Stratum</u> (Flot Size)				FAC species $53 \times 3 = 159$
l				FACU species 33 x 4 = 132
2				UPL species <u>0</u> x 5 = <u>0</u>
3				Column Totals: <u>117</u> (A) <u>353</u> (B)
4				Prevalence Index = B/A = 3.017094017094017
5				
0				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
	0	= Total Co	over	$3 - \text{Prevalence Index is } \le 30^{1}$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Alopecurus pratensis</u>	50	Y	FAC	data in Remarks or on a separate sheet)
2. <u>Phalaris arundinacea</u>	25	Y	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Trifolium pratense</u>	20	N	<u>FACU</u>	¹ Indicators of hydric coil and watland hydrology must
4. Anthoxanthum odoratum	5	N	<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Lotus corniculatus</u>	5	N	FACU	Definitions of Vegetation Strata:
6. <u>Lysimachia ciliata</u>	5	N	FACW	Tree Weedy plants 2 in (7.6 cm) or more in diameter
7. <u>Poa pratensis</u>	3	N	FACU	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>Poa palustris</u>	1	N	FACW	and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in height.
		= Total Co	over	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4				Vegetation Present? Yes v No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)			
The sample plot is representative of the	e wetlan	d vege	tation.	

SOIL

Profile Desc	ription: (I	Describe t	to the dep	oth needed	to docur	nent the i	ndicator	or confirm	n the absence of indic	ators.)
Depth		Matrix		Redox Features						
(inches)	Color ((moist)	%	<u>Color (</u>	moist)	%	Type'	Loc ²	Texture	Remarks
0-12	5YR	3/2	95	5YR	4/6	5	_C	_PL_	SCL	
12-20	5YR	2.5/1	100			None			SCL	
						·				
						·				
									·	
						·				
1										
Type: C=C	oncentratio	n, D=Depl	etion, RM	=Reduced	Matrix, M	S=Masked	Sand Gr	ains.	² Location: PL=Po	re Lining, M=Matrix.
Hydric Soll	Indicators			.		o (Indicators for Proc	Nematic Hydric Solis :
Histosol	(A1) ainadan (Af	2)				w Surface	(S8) (LR	кк,	2 cm Muck (A1	J) (LRR K, L, MLRA 149B)
Black Hi	stic (A3)	2)		Thin Γ	CA 1490) ace (S9) (I		I R 4 1498) 5 cm Mucky Pe	e_{L} (LRR K, L, R)
Hydroge	en Sulfide (J	A4)		Loam	v Mucky N	Mineral (F1) (LRR K	LIXA 1400, (, L)	Dark Surface (S	37) (LRR K, L)
Stratified	d Layers (À	.5) [°]		Loam	y Gleyed	Matrix (F2)		. ,	Polyvalue Belo	w Surface (S8) (LRR K, L)
Depleted	d Below Da	ark Surface	e (A11)	Deple	ted Matrix	(F3)			Thin Dark Surfa	ace (S9) (LRR K, L)
Thick Da	ark Surface	e (A12)		Redox	k Dark Su	rface (F6)			Iron-Manganes	e Masses (F12) (LRR K, L, R)
Sandy N	lucky Mine	ral (S1)		Deple	ted Dark	Surface (F	7)		Piedmont Floor	Iplain Soils (F19) (MLRA 149B)
Sandy G	Bleyed Mati	rix (S4)		Redox	<pre>C Depress</pre>	ions (F8)			Mesic Spodic (1A6) (MLRA 144A, 145, 149B)
Sandy F	(85) Matrix (86	2)							Red Parent Ma	(F21)
Dark Su	rface (S7)	") (IRRR M	II RA 149	3)					Other (Explain	in Remarks)
				_)						in ternance)
³ Indicators o	f hydrophyt	tic vegetati	ion and we	etland hydro	ology mus	st be prese	nt, unles	s disturbed	l or problematic.	
Restrictive	Layer (if ol	bserved):		-		-			-	
Туре:										
Depth (in	ches):								Hydric Soil Present	? Yes 🖌 No
Remarks [.]										
Redox fe	atures	were o	bserve	d in the		r soil pr	ofile.			
						оол р.				



wbae1005e_w_SE

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
Line 5 Relocation Project	DMP/ARK		
File #:	Date of visit(s):		
wbae1005	2020-06-10		
Location:	Ecological Landsca	ape:	
PLSS: sec 10 T047N R005W	Superior Coastal Plain		
Lat: <u>46.562218</u> Long: <u>-90.976654</u>	Watershed:		
	LS08, FISH Creek		
County: <u>Bayfield</u> Town/City/Village: <u>Cileen town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Portwing-Herbster complex, 0 to 6 percent slopes	Wetland Type(s):		
	PEM - Wet meadow		
Field Verified:			
The soil profile was not verified. The profile	Wetland Size:	Wetland Area Impacted	
consisted of a brown clay loam over a depleted	0.1206	0.1206	
clay. Depleted matrix was observed.	Vegetation:		
	Plant Community D	Description(s):	
Hydrology:			
The hydrologic regime is seasonally saturated.	The wet meadow is within a swale dominated by		
The wetland collects surface water from the	meadow foxtail, while reed canary grass and		
surrounding landscape	red clover were common throughout the feature		

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	Ν	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	N	N	3 or more strata present (>10% cover)
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	N	N	100 m buffer – natural land cover <a>>50% (south) 75% (north) intact
5	N	N	Occurs in a Joint Venture priority township
6	N	N	Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex, etc.)
7	Ν	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	N	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	N	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	Y	Vegetation is inundated in spring
SP			Shoreline Protection
1	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	Ý	Ý	Dense, persistent vegetation
4	N	Ň	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	Ν	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	N	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	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	N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

WH-7: Potential habitat for grassland birds. ST-5: Source of inflow is surrounding upland hay field.

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

Observed	Potential	Species/Habitat/Comments
	Y	Mammals and reptiles
Y	Y	Savannah sparrow, bobolink

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

Observed	Potential	Species/Habitat
	Y	Amphibians and aquatic insects
SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
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)
Alopecurus pratensis*			PEM	Continuous
Phalaris arundinacea*			PEM	Sparse
Trifolium pratense			PEM	Rare
Poa palustris			PEM	Rare
Anthoxanthum odoratum			PEM	Barren
Lotus corniculatus			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 floristic intregrity is low due to the dominance of non native species and the low diversity.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is within a hay field. There is a field road that passes near the wetland, which appears to be seldom used. Non-native species are dominant in and around the wetland.

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	The floristic integrity is low due to the dominance of non native species and the low diversity.
Human Use Values	Private land.
Wildlife Habitat	There is potential for grassland birds.
Fish and Aquatic Life Habitat	
Shoreline Protection	
Flood and Stormwater Storage	The wetland is a small linear flow-through feature that receives runoff from the hayfield.
Water Quality Protection	The wetland had dense vegetation that may provide some filtration of stormwater.
Groundwater Processes	The wetland serves as groundwater recharge.

Section 4: Project Impact Assessment

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

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	Low
Spatial/Habitat Integrity	Temporary construction impacts	Low
Rare Plant/Animal Communities/ Natural Areas	N/A	N/A

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: <u>Bayfield</u>	Sampling	Date: <u>2020-06-10</u>
Applicant/Owner: Enbridge		State: Wisconsin Sampli	ng Point: <u>wbae1005_u</u>
Investigator(s): <u>ARK/DMP</u>	Section, Township, Range: <u>Section</u>	ec 10 T047N R005W	N
Landform (hillslope, terrace, etc.): Rise	Local relief (concave, convex, no	one): <u>None</u>	Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.562	166 Long: <u>-9(</u>	0.976785	Datum: WGS84
Soil Map Unit Name: Portwing-Herbster complex, 0 1	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 significant	ntly disturbed? Are "Norma	al Circumstances" present?	res 🔽 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed,	explain any answers in Rema	ırks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced Weedy hay field.	ures here or in	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 Sol	ils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🗸 Depth (inches):	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No _
Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	Wetland Hydrology Present? Yes No
Saturation Present? Yes No	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 V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	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 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 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 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 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): 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 V Depth (inches): Ves No V Depth (inches): Ves No V Depth (inches): Vescribe 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:

VEGETATION – Use scientific names of plants.

Sampling Point: wbae1005_u

Trac Stratum (Diataiza: 20)	Absolute	Dominan	t 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: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6.				Description of the description of the
7				Tetal % Owner of
		- Total Ca		
			Jvei	$\begin{array}{c} \text{OBL species} \\ \text{EACW appaging} \\ \text{OBL species} \\ \text{OBL species}$
Sapling/Shrub Stratum (Plot size: 15)				FACW species $0 \times 2 = 0$
1				$\frac{1}{1} = \frac{1}{1} = \frac{1}$
2				$\frac{11}{100} = \frac{11}{100} = 1$
3				Column Totals: 70 (A) 278 (B)
4				$\frac{1}{210}$
5.				Prevalence Index = B/A = <u>3.9714285714285715</u>
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
/				2 - Dominance Test is >50%
		= Total Co	over	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Dactylis glomerata</u>	35	Y	FACU	data in Remarks or on a separate sheet)
2. Lotus corniculatus	25	Y	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Trifolium pratense	5	Ν	FACU	
4 Ranunculus acris	2	N	FAC	Indicators of hydric soil and wetland hydrology must
5 Fragaria virginiana	2	 N		be present, unless disturbed of problematic.
				Definitions of Vegetation Strata:
6. <u>Poa pratensis</u>		<u> </u>	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Potentilla recta</u>	1	<u> N </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
	71	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)	<u> </u>			
1				
2				
3				Hydrophytic
4				Present? Yes No V
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)			
Heterogeneous upland vegetation surro	ounds th	ne wetla	and.	

SOIL

Profile Desc	cription: (Describe	to the depth	needed to docur	ment the ir	dicator or confirm	the absence of indicators.)
Depth	Matrix		Redo	x Features	1 0	
(inches)	Color (moist)		Color (moist)	%	Type' Loc ²	Texture Remarks
0-12	<u>7.5YR 4/4</u>	100		None		
12-20	7.5YR 5/3	100		None		SCI
	<u>1.0110 0/0</u>					
				<u> </u>		
		·				
		<u> </u>				
		·			·	
¹ Type: C=C	oncentration, D=Depl	etion, RM=F	Reduced Matrix, M	S=Masked	Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:					Indicators for Problematic Hydric Soils ³ :
Histosol	(A1)	_	_ Polyvalue Belo	w Surface (S8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic El	pipedon (A2)		MLRA 149B) 200 (S0) (L)		Coast Prairie Redox (A16) (LRR K, L, R)
Hvdroge	en Sulfide (A4)		_ I oamv Muckv N	Mineral (F1	(LRR K. L)	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	k (F3)		Thin Dark Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)		_ Redox Dark Su	rface (F6)		Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy N	/lucky Mineral (S1)	_	_ Depleted Dark	Surface (F7	7)	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy G	Gleyed Matrix (S4)	_	_ Redox Depress	sions (F8)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)					Red Parent Material (F21)
Stripped	I Matrix (50)					Very Snallow Dark Surface (TFT2) Other (Explain in Remarks)
		ILKA 1450)				
³ Indicators o	f hydrophytic vegetat	ion and wetla	and hydrology mus	st be prese	nt, unless disturbed	or problematic.
Restrictive	Layer (if observed):					
Туре:						
Depth (in	ches):					Hydric Soil Present? Yes No
Remarks.	,					
No redox	k features were	e observ	ed within the	e soil pr	ofile.	



wbae1005_u_SE



wbae1005_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: <u>Bayfield</u>	Sampling	Date: <u>2020-06-10</u>
Applicant/Owner: Enbridge		_ State: Wisconsin Sampli	ing Point: <u>wbae1003e_w</u>
Investigator(s): <u>ARK/DMP</u>	_ Section, Township, Range: <u>S</u>	ec 10 T047N R005	W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, no	ne): <u>Concave</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.5613</u>	11 Long: -90	0.977385	Datum: <u>WGS84</u>
Soil Map Unit Name: Portwing-Herbster complex, 0 to	o 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 significan	tly disturbed? Are "Norma	I Circumstances" present?	Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally	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? Hydric Soil Present?	Yes <u> </u>	Is the Sampled Area within a Wetland? Yes <u>v</u> No
Wetland Hydrology Present?	Yes 🖌 No _	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proced Wet meadow in a swale v	ures here or in a separa vithin a hay field	ate 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	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	ils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes <u>No</u> Depth (inches):	
Saturation Present? Yes <u>Ves</u> No <u>V</u> Depth (inches): <u>Unches</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 inspective)	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	Wetland Hydrology Present? Yes <u>v</u> No <u>v</u> tions), if available:
Saturation Present? Yes No V Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: Seasonally saturated depression	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 inspective Remarks: Seasonally saturated depression.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> tions), if available:
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: Seasonally saturated depression.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> tions), if available:
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: Seasonally saturated depression.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> tions), if available:
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: Seasonally saturated depression.	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 inspec Remarks: Seasonally saturated depression.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> tions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: Seasonally saturated depression.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> tions), if available:
Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: Seasonally saturated depression.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> tions), if available:
Saturation Present? Yes No ✓ _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: Seasonally saturated depression.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> tions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks: Seasonally saturated depression.	Wetland Hydrology Present? Yes <u>v</u> No <u></u> tions), if available:

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wbae1003e_w</u>

	Absolute	Dominar	nt Indicator	Dominance Test worksheet:
<u>Iree Stratum</u> (Plot size: <u>30</u>)	% Cover	Species	<u>? Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Tatal Number of Deminant
3				Species Across All Strata: 1 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6.				Brovalance Index workshoot
7				
				Iotal % Cover or: Multiply by:
		= I otal Co	over	OBL species () x 1 = ()
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>55</u> x 2 = <u>110</u>
1.				FAC species $5 \times 3 = 15$
2				FACU species x 4 =8
2				UPL species x 5 =
3				Column Totals: 62 (A) 133 (B)
4				
5.				Prevalence Index = B/A = 2.1451612903225805
6				Hydrophytic Vegetation Indicators:
0				1 - Panid Test for Hydronbytic Vegetation
7				
	0	= Total Co	over	\sim 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				$\underline{}$ 3 - Prevalence Index is $\leq 3.0^{\circ}$
1. Phalaria arundinagoa	50	V		4 - Morphological Adaptations' (Provide supporting
				Dreblemetic Lludersbutic Vecetotion ¹ (Eveloin)
2. <u>Alopecurus pratensis</u>	5	<u> </u>	FAC	Problematic Hydrophytic Vegetation (Explain)
3. Carex cf. annectens	3	N	FACW	
4. Solidago altissima	2	Ν	FACU	be present unless disturbed or problematic
5 Poa palustris	2	N	FACW	
			<u></u>	Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				
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
	62	= Total Co	over	neight.
Woody Vine Stratum (Plot size: 30)				
(i lot size)				
1				
2				
3.				Hydrophytic
4				Vegetation
T				Present? Yes <u>v</u> No
		= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.) d			
	u.			

SOIL

Profile Desc	cription: (De	escribe t	to the dep	th needed	to docu	ment the i	ndicator	or confirm	the absence	of indicators.)	
Depth		Matrix			Redo	ox Features	<u> </u>	. 2			
(inches)	<u>Color (n</u>	noist)	%	Color (r	noist)	%	Type	Loc	Texture	Remarks	
0-10	<u>5YR</u>	3/3	100			None			SCL		
10-20	5YR	3/3	90	5YR	5/8	10	С	М	CL		
·								·			
								·			
·											
								·			
	oncentration	D=Den	etion RM	=Reduced I	Matrix M	S=Masked	Sand Gr	ains	² Location:	PI =Pore Lining M=Matrix	
Hydric Soil	Indicators:	, D-Depi			viauna, ivi	0-Maskeu	Sand Or	ams.	Indicators	for Problematic Hydric Soils ³ :	
Histosol	(A1)			Polyva	alue Belo	w Surface	(S8) (LRI	R R.	2 cm M	luck (A10) (LRR K, L, MLRA 149B)	
Histic E	pipedon (A2))		ŃL	RA 149B)	. , .		Coast F	Prairie Redox (A16) (LRR K, L, R)	
Black Hi	istic (A3)			Thin D	Dark Surfa	ace (S9) (L	RR R, M	LRA 149B)	5 cm M	lucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A	4)		Loam	y Mucky I	Mineral (F1) (LRR K	ζ, L)	Dark Si	urface (S7) (LRR K, L)	
Stratified	d Layers (A5) k Surfaar	. (. 1 1)	Loam	y Gleyed	Matrix (F2))		Polyvalue Below Surface (S8) (LRR K, L)		
Depleted	ark Surface (e (ATT)	Depie Redox	Dark Su	x (F3) Inface (F6)			Inin Da	and Sufface (S9) (LKR \mathbf{R}, \mathbf{L})	
Sandy N	Jucky Minera	al (S1)		Deple	ted Dark	Surface (F	7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)	
Sandy G	Sleyed Matrix	k (S4)		Redox	Depress	sions (F8)	,		Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)	
Sandy F	Redox (S5)								🖌 Red Pa	rent Material (F21)	
Stripped	I Matrix (S6)								Very Shallow Dark Surface (TF12)		
Dark Su	rface (S7) (L	.RR R, N	ILRA 1498	3)					Other (Explain in Remarks)	
³ Indicators o	of hydrophytic	voqotat	ion and w	atland bydr		et ha proco	nt unloci	e disturbod	or problomatic		
Restrictive	l aver (if ob	served).			Jogy mu	si be piese	int, unies:	s distui beu			
Type	_ujo: (0.5.										
Donth (in									Hydric Soil	Present? Yes 🗸 No	
	cnes).										
Remarks: Podox fo	oturos a	no pro	sont in	the low	vor so	il profile	、				
ILEUUX IE	aluito a	ie pie			VEI 30		7.				



wbae1003e_w_N

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	DMP/ARK			
File #:	Date of visit(s):			
wbae1003	2020-06-10			
Location:	Ecological Landsca	ape:		
PLSS: sec 10 T047N R005W	Superior Coastal Plain			
Lat: <u>46.561310</u> Long: <u>-90.977394</u>	Watershed:			
	LS08, FISh Greek			
County: <u>Bayfield</u> Town/City/Village: <u>Elleen town</u>				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Portwing-Herbster complex, 0 to 6 percent slopes	Wetland Type(s): PEM - Wet meadow			
Field Verified:				
The soil profile was not verified. The soils will be	Wetland Size:	Wetland Area Impacted		
sampled at a later date.	0.0170	0.0170		
'	Vegetation:			
	Plant Community	Description(s):		
Hydrology:	The wetland is a reed canary grass			
The hydrologic regime is seasonally saturated.				
The feature collects surface runoff from the	dominated the s	wale.		
ourrounding how field				
surrounding hay neid.				
Lat: <u>46.561310</u> Long: <u>-90.977394</u> County: <u>Bayfield</u> Town/City/Village: <u>Eileen town</u> <u>SITE DESCRIPTION</u> Soils: Mapped Type(s): Portwing-Herbster complex, 0 to 6 percent slopes Field Verified: The soil profile was not verified. The soils will be sampled at a later date. Hydrology: The hydrologic regime is seasonally saturated. The feature collects surface runoff from the surrounding hay field.	Watershed: LS08, Fish Creek WWI Class: N/A Wetland Type(s): PEM - Wet mea Wetland Size: 0.0170 Vegetation: Plant Community I The wetland is a dominated the s	dow Wetland Area Impacted 0.0170 Description(s): a reed canary grass wale.		

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	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	N	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	Y	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	N	N	Part of a large habitat block that supports area sensitive species
9	Ν	N	Ephemeral pond with water present <u>> 4</u> 5 days
10	Ν	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	N	N	Wetland is connected or contiguous with perennial stream or lake
2	N	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	Y	Vegetation is inundated in spring
SP			Shoreline Protection
1	N	N	Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable
2	Ν	N	water levels or high flows – if no. not applicable
3	N	N	Densely rooted emergent or woody vegetation
ST			Storm and Floodwater Storage
1	Ν	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	N	Dense, persistent vegetation
4	Ν	N	Evidence of flashy hydrology
5	Y	Y	Point or non-point source inflow
6	Ν	N	Impervious surfaces cover >10% of land surface within the watershed
7	Ν	N	Within a watershed with <10% wetland
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	N	N	Provides substantial storage of storm and floodwater based on previous section
2	N	N	Basin wetland or constricted outlet
3	Y	Y	Water flow through wetland is NOT channelized
4	N	N	Vegetated wetland associated with a lake or stream
5	N	N	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
	Y	Y	Stormwater or surface water from agricultural land is major hydrology source
8	N	N	Discharge to surface water
9	N	N	Installation cover in 100m putter area < 50%
GW			
1	N	N	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	I N	Wetland is within a wellhead protection area

Section 1 Comments (Refer to Section 1 numbers)

WH-7: The wetland could potentially provide habitat for some bird species. We did not hear or observe many species during the field visit, but bobolinks were active in the immediate area. FA-2: The feature was not inundated during the field survey, however it could potentially have standing water after a heavy rain or in the early spring. In those cases, it could provide habitat for amphibians and aquatic insects. ST-2/5: The feature occurs within a swale in a hayfield and receives nonpoint inputs from it.

WQ-7: The feature occurs within a swale within a hay field.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Bobolink, savannah sparrow, red winged blackbird
	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	Aquatic insects and amphibians

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata	All strata present	All strata present,
	or bare due to	present but	and good	conservative species
	invasive species	reduced native	assemblage of	represented
		species	native species	
NHI plant community	S4🖌	S3	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
Alopecurus pratensis			PEM	Rare
Poa palustris			PEM	Rare
Carex cf annectens			PEM	Barren
Poa pratensis			PEM	Barren
Solidago altissima			PEM	Barren

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

The floristic integrity is low due to the dominance of non native species and low diversity.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor	
					Filling, berms (non-impounding)	
					Drainage – tiles, ditches	
					Hydrologic changes - high capacity wells,	
					impounded water, increased runoff	
					Point source or stormwater discharge	
Х	Х		М	C	Polluted runoff	
					Pond construction	
					Agriculture – row crops	
Х	Х		Н	C	Agriculture – hay	
					Agriculture – pasture	
Х	Х		L	C	Roads or railroad	
	Х		L	C	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	
					Pomoval of Jargo woody dobris	
V	V			0	Removal of large woody debris	
Χ	X		Н		Cover of non-native and/or invasive species	
					Residential failu use	
					Dirban, commercial or moustnar use	
					Colf course	
					Gravel nit	
					Recreational use (boating ATVs etc.)	
					Excavation or soil grading	
					Other (list below):	
<u> </u>						
<u> </u>						

* 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 linear wetland that occurs within a swale in a hayfield. There is a field road just to the east of the feature. The wetland could potentially receive non point inputs from the hayfield. There were also marked utilities to the south and north of the feature. The feature is dominated by 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 low due to the dominance of non native species and low diversity.
Human Use Values	
Wildlife Habitat	The feature occurs within a swale in a hay field. We observed active bobolinks in the immediate area.
Fish and Aquatic Life Habitat	There was no standing water during the field survey. Potential spring flooding could provide habitat for aquatic insects and amphibians.
Shoreline Protection	
Flood and Stormwater Storage	The feature is a narrow linear flow through wetland. It is unlikely to store much water.
Water Quality Protection	The feature is a narrow linear flow through wetland. It is unlikely to filter out many pollutants since it is surrounded by hay field.
Groundwater Processes	The wetland likely serves as groundwater recharge.

Section 4: Project Impact Assessment

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

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	Low
Spatial/Habitat Integrity	Temporary construction impacts	Low
Rare Plant/Animal Communities/ Natural Areas	N/A	N/A

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Bayfield	Sampling	Date: 2020-06-10
Applicant/Owner: Enbridge		State: Wisconsin Sampli	ng Point: <u>wbae1003_u</u>
Investigator(s): <u>ARK/DMP</u>	Section, Township, Range:	sec 10 T047N R005	N
Landform (hillslope, terrace, etc.): Talf	Local relief (concave, convex,	none): <u>None</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.561	352 Long: -	90.977008	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	f year? Yes 🖌 No	_ (If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? Are "Norr	mal Circumstances" present?	Yes No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If neede	d, explain any answers in Rema	ırks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important 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 proced Weedy hay field.	ures here or in a	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 Sol	ils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No V Depth (inches):	Wetland Hydrology Present? Yes No _
Saturation Present? Yes No Depth (incluse): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ Depth (incluse): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No Depth (incluse): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks: No No wore observed	Wetland Hydrology Present? Yes No ions), if available:
Saturation Present? Yes No _ Depth (includes): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ Depth (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 (incluse): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Pepth (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 (inclusio). (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 (inclusio). (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 (incluse): (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 <u>No</u> Depth (incluse): <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
Saturation Present? Yes <u>No</u> Depth (inches): <u>(includes capillary fringe)</u> Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No

VEGETATION – Use scientific names of plants.

Sampling Point: wbae1003_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan	t Indicator	Dominance Test worksheet:
1				Number of Dominant Species That Are OBL_FACW. or FAC: 0 (A)
2.				
3				Species Across All Strata: <u>2</u> (B)
4				Percent of Dominant Species
5			<u> </u>	That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7			. . 	Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>2</u> x 2 = <u>4</u>
1				FAC species x 3 =
·				FACU species <u>52</u> x 4 = <u>208</u>
2				UPL species <u>5</u> x 5 = <u>25</u>
3				Column Totals: <u>59</u> (A) <u>237</u> (B)
4				Prevalence Index = B/A = <u>4.016949152542373</u>
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
/·				2 - Dominance Test is >50%
		= Total Co	over	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>5</u>)	00	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Phieum pratense</u>		<u> </u>	FACU	data in Remarks or on a separate sheet)
2. <u>Anthoxanthum odoratum</u>	15	<u> </u>	FACU	
3. Lotus corniculatus	10	<u> N</u>	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Leucanthemum vulgare</u>	5	<u> N </u>	UPL	be present, unless disturbed or problematic.
5. <u>Trifolium pratense</u>	5	<u>N</u>	FACU	Definitions of Vegetation Strata:
6. <u>Hieraium cf. cespitosum</u>	2	N		Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Lysimachia ciliata</u>	2	<u> N </u>	FACW	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. <u>Potentilla recta</u>	1	N	<u> </u>	and greater than or equal to 3.28 ft (1 m) tall.
10. <i>Hieracium aurantiacum</i>	1	N		Herb – All herbaceous (non-woody) plants, regardless
11				
12				height.
	03	= Total Co	over	
Woody Vine Stratum (Plot size: 30)				
1			·	
2			·	
3				Hydrophytic
4				Vegetation Present? Yes No v
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)	_		
There is much variation in the upland v	egetatic	on that s	surround	Is the wetland.

SOIL

Profile Desc	cription: (Describe	to the dept	h needed to docu	ment the inc	licator or confirm	m the absence of indicators.)	
Depth	Matrix		Redo	x Features			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹ Loc ²	Texture Remarks	-
0-16	<u>5YR 4/3</u>	100		None		SCL	-
16-20	2.5YR 3/3	100		None		CL	
		·				· · · · · · · · · _ · _ · _ ·	•
		·				·	-
		· ·				· · · · · · · · _ · _ · _ ·	•
		·				· ·	•
						· ·	_
		·					•
		·				· · · _	•
							-
		· ·					•
1						21	•
Type: C=C	oncentration, D=Depi	letion, RIVI=	Reduced Matrix, M	S=Masked S	and Grains.	Location: PL=Pore Lining, M=Matrix.	
Histosol			Polyvalue Belo	w Surface (S	8) (I PP P	2 cm Muck (A10) (I PP K I MI PA 149B)	
Histic E	pipedon (A2)	-	MLRA 149B)		Coast Prairie Redox (A16) (LRR K. L. R)	
Black H	istic (A3)	_	Thin Dark Surfa	, ace (S9) (LR	R R, MLRA 149B	B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A4)	-	Loamy Mucky I	Mineral (F1)	(LRR K, L)	Dark Surface (S7) (LRR K, L)	
Stratifie	d Layers (A5)		Loamy Gleyed	Matrix (F2)		Polyvalue Below Surface (S8) (LRR K, L)	
Deplete	d Below Dark Surface	e (A11)	Depleted Matrix	< (F3) (F3)		Thin Dark Surface (S9) (LRR K, L)	
I NICK Da	ark Sufface (A12)	-	Redox Dark Su Doploted Dark	Mace (F6) Surface (E7)		Iron-Manganese Masses (F12) (LRR K, L, R) Riodmont Electrologic Soils (E10) (ML RA 1498)	`
Sandy (Reved Matrix (S4)	-	Depleted Dark Redox Depress	sions (F8)		Mesic Spodic (TA6) (MI RA 144A, 145, 149B))
Sandy F	Redox (S5)	-				Red Parent Material (F21)	
Stripped	d Matrix (S6)					Very Shallow Dark Surface (TF12)	
Dark Su	urface (S7) (LRR R, N	ILRA 149B)			Other (Explain in Remarks)	
31 11 1							
Postrictivo	t hydrophytic vegetat	ion and wet	land hydrology mus	st be present	t, unless disturbed	d or problematic.	
Tunoi	Layer (il observeu).						
туре						Hydria Sail Brasant? Yan No. 1	
Depth (in	ches):					Hydric Soil Present? Fes No	
Remarks:			ا م ما				
No redox	c reatures were	e observ	vea.				
l							



wbae1003_u_N



wbae1003_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Bayfield Sampling Date: 2020-06-12
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wbad1002e_w
Investigator(s): <u>KDF/AGG</u>	Section, Township, Range: <u>Sec 05 T047N R005W</u>
Landform (hillslope, terrace, etc.): Side Slope	ocal relief (concave, convex, none): <u>Concave</u> Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.57584</u>	14 Long: <u>-91.030150</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Kellogg-Allendale-Ashwabay comp	lex, 6 to 15 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	vear? Yes <u>v</u> No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantl	y disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 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> Ves No No No No Ves </u>	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate rep The feature is disturbed and is located directly	ort.) v beneath an above-ground utility 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 (C3) Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled S	oils (C6) Geomorphic Position (D2)		
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)		
Field Observations:			
Surface Water Present? Yes <u>v</u> No <u>Depth</u> (inches): <u>1</u>			
Water Table Present? Yes No 🖌 Depth (inches):			
Saturation Present? Yes No 🖌 Depth (inches):	Wetland Hydrology Present? Yes <u> V</u> No		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	ctions), if available:		
Remarks:			
The hydrologic regime is seasonally saturated. The feature	e is located on a concave side slope within		
a utility corridor and exhibits recharge and weak to modera	te discharge hydrology. Shallow surface		

water is present within pockets of the wetland.

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wbad1002e_w</u>

Trace Objections (Distributed and 20	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Iree Stratum</u> (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, of FAC:(A/B)
6			. <u> </u>	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Cov	/er	OBL species <u>84</u> x 1 = <u>84</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =8
1				FAC species <u>8</u> x 3 = <u>24</u>
2				FACU species x 4 =
3.				UPL species <u>0</u> x 5 = <u>0</u>
4			·	Column Totals: <u>96</u> (A) <u>116</u> (B)
5				Prevalence Index = B/A = <u>1.208333333333333333</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
··		- Total Co		∠ 2 - Dominance Test is >50%
Hark Strature (Plat size) 5			/ei	$_$ 3 - Prevalence Index is ≤3.0 ¹
<u>Herb Stratum</u> (Plot size. <u>5</u>)	50	V		4 - Morphological Adaptations ¹ (Provide supporting
	<u></u>	<u> </u>		data in Remarks or on a separate sheet)
2. <u>Scirpus microcarpus</u>	15	<u> </u>		
3. <u>Scirpus cyperinus</u>	15	<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Rubus idaeus</u>	5	<u> </u>	FAC	be present, unless disturbed or problematic.
5. <u>Carex stipata</u>	2	<u> N </u>	OBL	Definitions of Vegetation Strata:
6. <i>Impatiens capensis</i>	2	<u> N </u>	FACW	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Onoclea sensibilis</u>	2	<u> N </u>	<u>FACW</u>	at breast height (DBH), regardless of height.
8. <u>Carex cf. radiata</u>	2	N	FAC	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Calamagrostis canadensis</u>	2	<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				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 Cov	/er	height.
Woody Vine Stratum (Plot size: 30)				
1				
2			·	
2				Underse log 2a
3			·	Nydropnytic Vegetation
4		Tatal Oa		Present? Yes <u>v</u> No
Pomarka: (Include photo numbers here or on a separate	<u> </u>		/er	
The vegetation is representative of fres	sh (wet)	meadov	v domin	ated by fringed sedge and red-tinged
bulrush. Other graminoids, fern species	s, and tr	ee sapli	ngs are	scattered throughout.
		•	-	-

Denth	Matrix	uopui i	Red/	ox Feature	S			
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
	·							
	·						<u> </u>	
	· · _							
	·							
1 Type: C=C		ion RM=Re	duced Matrix M		Sand Gr	aine	² Location:	PI = Pore Lining M=Matrix
Hydric Soil	Indicators:					airi5.	Indicators f	or Problematic Hydric Soils ³
Histoso	μ (Δ1)		Polyvalue Belo	w Surface	(S8) (I RE	R	2 cm Mi	
Histic F	ninedon (A2)		MIRA 149P		(50) (EN	х іх ,	Coast P	$\frac{1}{100} \left(\frac{1}{100} \left(\frac{1}{100} \left(\frac{1}{100} \right) \left(\frac{1}{100} \left(\frac{1}{100} \right) \left(\frac{1}{100} \right) \right) \right)$
Black H	listic (A3)		Thin Dark Surf	, ace (S9) (I	RR R. MI	RA 149B)	5 cm Mi	ucky Peat or Peat (S3) (LRR K, L, R)
Hvdrog	en Sulfide (A4)		Loamv Muckv	Mineral (F	1) (LRR K	.L)	Dark Su	Inface (S7) (LRR K. L)
Stratifie	ed Lavers (A5)		Loamy Gleved	Matrix (F2	:)	, _,	Polyvalu	ue Below Surface (S8) (LRR K, L)
Deplete	ed Below Dark Surface (A11)	Depleted Matri	x (F3)	,		Thin Da	rk Surface (S9) (LRR K, L)
Thick D	ark Surface (A12)	,	Redox Dark Su	urface (F6)			Iron-Ma	nganese Masses (F12) (LRR K, L, R)
Sandy	Mucky Mineral (S1)		Depleted Dark	Surface (F	7)		Piedmo	nt Floodplain Soils (F19) (MLRA 149B)
Sandy	Gleyed Matrix (S4)		Redox Depres	sions (F8)			Mesic S	podic (TA6) (MLRA 144A, 145, 149B)
Sandy	Redox (S5)						Red Pa	rent Material (F21)
Strippe	d Matrix (S6)						Very Sh	allow Dark Surface (TF12)
Dark S	urface (S7) (LRR R, ML	RA 149B)					🖌 Other (E	Explain in Remarks)
³ Indicators of	of hydrophytic vegetation	n and wetlar	nd hydrology mu	st be prese	ent, unless	s disturbed	or problematic.	
Restrictive	Layer (if observed):							
Туре:			_					
Depth (ir	iches).						Hydric Soil F	Present? Yes <u><</u> No
Doparke:			_				-	
The soil	s were not samr	مامط طبيم	to the loca	ation wi	thin an	avistin	a utility cou	rridor. The soils are
	s were not samp							
assume	a to be hydric ba	ased on	nyaropnyu	c vegei	alion a	and well	and nydro	iogy.



wbad1002e_w_N



wbad1002e_w_SE

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation	Proiect	City/County: Ba	avfield	Samplin	ig Date: <u>2020-06-22</u>	
Applicant/Owner: Enbridge	,		,	State: Wisconsin Samp	ling Point: wbad1002f_w	
Investigator(s): SBR/DGI		Section, Townsh	ip. Range: S	ec 05 T047N R005	5W	
Landform (billslope terrace etc.): Sic	te Slope	Local relief (concav	e convex no	ne): Concave	Slope (%): 0-2%	
Subragion (LPR or MLPA). Northcent	tral Forests	16 575611	Long: -Q'	1 020060	Optum: WGS84	
Soil Map Lipit Name: Kellogg-Alley	ndale-Ashwa	40.373044 hav complex 6 to 15 p	_ Long. <u>-5</u>			
Are alies atic (herein a sin and iting and						
Are climatic / hydrologic conditions on		this time of year? Yes		(if no, explain in Remarks.)		
Are Vegetation, Soil, or	r Hydrology		Are "Norma	I Circumstances" present?	Yes 🥢 No	
Are Vegetation, Soil, or	r Hydrology	naturally problematic?	(If needed, e	explain any answers in Rem	ıarks.)	
SUMMARY OF FINDINGS - A	Attach site ma	ap showing sampling po	oint locatio	ons, transects, impor	tant features, etc.	
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes <u> </u>	No Is the Sa within a v	mpled Area Wetland?	Yes 🖌 No _		
Wetland Hydrology Present?	Yes <u>v</u>	No If yes, op	tional Wetland	d Site ID:		
is not dense in the unders	story and is	mostly dominated by	fern spe	cies.		
HYDROLOGY						
Wetland Hydrology Indicators:				Secondary Indicators (min	imum of two required)	
Primary Indicators (minimum of one is	s required; check	all that apply)		Surface Soil Cracks (E	36)	
Surface Water (A1)	V	Water-Stained Leaves (B9)		Drainage Patterns (B10)		
→ High Water Lable (A2)	<i>P</i>	Aquatic Fauna (B13)		Moss Trim Lines (B16)		
Water Marks (B1)	K	Hydrogen Sulfide Odor (C1)		Cravfish Burrows (C8)		
Sediment Deposits (B2)	(Dxidized Rhizospheres on Livin	a Roots (C3)	Saturation Visible on A	Aerial Imagery (C9)	
Drift Deposits (B3)	F	Presence of Reduced Iron (C4)	j · · · · · · (- · ·)	Stunted or Stressed P	Plants (D1)	
Algal Mat or Crust (B4)	F	Recent Iron Reduction in Tilled	Soils (C6)	Geomorphic Position	(D2)	
Iron Deposits (B5)	т т	Thin Muck Surface (C7)		Shallow Aquitard (D3)	1	
Inundation Visible on Aerial Imag	jery (B7) (Other (Explain in Remarks)		Microtopographic Reli	ef (D4)	
Sparsely Vegetated Concave Su	rface (B8)			FAC-Neutral Test (D5)	
Field Observations:						
Surface Water Present? Yes	_✔_ No	Depth (inches): <u>0.1</u>				
Water Table Present? Yes_	No	Depth (inches): 0				
(includes capillary fringe)	✓ NO	Depth (Inches): U	wetland F	hydrology Present? Yes	<u> </u>	
Describe Recorded Data (stream gau	ige, monitoring we	ell, aerial photos, previous inspe	ections), if ava	ailable:		
Remarks [.]						
The hydrologic regime is	saturated.					

VEGETATION – Use scientific names of plants.

Sampling Point: wbad1002f_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Acer rubrum	60	Y	FAC	Number of Dominant Species That Are OBL EACW or EAC: 6 (A)
2 Abies balsamea	20	Y	FAC	
3. Acer saccharum	 5	N	FACU	Total Number of Dominant Species Across All Strata: 7 (B)
4.				Percent of Dominant Species
5.				That Are OBL, FACW, or FAC: <u>86</u> (A/B)
6.				
7.				Total % Cover of: Multiply by:
	85	= Total Cov	/er	$\begin{array}{c} \hline \hline$
Sapling/Shrub Stratum (Plot size: 15)				FACW species 20 $x^2 = 40$
1 Condus corputa	5	Y	FACU	FAC species x 3 =315
		1	1700	FACU species x 4 =80
2				UPL species x 5 =
3				Column Totals: <u>165</u> (A) <u>455</u> (B)
4				Prevalence Index = B/A = 2.757575757575758
5				Hydronhytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
/	- <u> </u>			 2 - Dominance Test is >50%
		= Total Cov	/er	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:)	45	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Osmunda claytoniana</u>	15	<u> Y </u>	FAC	data in Remarks or on a separate sheet)
2. <u>Carex crinita</u>	10	<u> </u>	OBL	
3. <u>Rubus pubescens</u>	10	<u> </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. Juncus effusus	5	<u> </u>	OBL	be present, unless disturbed or problematic.
5. Dryopteris carthusiana	5	<u> N </u>	<u>FACW</u>	Definitions of Vegetation Strata:
6. <u>Caltha palustris</u>	5	N	OBL	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Athyrium angustum</u>	5	<u> N </u>	FAC	at breast height (DBH), regardless of height.
8. <u>Equisetum pratense</u>	5	<u> N </u>	<u>FACW</u>	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Maianthemum canadense</u>	5	<u> N </u>	<u>FACU</u>	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Trientalis borealis</u>	5	N	FAC	Herb – All herbaceous (non-woody) plants, regardless
11. Phegopteris connectilis	5	<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 backt
	75	= Total Cov	/er	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4				Vegetation Prosput2 Vos v No
	0	= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate	sheet.)			l
Cover is not 100% due to leaf litter cov	er.			
L				

SOIL

Profile Desc	ription: (D	Describe 1	to the dep	th needed	to docun	nent the i	ndicator	or confirm	the absence of	f indicators	s.)	
Depth		Matrix			Redo	x Features	5					
(inches)	Color (moist)	%	Color (r	noist)	%	Type ¹	Loc ²	Texture		Remarks	
0-12	5YR	4/2	90	5YR	4/6	10	C	Μ	S			
12-20	5YR	4/6	100			0			S			
		1/0										
						·						
						·						
						·						
			·									
		n D-Don	otion PM	-Poducod I	Matrix MS	-Maskod	Sand Gr	aine	² Location:	DI - Doro Li	ning M-Matr	ix
Hydric Soil	Indicators			-Neuuceu i				airi5.	Indicators fo	r Problem	atic Hydric S	inils ³ .
Histosol	(A 1)			Polya		v Surfaco	(S8) /I DE	D	2 cm Mu			2A 140B)
Histosof	(AT) Ninodon (AS	2)				v Sunace	(30) (LKr	х к,	2 cm Mu	ck (ATU) (L	$(\Lambda 16)$ (I DD	KA 149D) KID)
Black Hi	stic (Δ 3)	-)		τhin Γ)ark Surfa	(SQ) (I		RA 1498)	<u> </u>	cky Peat or	: Peat (S3) (I	RRKIR)
<u> </u>	en Sulfide (A	44)			v Mucky M	/lineral (F1		L)	Dark Sur	face (S7) (RR K. I)	Ki K, ⊑, K)
Stratified	1 avers (A	5)			v Gleved I	Matrix (F2)	, =)	Polyvalue	e Below Su	rface (S8) (L	RRK(I)
Depleted	d Below Da	∽, rk Surface	e (A11)	Deple	ted Matrix	(F3)	/		Thin Dar	k Surface (S9) (LRR K. I	L)
Thick Da	ark Surface	(A12)		Redox	Dark Su	face (F6)			Iron-Man	idanese Ma	asses (F12) (L	-/ .RR K. L. R)
Sandy M	lucky Mine	(sti_) ral (S1)		Deple	ted Dark S	Surface (F	7)		Piedmon	t Floodplair	n Soils (F19) ((MLRA 149B)
Sandy G	leved Matr	ix (S4)		Redox	Depress	ions (F8)	.,		Mesic Sc	podic (TA6)	(MLRA 144A	. 145. 149B)
Sandy R	Redox (S5)	(-)			-	(-)			Red Pare	ent Materia	(F21)	, -, -,
Stripped	Matrix (S6)						Very Sha	allow Dark S	Surface (TF12	2)	
Dark Su	rface (S7) (, LRR R, N	ILRA 1498	3)				Other (E:	xplain in Re	emarks)	,	
				,						•	,	
³ Indicators of	f hydrophyt	ic vegetat	ion and we	etland hydro	ology mus	t be prese	ent, unless	s disturbed	or problematic.			
Restrictive I	_ayer (if ob	oserved):										
Type:												
Donth (in	aboo):								Hydric Soil P	resent?	Yes 🗸	No
	ines).											<u> </u>
Remarks:												
A sandy	Soll with	n redox	cobser	ved nea	ar the s	surrace	9.					



wbad1002f_w_N



wbad1002f_w_S

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

WETLAND IDENTIFICATION			
Project name:	Evaluator(s):		
File #: wbad1002	Date of visit(s):		
Location: PLSS: sec 05 T047N R005W	Ecological Landscape: Superior Coastal Plain		
Lat: <u>46.575844</u> Long: <u>-91.030150</u>	Watershed: LS08, Fish Creek		
SITE DESCRIPTION			
Soils: Mapped Type(s): Kellogg-Allendale-Ashwabay complex, 6 to 15 percent slopes,	WWI Class: N/A Wetland Type(s):		
Cublake-Croswell-Ashwabay complex, 0 to 6 percent slopes Field Verified:	PEM - Fresh (wet) meadow		
The soil series was not verified.	Wetland Size: 0.1559	Wetland Area Impacted 0.1559	
	Vegetation: Plant Community Description(s): The vegetation is representative of fresh (wet) meadow dominated native graminoids such as fringed sedge and red-tinge bulrush. Other graminoids, fern species, and tree saplings are scattered throughout.		
Hydrology: The hydrologic regime is seasonally saturated. The feature is located on a concave side slope within a utility corridor and exhibits recharge and weak to moderate discharge hydrology. Shallow surface water is present within pockets of the wetland. The feature narrows outside of the corridor, where it may feed a small waterbody.			

SITE MAP

SECTION 1: Functional Value Assessment

1 N Used for recreation (hunning, birding, hiking, etc.). List: 2 N N Usually or physically accessible to public 3 N N Vesually or physically accessible to public 4 N N Availation or sidiation or solentific purposes 5 N N N Availation or adjacent to RED FLAG areas 6 N N Supports or provides habitat for endangered, threatened or special concern species 7 N N N N 8 N N Weitlind Habitation 1 N Weitlind and contiguous habitati>10 acres 2 N N Of or more sitial present (>10% cover) 3 N N Weitlind nadjacent to habita corridor or established wildlife habitat area 4 N N Toor more sitial preserve >60% (south) 75% (north) intact 5 N N Occurs in a Joint Venture prorivity township 6 N N Interseparison of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex,etc.) 7 N Supports or provides habitat for amphibians and aquatic inverteas <	HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
2 N N Visually or physically accessible to public 4 N N Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation 5 N N N Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation 6 N N Supports or provides habitat for endangered, threatened or special concern species 7 N N In or adjacent to archaeological or cultural resource site 1 N N Wetland and contiguous habitat >10 acres 2 N N Wetland and contiguous habitat >10 acres 3 N N Within or adjacent to habitat corridor or established wildife habitat area 4 N N Occurs in a Joint Venture priority township 5 N N Occurs in a Joint Venture provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other 7 N N Parts Sagoords core provides habitat for amplibians and aquatic invertebrates 11 N Personal quater provides habitat for amplibians and aquatic invertebrates 11 N N Sacoonally exposed multilats present 4 days 11 <td>1</td> <td>Ν</td> <td>N</td> <td>Used for recreation (hunting, birding, hiking, etc.). List:</td>	1	Ν	N	Used for recreation (hunting, birding, hiking, etc.). List:
3 N N Visually or physically accessible to public 4 N N N N 4 N N N N 5 N N N In or adjacent to RED FLAG areas 6 N N Supports or provides habitat for endangered, threatened or special concern species 7 N N N N N 1 N Wildlife Habitat Carchaeological or cultural resource site 2 N N 3 or more sitata present (-10% cover) 3 N N Within or adjacent to habitat corridor or established wildlife habitat area 4 N 100 m buffer - natural land cover ≥50%(south) 75% (north) intact 5 N N Occurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh shrub/emergent, wetland/upland complex.etc.) 7 N N Supports or provides habitat for amphibitas and aquatic invertebrates 10 N Paras Paras 9 N	2	N	N	Used for educational or scientific purposes
4 N A settimizing pleasing due to diversity of habitat types, lack of pollution or degradation 5 N 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 7 N N In or adjacent to archaeological or cultural resource site 7 N N Wetlend and contiguous habitat >10 acres 2 N N 3 or more strata present (>10% cover) 3 N Within or adjacent to habitat scruture torrify tronship 6 N N 100 m buffer - natural land cover >20% (south) 75% (north) intact 7 N Occurs in a Joint Venture priority tronship 6 N N Interspersion of habitat structure (neim-marsh.shrub/emergent, wetland/upland complex.etc.) 7 N Supports or provides habitat for amphibians and aquatic invertebrates 10 N Petnemaria present >45 days 11 N Seasonally exposed mutflats present 12 N Petnemaria present provides habitat for amphibians and aquatic invertebrates	3	Ν	N	Visually or physically accessible to public
6 N N List: 6 N N Supports or provides habitat for endangered, threatened or special concern species 7 N N N nor adjacent to achaeological or cultural resource site WH Widifie Habitat Widifie Habitat N N 1 N Wetlend and contiguous habitat >10 acres N N 2 N N 3 or more strata present (>10% cover) N 3 N N Within or adjacent to habitat corridor over <50% (south) 75% (north) Intact	4	N	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
6 N N Supports or provides habitat for endangered, threatened or special concern species 7 N N N N N N 1 N N N Wildlife Habitat N Wildlife Habitat 2 N N 3 or more strata present (>10% cover) Supports or stabilished wildlife habitat area 3 N N Within or adjacent to habitat scructure resofts(couth) 75% (north) Intact 5 N N Occurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh.shrub/emergent, wetland/upland complex.etc.) 7 N N Plans Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other 8 N N Perfore along whith water present >45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N Seasonally exposed mudflats present 11 12 N Provides habitat scare in the area (urban, agricultural, etc.) FA Fish and Aquatic Life Habita	5	N	N	In or adjacent to RED FLAG areas List:
7 N N In or adjacent to archaeological or cultural resource site 1 N N Wetland and contiguous habital >10 acres 2 N N Wetland and contiguous habital >10 acres 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.tc.) 7 N N Deports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other 8 N Part of a large habitat block that supports area sensitive species 9 N N Esasonally exposed muditab present 11 N Seasonally exposed muditab present 12 N Provides habitat correct or ontiguous with perennial stream or lake 2 N N Veglation is inundated in spring 74 N N Wetland is a stream, lake, pond or open water area (>1 acre) - if no, not applicable 7 N N <td>6</td> <td>Ν</td> <td>Ν</td> <td>Supports or provides habitat for endangered, threatened or special concern species</td>	6	Ν	Ν	Supports or provides habitat for endangered, threatened or special concern species
WH Wildlife Habitat 1 N N Wetland and contiguous habitat >10 acres 2 N N 3 or more strata present (>10% cover) 3 N Within or adjacent to habitat corridor or established wildlife habitat area 4 N N Within or adjacent to habitat corridor or established wildlife habitat area 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 Supports or provides habitat for SGCN or birds listed in the VI All-Bird Cons. Plan, or other 8 N N Perfort alarge habitat block that supports area sensitive species 9 N N Ephemeral pond with water present ≥ 45 days 10 N Y Standing water provides habitat for amphibians and aquatic invertebrates 11 N N Wetland is connected or contiguous with perennial stream or lake 1 N N Wetland leix species within aquatic system 4 N N Vetgetation is inundated in spring	7	Ν	N	In or adjacent to archaeological or cultural resource site
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3 N Within or adjacent to habitat corridor or established wildlife habitat area 4 N N N 5 N N Cocurs in a Joint Venture priority township 6 N N Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.) 7 N Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans 8 N N Part of a large habitat block that supports area sensitive species 9 N N Ephermeral pond with water present ≥45 days 10 N Seasonally exposed mudflats present 11 N N Seasonally exposed mudflats present 12 N Provides habitat scarce in the area (urban, agricultural, etc.) FA Fish and Aquatic Life Habitat Teish and Aquatic Life Habitat for amphibinas 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 N Natural Heritage Inventory (NHI) listed aquatic species within for no, not applicable 1 N	2	N	N	3 or more strata present (>10% cover)
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GW Groundwater Processes 1 Y 2 N 3 N 4 N 4 N 5 N N Wetland soils are organic	9	N	N	Natural land cover in 100m buffer area < 50%
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4 N Wetland soils are organic 5 N N Wetland is within a wellhead protection area	2			Wetland remains saturated for an extended time period with no additional water inpute
5 N N Wetland is within a wellhead protection area	4		N N	Wetland soils are organic
	5	N	N	Wetland is within a wellhead protection area

WH-10, FA-2: There is shallow standing water present within pockets of the feature. WQ-8, GW-1: The feature is located on a convcave side slope and likely exhibits weak to moderate discharge hydrology that may discharge to surface water downslope outside of the survey corridor.

ST-3, WQ-5: There is near continuous ground cover throughout 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	Frogs and toads
	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

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 crinita*			PEM	Interrupted
Carex stricta*			PEM	Rare
Scirpus cyperinus			PEM	Rare
Scirpus microcarpus			PEM	Rare
Juncus effusus			PEM	Rare
Osmundastrum cinnamomeum			PEM	Rare
Calamagrostis canadensis			PEM	Barren
Carex gracillima			PEM	Barren
Carex stipata			PEM	Barren
Onoclea sensibilis			PEM	Barren
Rubus idaeus			PEM	Barren
Solidago gigantea			PEM	Barren
Symphyotrichum sp.			PEM	Barren
Acer rubrum			PEM	Barren
Alnus incana			PEM	Barren
Athyrium filix-femina			PEM	Barren
Carex cf. radiata			PEM	Barren
Comptonia peregrina			PEM	Barren
Equisetum arvense			PEM	Barren
Fragaria virginiana			PEM	Barren
Glyceria striata			PEM	Barren
Impatiens capensis			PEM	Barren
Osmunda claytoniana			PEM	Barren
Potentilla simplex			PEM	Barren
Salix petiolaris			PEM	Barren

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

There is moderate overall native diversity within the feature, with some invasive species present. The area has been disturbed by the utility corridor.

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		М	С	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		M	С	Roads or railroad
Х	Х		Н	С	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
Х	х		М	UC	Removal of herbaceous stratum – mowing, grading, earthworms, etc.
					Removal of tree or shrub strata – logging, unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
Х	Х		М	С	Cover of non-native and/or invasive species
					Residential land use
					Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					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 a maintained above-ground utility corridor that shows signs of disturbance. Abundant invasive species are present within the surrounding area, with less coverage within the wetland itself. Outside of the wetland, there is a small mowed trail directly beneath the utility lines.
SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	There is moderate overall diversity within the feature, with some invasive species present. The area has been disturbed by the utility corridor.
Human Use Values	The feature is located within a utility corridor and is not visible to the public.
Wildlife Habitat	Minimal habitat is provided by the feature. Sparse shrubs are present that may provide habitat for avians. Shallow surface water is present within pockets of the feature that may support wildlife habitat for frogs and toads.
Fish and Aquatic Life Habitat	Shallow surface water present within the wetland is unlikely to provide habitat for aquatic life and does not support fish.
Shoreline Protection	N/A
Flood and Stormwater Storage	There is dense vegetation cover throughout the feature, but there is limited potential for stormwater storage due to its landscape position amd small size. The feature narrows downslope outside of the corridor and may feed a small waterbody.
Water Quality Protection	There is dense vegetation cover throughout the feature, which may provide some filtration of stormwater runoff.
Groundwater Processes	The feature exhibits recharge and 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

Project/Site: Line 5 Relocation Project	City/County: Ba	yfield	_ Sampling Date: 2020-06-12		
Applicant/Owner: Enbridge		State: Wiscon	nsin Sampling Point: wbad1002_u		
Investigator(s): AGG/KDF	Section, Townshi	p, Range: <u>Sec 05 T047</u>	N R005W		
Landform (hillslope, terrace, etc.): Nose Slope	Local relief (concave	, convex, none): Convex	Slope (%): 3-7%		
Subregion (I BB or MI BA). Northcentral Forests Lat.	46 575911	Long: -91 029507	Datum: WGS84		
Soil Man Unit Name: Cublake-Croswell-Ashwa	abay complex 0 to 6 pe	rcent slopes NWI classi	fication:		
Are climatic / hydrologic conditions on the site typical for	this time of year? Ves \checkmark	No (If no explain in	Remarks)		
Are Vegetation Soil or Hydrology	aignificantly disturbed?	Are "Normal Circumstances"	' propont? You // No		
Are Vegetation, Soli, of Hydrology		Ale Normal Circumstances	present? Tes <u>v</u> No		
Are vegetation, Soli, or Hydrology		(If needed, explain any answ			
SUMMARY OF FINDINGS – Attach site ma	ap showing sampling po	Int locations, transect	s, important features, etc.		
Hydrophytic Vegetation Present? Yes	No Is the San	npled Area			
Hydric Soil Present? Yes	No <u>v</u> within a V	/etland? Yes	No <u>//</u>		
Wetland Hydrology Present? Yes	No <u> If yes, opti</u>	onal Wetland Site ID:			
and orchard grass. The upland samp	le point is shared with	i feature wbad1003	е.		
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary India	cators (minimum of two required)		
Primary Indicators (minimum of one is required; check	all that apply)	Surface So	il Cracks (B6)		
Surface Water (A1)	Nater-Stained Leaves (B9)	Drainage P	Patterns (B10)		
High Water Table (A2) A	Aquatic Fauna (B13)	Moss Trim	Moss Trim Lines (B16)		
Saturation (A3) I	Dry-Seasol	Dry-Season Water Table (C2)			
Sediment Deposits (B2)	Roots (C3) Saturation	Visible on Aerial Imagery (C9)			
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or	Stressed Plants (D1)		
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled S	oils (C6) Geomorphi	c Position (D2)		
Iron Deposits (B5)	Iron Deposits (B5) Thin Muck Surface (C7)				
Inundation Visible on Aerial Imagery (B7) 0	Other (Explain in Remarks)	Microtopog	raphic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)		FAC-Neutra	al Test (D5)		
Field Observations:					
Surface Water Present? Yes No _	Depth (inches):				
Water Table Present? Yes <u>No</u>	Depth (inches):				
Saturation Present? Yes No 🖌	Depth (inches):	Wetland Hydrology Prese	ent? Yes No		
Describe Recorded Data (stream gauge, monitoring we	ell, aerial photos, previous inspe	ctions), if available:			
Demortio					
No indicators of wetland hydrology w	vere observed.				

Sampling Point: wbad1002_u

Trop Stratum (Plot size: 30)	Absolute	Dominan	t Indicator	Dominance Test worksheet:
		<u>Species</u> ?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				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: 33 (A/B)
6				Prevalence Index worksheet:
7.				Total % Cover of: Multiply by:
	0	= Total Co	ver	$\frac{1}{1} \frac{1}{1} \frac{1}$
Sapling/Shrub Stratum (Plot size: 15)				EACW species $10 \times 2 = 20$
(File Size)	10	V		FAC species 5 $x_3 = 15$
1. <u>Comptonia peregrina</u>		<u> </u>		FACU species $62 \times 4 = 248$
2. <u>Cornus alba</u>	5	Y	FACW	UPL species $10 \times 5 = 50$
3				Column Totals: 87 (A) 333 (B)
4				
5			<u> </u>	Prevalence Index = $B/A = 3.83$
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	15	- Total Ca		2 - Dominance Test is >50%
			vei	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:)			=	4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Poa pratensis</u>	50	<u> </u>	FACU	data in Remarks or on a separate sheet)
2. <u>Dactylis glomerata</u>	10	<u> N</u>	<u>FACU</u>	Problematic Hydrophytic Vegetation' (Explain)
3. <u>Acer rubrum</u>	5	N	FAC	¹ Indiastors of hydric soil and watland hydrology must
4. <u>Rumex acetosa</u>	5	N	UPL	be present, unless disturbed or problematic.
5. Leucanthemum vulgare	5	Ν	UPL	Definitions of Vegetation Strata
6. Cornus alba	5	N	FACW	Definitions of Vegetation of ata.
7 Taraxacum officinale	2	N	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
o			1700	at bleast height (DBH), regardless of height.
o			<u> </u>	Sapling/shrub – Woody plants less than 3 in. DBH
9			<u> </u>	
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 5.26 it tail.
12			<u> </u>	Woody vines – All woody vines greater than 3.28 ft in
	82	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1.				
2				
2			<u> </u>	Heater sheets
				Vegetation
4				Present? Yes No 🗸
	0	= Total Co	ver	
The sample plot is dominated by orcha	sheet.)	and K	entucky	bluegrass
	ild glube		cintuolty	bidegrass.

Profile Des	cription: (Describe t	o the depth	needed to docum	nent the i	ndicator	or confirm	the absence of	of indicato	rs.)	
Depth	Matrix		Redox	K Features	8					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
		<u> </u>					·			
<u> </u>										
		<u> </u>								
<u> </u>										
		<u> </u>								
¹ Type: C=C	oncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location:	PL=Pore L	_ining, M=Matrix	ι.
Hydric Soil	Indicators:		· · · ·				Indicators f	or Problen	natic Hydric So	oils ³ :
Histosol	l (A1)		Polyvalue Below	v Surface	(S8) (I R	R R.	2 cm Mi	uck (A10) (A 149B)
Histic F	ninedon (A2)	-	MI RA 149R)	Canado	(00) (2:1	,	Coast P	rairie Redo	(A16) (I RR K	
Black H	istic (Δ 3)		Thin Dark Surfa	(SQ) (I		RA 149B)	<u> </u>	icky Peat o	or Peat (S3) (I R	RKIR)
<u> </u>	an Sulfide ($\Delta 4$)	_	Loamy Mucky M	lineral (F1		(1)	Dark Su	ucity i cat c irface (S7)		IN IN, E, IN)
Tryutoge		-	_ Loamy Gloved N	Matrix (E2		., ∟ /	Dark Su		$(\mathbf{L}\mathbf{N}\mathbf{N},\mathbf{L})$	
	d Dalaw Dark Surface	(411)	_ Loanty Gleyeu in	(F2))					κ κ , μ)
Depiete		(ATT) _	_ Depieted Matrix	(F3) face (FC)					(59) (LKK K, L	
	ark Surface (A12)	-	_ Redox Dark Sur	Tace (F6)			Iron-ivia	nganese ivi	iasses (F12) (LI	$\mathbf{R} \mathbf{K}, \mathbf{L}, \mathbf{R}$
Sandy N	Nucky Mineral (S1)	-	_ Depleted Dark S	Surface (F	()				iin Solis (F19) (I	WLRA 149B)
Sandy C	Sleyed Matrix (S4)	-	_ Redox Depressi	ions (F8)) (WILRA 144A ,	145, 149B)
Sandy F	Redox (S5)						Red Pai	rent Materia	al (F21)	
Stripped	d Matrix (S6)						Very Sh	allow Dark	Surface (TF12)	
Dark Su	Irface (S7) (LRR R, M	LRA 149B)					Other (E	Explain in R	Remarks)	
2										
³ Indicators o	f hydrophytic vegetati	on and wet	and hydrology mus	t be prese	ent, unless	s disturbed	or problematic.			
Restrictive	Layer (if observed):									
Type:										
Donth (in	abaa);						Hydric Soil F	Present?	Yes	No
Depth (In	cnes):							resent.	100	<u> </u>
Remarks:					<u>.</u>					
Soils we	re not sampled	I due to	the location	within a	a main	itained p	powerline	corridor	r and proxi	mity to
buried ut	tilities. Soils are	e assum	ned to be non	hvdri	c base	d on the	e dominan [.]	t vegeta	ation and la	ack of
bydrolog	v indicatore			,						
riyurulug	y mulcalors.									



wbad1002_u_E



wbad1002_u_N

Project/Site: Line 5 Relocation Project	City/County: Bayfield Sampling Date: 2020-06-22
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wbad1002f_u
Investigator(s): <u>SBR/DGL</u>	Section, Township, Range: <u>Sec 05 T047N R005W</u>
Landform (hillslope, terrace, etc.): Talf	ocal relief (concave, convex, none): <u>None</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.57564	6Long: <u>-91.029843</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Cublake-Croswell-Ashwabay comp	blex, 0 to 6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🔽 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes <u>v</u> 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 No Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report The upland is located upslope from the wetlan beaked hazel in the shrub layer. The herbaced seedlings.	ort.) Id and is dominated by white pine in the canopy and ous layer is a mixture of shrub-tolerant forbs and tree
HYDROLOGY Wetland Hydrology Indicators:	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 Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living I	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	bils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No</u> Depth (inches):	
Water Table Present? Yes <u>No</u> 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 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 inspection)	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection)	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No 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) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No
Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No _ ✓ _ Depth (inches): (includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No _ ✓ _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No ✓ _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No ✓ _ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No tions), if available:
Saturation Present? Yes No _ Uppth (inches): [includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks: Remarks: No indicators of wetland hydrology were observed.	Wetland Hydrology Present? Yes No tions), if available:

Sampling Point: wbad1002f_u

Index struburs
1. Prices subbus 30 1 FACU 2. Acer saccharum 25 Y FACU 3. Acer rubrum 15 N FACU 4. Betula alleghaniensis 10 N FACU 5. Amelanchier sp. 5 N FACU 6. - - - 7. - - - 85 = Total % Cover of: Multiply by: 85 = Total % Cover of: Multiply by: 85 = Total % Cover of: Multiply by: 985 = Total % Cover of: Multiply by: 1. Corylus cornuta 30 Y FACU 2. Abies balsamea 5 N FAC 3. - - - 4. - - - 5. - - - 6. - - - 7. - - - 3. - - - 4. - - - 5. - - -
2. Acer saccnarum 25 Y FACU 3. Acer rubrum 15 N FACU 3. Acer rubrum 15 N FACU 4. Betula alleghaniensis 10 N FAC 5. Amelanchier sp. 5 N FAC 6. - - - 7. - - - 85 = Total Cover - Multiply by: 0BL species 0 x1 = 0 7. - - - - 2. Abies balsamea 5 N FAC FACU 3. - - - - - 4. - - - - - 5. N FAC - - - 6. - - - - - - 7. - - - - - - - 7. - - - - - - - - - - -
3. Acer rubrum 15 N FAC Species Across All Strata: E (B) 4. Betula alleghaniensis 10 N FAC Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B) 5. Amelanchier sp. 5 N Prevalence Index worksheet: Total % Cover of: Multiply by: 7. 85 = Total Cover Sectors All Stratum OBL species 0 x1 = 0 2. Abies balsamea 5 N FAC FACU species 0 x2 = 0 3. 30 Y FACU FACU species 0 x2 = 0 FACU species 0 x5 = 0 (B) 4.
4. Betula alleghaniensis 10 N FAC 5. Amelanchier sp. 5 N Percent of Dominant Species 6. 5 N That Are OBL, FACW, or FAC: 0 (A/B) 6. 6. 7. 85 = Total Cover Sapling/Shrub Stratum (Plot size: 15 10 Y FACU FAC species 0 x1 = 0 7. 30 Y FACU FACU species 0 x1 = 0 7. 30 Y FACU FACU species 0 x1 = 0 7. 30 Y FACU Species 0 x2 = 0 8. 5 N FACU Species 0 x5 = 0<
5. $Amelanchier sp.$ 5 N Infat Are OBL, FACW, or FAC: U (Are) 6. Prevalence Index worksheet: 7. Total % Cover of: Multiply by: 85 = Total Cover FACU species 0 $x 1 = 0$ 7. FACU species 0 $x 2 = 0$ 7. FACU species 0 $x 2 = 0$ 7. FACU species 0 $x 5 = 0$ 7. 8. 7. 8. 9. 1. Cory/us cornuta </td
6.
7.
B5 = Total Cover Sapling/Shrub Stratum (Plot size:15_) 30 Y FACU 1. Corylus cornuta 30 Y FACU 2. Abies balsamea 5 N FAC 3
Sapling/Shrub Stratum (Plot size:15) 1. Corylus cornuta 30 Y FACU 2. Abies balsamea 5 N FAC 3.
1. Corylus cornuta 30 Y FAC upperies 50 x 3 = 150 2. Abies balsamea 5 N FAC FAC upperies 50 x 4 = 600 3.
2. Abies balsamea 5 N FAC FACU species 150 x 4 = 600 3.
3.
Column Totals: 200 (A) 750 (B) 4
5.
6.
0.
35 = Total Cover 35 = Total Cover 2 2 Dominance Test is >50% 3 3 Prevalence Index is ≤3.0 ¹ 4 4 Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) 2 $Corylus cornuta$ 3 $Mitchella repens$ 4 $Quercus rubra$ 4 $Quercus rubra$ 10 Y 10 N 10
Herb Stratum(Plot size: 5) 3^{-} = Total Cover 3^{-} = Total Cover1. <u>Pteridium aquilinum</u> 25YFACU2. <u>Corylus cornuta</u> 15YFACU3. <u>Mitchella repens</u> 10YFACU4. <u>Quercus rubra</u> 10NFACU5. <u>Acer rubrum</u> 10NFAC6. <u>Trientalis borealis</u> 10NFAC7. <u>Maianthemum canadense</u> 5NFACU8
Herb Stratum (Plot size: 5) 5) 1. <u>Pteridium aquilinum</u> 25 Y FACU 2. <u>Corylus cornuta</u> 15 Y FACU 3. <u>Mitchella repens</u> 10 Y FACU 4. <u>Quercus rubra</u> 10 Y FACU 5. <u>Acer rubrum</u> 10 N FACU 6. <u>Trientalis borealis</u> 10 N FACU 7. <u>Maianthemum canadense</u> 5 N FACU 8.
1. <u>Pteridium aquilinum</u> 25 Y FACU data in Remarks or on a separate sheet) 2. <u>Corylus cornuta</u> 15 Y FACU Problematic Hydrophytic Vegetation ¹ (Explain) 3. <u>Mitchella repens</u> 10 Y FACU Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 4. <u>Quercus rubra</u> 10 N FACU Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 5. <u>Acer rubrum</u> 10 N FAC 6. <u>Trientalis borealis</u> 10 N FACU 7. <u>Maianthemum canadense</u> 5 N FACU 8. Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
2. Corylus cornuta 15 Y FACU Problematic Hydrophytic Vegetation ¹ (Explain) 3. Mitchella repens 10 Y FACU Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 4. Quercus rubra 10 N FACU Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 5. Acer rubrum 10 N FAC 6. Trientalis borealis 10 N FAC 7. Maianthemum canadense 5 N FACU 8. Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
3. <u>Mitchella repens</u> 10 Y FACU 4. <u>Quercus rubra</u> 10 N FACU 5. <u>Acer rubrum</u> 10 N FAC 6. <u>Trientalis borealis</u> 10 N FAC 7. <u>Maianthemum canadense</u> 5 N FACU 8. Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
4. Quercus rubra 10 N FACU 5. Acer rubrum 10 N FAC 6. Trientalis borealis 10 N FAC 7. Maianthemum canadense 5 N FACU 8. Sanling(shrub – Woody plants less than 3 in DBH
5. Acer rubrum 10 N FAC 6. Trientalis borealis 10 N FAC 7. Maianthemum canadense 5 N FACU 8. Sanling(shruh – Woody plants less than 3 in DBH
6. <u>Trientalis borealis</u> 10 N FAC 7. <u>Maianthemum canadense</u> 5 N FACU 8. Sapling/shrub – Woody plants less than 3 in DBH
7. <u>Maianthemum canadense</u> <u>5</u> <u>N</u> <u>FACU</u> Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8 Sanling/shrub - Woody plants less than 3 in DBH
and greater than or equal to 3.28 ft (1 m) tall.
10 Horb All horbaccours (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
PE T the height.
Woody Vine Stratum (Plot size: 30)
1
2
3 Hydrophytic
4 Vegetation Present? Yes No ✓
= Total Cover
Remarks: (Include photo numbers here or on a separate sheet.)
Cover is not 100% due to leaf litter.

SOIL

Profile Desc	ription: (D	Describe	to the dep	th needed to docum	nent the i	indicator	or confirm	n the absence of inc	dicators.)	
Depth		Matrix		Redox	K Feature	<u>s</u> 1	. 2			
(inches)		moist)		Color (moist)		Type'	Loc		Remarks	
<u> </u>	<u>7.51K</u>	<u>3/1</u>	100			·				
8-16	<u>51R</u>	5/2	100							
16-20	5YR	4/6	100		0	·		SIL		
			·			·		·		
			·							
						·				
						·				
·			·			·				
			·			·		·		
1										
Hype: C=Co	oncentration	n, D=Dep	letion, RM=	Reduced Matrix, MS	;=Masked	Sand Gra	ains.	Indicators for P	<u>=Pore Lining, M=Ma</u> Problematic Hvdric	Soils ³ :
Histosol	(A1)			Polyvalue Below	v Surface	(S8) (LRF	RR,	2 cm Muck ((A10) (LRR K, L, M I	LRA 149B)
Histic Ep	bipedon (A2	2)		MLRA 149B)	(00) (1			Coast Prairie	e Redox (A16) (LRF	ξ K, L, R)
Hydroge	stic (A3) en Sulfide (A	\ 4)		Loamy Mucky N	ce (S9) (L 1ineral (F	_RR R, MI 1) (LRR K	LRA 149B _. , L)	5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K. L)		
Stratified	Layers (A	5)		Loamy Gleyed N	Matrix (F2	2)	, ,	Polyvalue Below Surface (S8) (LRR K, L)		
Depleted	d Below Da ark Surface	rk Surface	e (A11)	Depleted Matrix Redox Dark Sur	(F3) face (F6)			Thin Dark Surface (S9) (LRR K, L)		
Sandy M	lucky Miner	ral (S1)		Depleted Dark S	Surface (F	7)		Piedmont Floodplain Soils (F12) (MLRA 149B)		
Sandy G	Bleyed Matr	ix (S4)		Redox Depressi	ons (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy R	Sandy Redox (S5) Stripped Matrix (S6)		Red Parent Material (F21) Very Shallow Dark Surface (TE12)							
Dark Su	rface (S7) (, LRR R, N	ILRA 1498	3)				Other (Expla	ain in Remarks)	,
³ Indicators of	f hydrophyti	ic vegetat	ion and we	tland hydrology mus	t he nres(ent unless	s disturbed	l or problematic		
Restrictive I	Layer (if ob	served):								
Type:										
Depth (ind	ches):							Hydric Soil Pres	ent? Yes	No <u> </u>
Remarks:			ith no o							
Three dis	sunctia	yers w			Χ.					



wbad1002f_u_N



wbad1002f_u_S

Project/Site: Line 5 Relocation Project	City/County: Bayfield	Sampling Date: <u>2020-06-12</u>				
Applicant/Owner: Enbridge	St	ate: Wisconsin Sampling Point: wbad1003e_w				
Investigator(s): KDF/AGG	Section, Township, Range: SEC	05 T047N R005W				
Landform (hillslope, terrace, etc.): <u>Side Slope</u>	Local relief (concave, convex, none):	Concave Slope (%): <u>3-7%</u>				
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.57</u>	75798 Long: -91.02	29043 Datum: WGS84				
Soil Map Unit Name: Kellogg-Allendale-Ashwabay c	omplex, 6 to 15 percent slopes	NWI classification:				
Are climatic / hydrologic conditions on the site typical for this tim	ne of year? Yes 🖌 No (If no	o, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology signi	ficantly disturbed? Are "Normal Circ	cumstances" present? Yes 🖌 No				
Are Vegetation, Soil, or Hydrology nature	rally problematic? (If needed, expla	in 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 <u> </u>				
Wetland Hydrology Present? Yes <u>v</u> No	If yes, optional Wetland Site) ID:				
Remarks: (Explain alternative procedures here or in a separate report.)						
	ectly beneath an overhead t					

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 S	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>v</u> No Depth (inches): <u>1</u>	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No 🖌 Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes <u>v</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	ctions), if available:
Remarks:	
The hydrologic regime is seasonally saturated. The feature	e is located on a concave side slope within
a utility corrider and exhibite recharge and week to medere	to discharge hydrology. Shallow surface

a utility corridor and exhibits recharge and weak to moderate discharge hydrology. Shallow surface water is present within a small pocket of the wetland.

Sampling Point: <u>wbad1003e_w</u>

Trac Stratum (Dist size) 20	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Thee Stratum</u> (Plot size: <u>50</u>)	<u>% Cover</u>	<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: <u>3</u> (B)
4	<u></u>		. <u> </u>	Percent of Dominant Species
5				That are 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>31</u> x 2 = <u>62</u>
1				FAC species <u>14</u> x 3 = <u>42</u>
2.				FACU species x 4 =
3	- <u> </u>			UPL species x 5 =
۵ ۸				Column Totals: <u>90</u> (A) <u>149</u> (B)
5	·			Prevalence Index = B/A = <u>1.6555555555555555555555555555555555555</u>
6				Hydrophytic Vegetation Indicators:
7				 1 - Rapid Test for Hydrophytic Vegetation
/·		Tatal Oa		\sim 2 - Dominance Test is >50%
			ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:)	~-			4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Onoclea sensibilis</u>	25	<u> </u>	FACW	data in Remarks or on a separate sheet)
2. <u>Carex crinita</u>	20	<u> </u>	OBL	Problematic Hydrophytic Vegetation' (Explain)
3. <u>Carex stipata</u>	15	<u> </u>	OBL	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Calamagrostis canadensis</u>	5	N	OBL	be present, unless disturbed or problematic.
5. <u>Rubus idaeus</u>	5	N	FAC	Definitions of Vegetation Strata:
6. <u>Osmunda claytoniana</u>	5	N	FAC	
7. <u>Scirpus cyperinus</u>	5	N	OBL	at breast height (DBH), regardless of height.
8. <u>Equisetum arvense</u>	2	N	FAC	Sapling/chrub - Woody plants less than 3 in DBH
9. <u>Alnus incana</u>	2	N	FACW	and greater than or equal to 3.28 ft (1 m) tall.
10. <i>Impatiens capensis</i>	2	N	<u>FACW</u>	Herb – All herbaceous (non-woody) plants, regardless
11. Acer rubrum	2	N	FAC	of size, and woody plants less than 3.28 ft tall.
12. <u>Solidago gigantea</u>	2	N	FACW	Woody vines – All woody vines greater than 3.28 ft in
	90	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1				
2				
2.				
			<u> </u>	Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
	<u> </u>	= Total Co	ver	
The vegetation is representative of a free	esh (we	t) mead	ow dom	inated by sedge species and blueioint

The vegetation is representative of a fresh (wet) meadow dominated by sedge species and bluejoint. Sensitive fern is dominant within the sample plot but becomes less prevalent within the overall wetland.

Denth	Matrix	uopui i	Red/	ox Feature	S				
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks	
	·								
	·						<u> </u>		
	· · _								
	·								
1 Type: C=C		ion RM=Re	duced Matrix M		Sand Gr	aine	² Location:	PI = Pore Lining M=Matrix	
Hydric Soil	Indicators:					airi5.	Indicators f	or Problematic Hydric Soils ³	
Histoso	μ (Δ1)		Polyvalue Belo	w Surface	(S8) (I RE	R	2 cm Mi		
Histic F	ninedon (A2)		MIRA 149P		(50) (EN	х іх ,	Coast P	$\frac{1}{100} \left(\frac{1}{100} \left(\frac{1}{100} \left(\frac{1}{100} \right) \left(\frac{1}{100} \left(\frac{1}{100} \right) \left(\frac{1}{100} \right) \right) \left(\frac{1}{100} \left(\frac{1}{100} \right) \left(\frac{1}{100$	
Black H	listic (A3)		Thin Dark Surf	, ace (S9) (I	RR R. MI	RA 149B)	5 cm Mi	ucky Peat or Peat (S3) (LRR K, L, R)	
Hvdrog	en Sulfide (A4)		Loamv Muckv	Mineral (F	1) (LRR K	.L)	Dark Su	Inface (S7) (LRR K. L)	
Stratifie	ed Lavers (A5)		Loamy Gleved	Matrix (F2	:)	, _,	Polyvalu	ue Below Surface (S8) (LRR K, L)	
Deplete	ed Below Dark Surface (A11)	Depleted Matri	x (F3)	,		Thin Da	rk Surface (S9) (LRR K, L)	
Thick D	ark Surface (A12)	,	Redox Dark Su	urface (F6)			Iron-Ma	nganese Masses (F12) (LRR K, L, R)	
Sandy	Mucky Mineral (S1)		Depleted Dark	Surface (F	7)		Piedmo	nt Floodplain Soils (F19) (MLRA 149B)	
Sandy	Gleyed Matrix (S4)		Redox Depres	sions (F8)			Mesic S	podic (TA6) (MLRA 144A, 145, 149B)	
Sandy	Redox (S5)						Red Pa	rent Material (F21)	
Strippe	d Matrix (S6)						Very Shallow Dark Surface (TF12)		
Dark S	urface (S7) (LRR R, ML	RA 149B)					🖌 Other (E	Explain in Remarks)	
³ Indicators of	of hydrophytic vegetation	n and wetlar	nd hydrology mu	st be prese	ent, unless	s disturbed	or problematic.		
Restrictive	Layer (if observed):								
Туре:			_						
Depth (ir	iches).						Hydric Soil F	Present? Yes <u><</u> No	
Doparke:			_				-		
The soil	s were not samr	مامط طبيم	to the loca	ation wi	thin an	avistin	a utility cou	rridor. The soils are	
	s were not samp								
assume	a to be hydric ba	ased on	nyaropnyu	c vegei	alion a	and well	and nydro	iogy.	



wbad1003e_w_N



wbad1003e_w_S

Project/Site: Line 5 Relocation Project	City/County: Bayfield	Sampling Date: 2020-06-22
Applicant/Owner: <u>Enbridge</u>		State: Wisconsin Sampling Point: wbad1003f_w
Investigator(s): DMP/AGG	Section, Township, Rang	ge: sec 05 T047N R005W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, conve	ex, none): Concave Slope (%): 0-2%
Subregion (I BB or MI BA). Northcentral Forests		-91 028963 Datum WGS84
Soil Map Unit Name: Kelloog-Allendale-Ashwabay	complex. 6 to 15 percent	Slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this t	ime of year? Yes 🖌 No	(If no, explain in Remarks.)
Are Vegetation Soil or Hydrology sig	inificantly disturbed? Are "N	lormal Circumstances" present? Yes 🖌 No
Are Vegetation, our hydrology sig	turally problematic?	
Are vegetation, soit, or Hydrology ha	urany problematic? (If nee	ded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map s	howing sampling point lo	cations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🗸 No	Is the Sampled A	Area
Hydric Soil Present? Yes V No	within a Wetland	d? Yes∕_ No
Wetland Hydrology Present? Yes <u>·</u> No	If yes, optional W	etland Site ID:
layer is dominated by hydrophytic vegeta	ation.	
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all the	at apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water	-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquat	ic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl E	Deposits (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) Prese	nce of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recer	it Iron Reduction in Tilled Soils (Ce	6) Geomorphic Position (D2)
Iron Deposits (B5)	luck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other	(Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	I	FAC-Neutral Test (D5)
Field Observations:		
Surrace Water Present? Yes No Dept	n (inches):	

Saturation Present? (includes capillary fringe)

Water Table Present?

Yes <u>v</u> No Depth (inches): <u>8</u> Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Yes <u>v</u> No ____ Depth (inches): <u>10</u>

Remarks:

The hydrologic regime is seasonally saturated. The water table was observed 10 inches below the soil surface.

Wetland Hydrology Present? Yes ____

No

Sampling Point: wbad1003f_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 Acer saccharum	<u>30</u>	V	FACU	Number of Dominant Species That Are OBL EACIVL or EAC: 2 (A)
2			17100	
3.				Total Number of Dominant Species Across All Strata: 3 (B)
4.	_			Percent of Dominant Species
5.				That Are OBL, FACW, or FAC: <u>67</u> (A/B)
6.				
7.				Total % Cover of: Multiply by:
	30	= Total Cov	ver	$\begin{array}{c} \hline \hline \\ $
Sapling/Shrub Stratum (Plot size: 15)			-	FACW species $5 \times 2 = 10$
1 Abies balsamea	5	Y	FAC	FAC species <u>82</u> x 3 = <u>246</u>
2		·		FACU species <u>30</u> x 4 = <u>120</u>
3				UPL species x 5 =
а Л				Column Totals: <u>117</u> (A) <u>376</u> (B)
T				Prevalence Index = B/A = <u>3.213675213675214</u>
				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
1	- <u> </u>	- Tatal Car		\sim 2 - Dominance Test is >50%
Hert Otertury (District) E		= Total Cov	rer	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>5</u>)	75	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Osmunda ciaytoniana</u>	 	<u> </u>		data in Remarks or on a separate sneet)
2. <u>Carex projecta</u>	<u> </u>			
3. <u>Carex cf radiata</u>	2	<u> </u>	FAC	¹ Indicators of hydric soil and wetland hydrology must
4		·		be present, unless disturbed or problematic.
5		·		Definitions of Vegetation Strata:
6		·		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7		·		at breast height (DBH), regardless of height.
8		· <u> </u>		Sapling/shrub – Woody plants less than 3 in. DBH
9		·		and greater than or equal to 3.28 ft (1 m) tall.
10		·		Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.26 it tail.
12				Woody vines – All woody vines greater than 3.28 ft in height
	82	= Total Cov	ver	
Woody Vine Stratum (Plot size: <u>30</u>)				
1		·		
2		·		
3				Hydrophytic
4				vegetation Present? Yes ✔ No
	0	= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

The plot vegetation is representative of the wetland. The canopy is dominated by sugar maple. Balsam fir is sparse within the shrub layer, and the herbaceous layer is dominated by interrupted fern. Awl-fruited sedge, fowl manna grass, and possibly eastern star sedge were observed within other areas of the wetland.

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth		Matrix			Redo	x Feature	s			
(inches)	Color	(moist)	%	<u>Color (</u> r	noist)	%	Type'	Loc ²	Texture	Remarks
0-4	5YR	2.5/2	100			0			<u> S </u>	
4-12	5YR	4/2	98	<u>2.5YR</u>	4/6	2	С	M	S	
12-20	5YR	4/3	100			0			S	
		<u>.</u>								
							·			
							·			
						·	·			
							·		·	·
¹ Type: C=Co	oncentratio	on, D=Depl	etion, RN	Reduced N	/latrix, MS	S=Masked	d Sand Gra	ains.	² Location:	: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators	:							Indicators	for Problematic Hydric Soils ³ :
Histosol	(A1)	-		Polyva	lue Belov	v Surface	(S8) (LRF	RR,	2 cm N	1uck (A10) (LRR K, L, MLRA 149B)
Histic Ep	olpedon (A	2)		MLI Thin D	RA 149B)	00 (50) (DA 1400	Coast I	Prairie Redox (A16) (LRR K, L, R)
Hvdroge	n Sulfide ((A4)			Mucky M	lineral (F	1) (LRR K	LKA 1490) . L)	Dark S	urface (S7) (LRR K. L)
Stratified	Layers (A	A5)		Loamy	Gleved	Matrix (F2	<u>')</u>	, _/	Polyval	lue Below Surface (S8) (LRR K, L)
- Depleted	Below Da	ark Surface	e (A11)	Deplet	ed Matrix	(F3)			Thin Da	ark Surface (S9) (LRR K, L)
Thick Da	irk Surface	e (A12)		Redox	Dark Su	face (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)							Piedmo	ont Floodplain Soils (F19) (MLRA 149B)		
Sandy Gleyed Matrix (S4) Redox Depressions (F8)							Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
Sandy R	edox (S5)								Red Pa	arent Material (F21)
Stripped	Matrix (Se	6)							Very Sl	hallow Dark Surface (TF12)
Dark Sur	face (S7)	(LRR R, M	ILRA 149	B)					Other (Explain in Remarks)
³ Indicators of	hydrophy	tic vegetati	ion and w	etland hydro	logy mus	t be pres	ent, unless	s disturbed	or problematic	
Restrictive L	ayer (if o	bserved):		-		-				
Туре:										
Depth (inc	hes):								Hydric Soil	Present? Yes <u><</u> No

Remarks:

The soil profile consists of three sandy layers. The first layer is a dark sand. The second is a depleted sand with redox concentrations, and the third layer is a reddish brown sand. Two hydric indicators were observed.



wbad1003f_w_E



wbad1003f_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/AGG		
File #:	Date of visit(s):		
wbad1003	2020-06-12		
Location:	Ecological Landsca	ape:	
PLSS: <u>sec 05 T047N R005W</u>	Superior Coastal Plain		
Lat: <u>46.575783</u> Long: <u>-91.029048</u>	Watershed: LS08, Fish Creek		
County: <u>Bayfield</u> Town/City/Village: <u>Eileen town</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Kellogg-Allendale-Ashwabay complex, 6 to 15 percent slopes,	Wetland Type(s):		
Cublake-Croswell-Ashwabay complex, 0 to 6 percent slopes	PFO/PEM - Hardwood Swamp/Fresh (wet) meadow		
Field Verified:		1	
The soil series was not verified.	Wetland Size: 0.0468	Wetland Area Impacted 0.0468	
	Vegetation:		
	Plant Community E	Description(s):	
Hydrology:	The vegetation is representative of a fresh		
concave side slope within a utility corridor and into the nearby forest and	(wet) meadow dominated by sedge species and bluejoint.		
exhibits recharge and weak to moderate discharge hydrology. Shallow surface water is present within a small pocket 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	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 <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	N	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	N	N	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present > 45 days
10	N	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			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
SD	IN	IN	Shoreline Protection
1	NI	N	Along shoreline of a stream lake nond or open water area (>1 acre), if no, not applicable
	IN	IN	Potential for presion due to wind fotch, waves, heavy heat traffic, presive soils, fluctuating
2	Ν	N	water levels or high flows - if no, not applicable
3	N	N	Densely rooted emergent or woody vegetation
ST	IN		Storm and Floodwater Storage
1	V	V	Basin wetland constricted outlet has through-flow or is adjacent to a stream
2		V V	Water flow through wetland is NOT channelized
3	I V	I V	Dense persistent vegetation
	T N	I N	Evidence of flashy hydrology
5			Point or non point source inflow
6	IN N		Impervious surfaces cover >10% of land surface within the watershed
7	IN N	IN N	Within a watershed with <10% wetland
/ Q	IN N	IN N	Potential to hold $>10\%$ of the runoff from contributing area from a 2 year 24 hour storm event.
WO	IN	IN	Water Quality Protection
1	NI	NI	Provides substantial storage of storm and floodwater based on previous section
2			Basin wetland or constricted outlet
2	I V	ř V	Water flew through wetland is NOT channelized
3	T N	T NI	Vogetated wetland associated with a lake or stream
-			Dense, persistent vegetation
6	T N	T NI	Signs of excess putrients, such as algae blooms, beauty macrophyte growth
7	IN NI		Stermwater or surface water from agricultural land is major hydrology source
0	IN NI	IN N	Discharge to surface water nom agricultural land is major hydrology source
0	IN N		Discridige to suitable water Natural land cover in 100m buffer area < 50%
9	N.	N N	Groundwater Processes
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	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

WH-10, FA-2: There is shallow standing water present within a pocket of the feature. ST-3, WQ-5: There is near continuous ground cover throughout the feature. GW-2: The wetland appears to weakly discharge groundwater.

> 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	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)
Acer saccharum*			PEM	Patchy
Calamagrostis canadensis*			PEM	Patchy
Abies balsamea			PEM	Rare
Carex crinita*			PEM	Rare
Carex stipata			PEM	Rare
Onoclea sensibilis*			PEM	Rare
Scirpus cyperinus			PEM	Rare
Osmunda claytoniana			PEM	Rare
Acer rubrum			PEM	Barren
Alnus incana			PEM	Barren
Carex projecta			PEM	Barren
Equisetum arvense			PEM	Barren
Impatiens capensis			PEM	Barren
Rubus idaeus			PEM	Barren
Carex cf. radiata			PEM	Barren
Carex cf. radiata			PEM	Barren
Fragaria virginiana			PEM	Barren
Gaultheria procumbens			PEM	Barren
Hieracium aurantiacum			PEM	Barren
Juncus effusus			PEM	Barren
Lycopus americanus			PEM	Barren
Potentilla simplex			PEM	Barren
Pteridium aquilinum			PEM	Barren
Ranunculus acris			PEM	Barren
Scirpus microcarpus			PEM	Barren
Solidago gigantea			PEM	Barren

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

The floristic integrity is moderate due to relative native diversity within the feature, but invasive species are present throughout due to disturbance factors.

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The feature is located within a maintained above-ground utility corridor that shows signs of disturbance. Abundant invasive species are present within the surrounding area, with less coverage within the wetland itself. Outside of the wetland, there is a small mowed trail directly beneath the utility lines.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	There is moderate overall diversity, but the feature is disturbed due to land use for a utility corridor. Invasive species are present within and surrounding the feature.
Human Use Values	The feature is located within a utility corridor and the nearby forest and is not visible to the public.
Wildlife Habitat	Minimal habitat is provided by the feature. Sparse shrubs and trees are present that may provide habitat for avians. Shallow standing water is present within a pocket of the feature but is unlikely to support wildlife habitat for frogs and toads.
Fish and Aquatic Life Habitat	Shallow standing water is present within a pocket of the wetland, but it is unlikely to provide habitat for aquatic life and does not support fish.
Shoreline Protection	N/A
Flood and Stormwater Storage	There is dense vegetation cover throughout the feature, but there is limited potential for stormwater storage due to its landscape position and small size.
Water Quality Protection	There is dense vegetation cover throughout the feature that could provide some filtration of stormwater runoff.
Groundwater Processes	The feature exhibits recharge and 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.	Medium
Cumulative Impacts	Operational vegetation maintenance.	Low
Spatial/Habitat Integrity	Temporary construction impacts.	Medium
Rare Plant/Animal Communities/ Natural Areas	N/A	N/A

State: Wisconsin Sampling Point: wbad1003f_u
on, Township, Range: <u>sec 05 T047N R005W</u>
ef (concave, convex, none): <u>None</u> Slope (%): <u>0-2%</u>
Long: <u>-91.029045</u> Datum: <u>WGS84</u>
to 15 percent slopes NWI classification:
es 🗹 No (If no, explain in Remarks.)
bed? Are "Normal Circumstances" present? Yes <u>v</u> No
tic? (If needed, explain any answers in Remarks.)
pling point locations, transects, important features, etc.
Is the Sampled Area
within a Wetland? Yes No 🖌
If yes, optional Wetland Site ID:
n the landscape. No wetland indicators were

HYDROLOGY

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

Sampling Point: wbad1003f_u

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	Species?	Status	Dominance Test worksheet:
1. <u>Populus grandidentata</u>	50	Y	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2. <u>Abies balsamea</u>	2	N	FAC	Total Number of Dominant
3.				Species Across All Strata:4 (B)
4				Porcent of Dominant Species
5			·	That Are OBL, FACW, or FAC: <u>50</u> (A/B)
5				
0	_		·	Prevalence Index worksheet:
/		·	·	Total % Cover of: Multiply by:
	52	= Total Co	ver	OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species $0 \times 2 = 0$
1. <u>Abies balsamea</u>	5	Y	FAC	FAC species $12 \times 3 = 36$
2	_			FACU species 59 $x 4 = 236$
3				$\begin{array}{c} \text{OPL species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Column Totals} \overline{71} (A) 272 (B) \end{array}$
4.				Column Totals: $\underline{71}$ (A) $\underline{212}$ (B)
5.				Prevalence Index = B/A = <u>3.8309859154929575</u>
6				Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
/·			·	2 - Dominance Test is >50%
_		= I otal Co	ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Trientalis borealis</u>	5	<u> </u>	FAC	data in Remarks or on a separate sheet)
2. <u>Pteridium aquilinum</u>	5	Y	<u>FACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Maianthemum canadense</u>	2	N	FACU	1
4. <u>Mitchella repens</u>	2	N	FACU	be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9		·		and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11		·	·	Weedy vince All weedy vince greater than 2.29 ft in
12			·	height.
	14	= Total Co	ver	
Woody Vine Stratum (Plot size: 30)				
1			·	
2				
3				Hydrophytic
4		·		Vegetation Prospet2 Vos No ví
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			1
The plot vegetation is generally represe	entative	of the u	ipland. E	Big-tooth aspen dominates the canopy

at the sample plot, whereas sugar maple and red oak dominate other areas. The herbaceous and shrub layers are sparse.

SOIL

Profile Dese	cription: (Describe	to the depth	needed to document the indicator or confirm	the absence of in	ndicators.)
Depth (inches)	Matrix Color (moist)		<u>Redox Features</u> Color (moist) % Type ¹ Loc ²	Texture	Remarks
0-3	5YR 3/2	100	0	S	
3_7	5YR 3/3	100		<u> </u>	
<u> </u>	5VP 1/6	100		<u></u>	
	<u> 31N 4/0</u>			<u> </u>	
					
1 Type: C=C	oncentration D=De	oletion RM=6	Peduced Matrix MS=Masked Sand Grains	² Location: PL	=Pore Lining M=Matrix
Hydric Soil	Indicators:			Indicators for I	Problematic Hydric Soils ³ :
Histosol	l (A1)	_	Polyvalue Below Surface (S8) (LRR R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
Histic E Black H	pipedon (A2)		MLRA 149B) Thin Dark Surface (S9) (LRR R MLRA 149B)	Coast Prair	ie Redox (A16) (LRR K, L, R)
Hydroge	en Sulfide (A4)	_	Loamy Mucky Mineral (F1) (LRR K, L)	Dark Surfac	ce (S7) (LRR K, L)
Stratifie	d Layers (A5)		Loamy Gleyed Matrix (F2)	Polyvalue E	Below Surface (S8) (LRR K, L)
Deplete Thick Da	d Below Dark Surfac ark Surface (A12)	ce (A11)	_ Depleted Matrix (F3) Redox Dark Surface (F6)	I hin Dark S	inese Masses (F12) (LRR K, L)
Sandy M	Mucky Mineral (S1)	_	Depleted Dark Surface (F7)	Piedmont F	loodplain Soils (F19) (MLRA 149B)
Sandy C	Gleyed Matrix (S4)	-	_ Redox Depressions (F8)	Mesic Spoo	lic (TA6) (MLRA 144A, 145, 149B)
Sandy F	d Matrix (S6)			Verv Shallo	w Dark Surface (TF12)
Dark Su	urface (S7) (LRR R,	MLRA 149B)		Other (Expl	ain in Remarks)
³ Indicators o	of hydrophytic ycast	tion and woth	and hydrology must be present, unloss disturbed	or problematic	
Restrictive	Layer (if observed)		and hydrology must be present, unless disturbed t	or problematic.	
Туре:					
Depth (in	iches):			Hydric Soil Pres	sent? Yes <u>No </u>
Remarks:					
The soil	profile consis	ts of two	layers of sand over a reddish bro	wn fine sand	1.



wbad1003f_u_N



wbad1003f_u_W

Project/Site: Line 5 Relocation Project	City/County: <u>Bayfield</u>	Sampling	Date: <u>2020-06-12</u>
Applicant/Owner: Enbridge		State: Wisconsin Samplin	ng Point: <u>wbad1004e_</u> w
Investigator(s): KDF/AGG	Section, Township, Range: Section	ec 05 T047N R005V	V
Landform (hillslope, terrace, etc.): Depression Lc	cal relief (concave, convex, non	e): <u>Concave</u>	_ Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.57476	1 Long: <u>-91</u>	.032590	Datum: <u>WGS84</u>
Soil Map Unit Name: Kellogg-Allendale-Ashwabay compl	<u>ex, 6 to 15 percent slop</u>	es 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? Y	′es No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, e	xplain any answers in Remar	rks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locatio	ns, transects, importa	ant 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 proce The feature is located wi	dures here or in a separate report.) thin a disturbed roadside o	ditch.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
✓ Surface Water (A1) ✓ Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	pils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>v</u> No Depth (inches): <u>1</u>	
Water Table Present? Yes <u>No</u> Depth (inches):	
Saturation Present? Yes <u>Ves</u> Depth (inches):	Wetland Hydrology Present? Yes <u> v</u> No
(Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions) if available:
Describe Recorded Data (stream gauge, monitoring weil, aenai photos, previous inspec	
Remarks:	· · · _ · · · · ·
The hydrologic regime is seasonally saturated with recharg	e hydrology. There is a culvert on the
east side that carries water into the feature. Standing water	r is present within the lowest part of the
landscape nearest the culvert.	

Sampling Point: <u>wbad1004e_w</u>

Tree Stratum (Distring) 20	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u>)	<u>% Cover</u>	<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. 4 (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:
	0	= Total Cov	/er	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: <u>15</u>)				FACW species <u>60</u> $x = 120$
1. <u>Acer rubrum</u>	5	<u> </u>	FAC	FAC species $8 \times 3 = 24$
2. <u>Alnus incana</u>	5	Y	FACW	FACU species 2 $x 4 = 8$
3. <u>Quercus rubra</u>	2	N	<u>FACU</u>	$\begin{array}{c} \text{OPL species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Column Totals:} \underline{90} (A) \underline{172} (B) \end{array}$
4	<u> </u>			
5				Prevalence Index = B/A = <u>1.91111111111111111</u>
6				Hydrophytic Vegetation Indicators:
7.	·			1 - Rapid Test for Hydrophytic Vegetation
	12	= Total Cov	/er	∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				$\underline{}$ 3 - Prevalence Index is $\leq 3.0^1$
1. Opoclos sonsibilis	40	V		4 - Morphological Adaptations ¹ (Provide supporting
	20	 		Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Juncus enusus</u>		 		
3. <u>Salix petiolaris</u>	<u> 10 </u>	<u> </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Phalaris arundinacea</u>		<u> </u>	FACW	be present, unless disturbed or problematic.
5. <u>Equisetum arvense</u>	2	<u> </u>	FAC	Definitions of Vegetation Strata:
6. <u>Equisetum hyemale</u>	1	<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
	78	= 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.)			
The vegetation is representative of a free	əsh (we	t) mead	ow dom	inated by sensitive fern. Speckled
alder is present along the margin of the	wetland	d, provid	ding sor	me shrub cover. Ground cover is
limited by leaf litter and inundation in th	e lowes	t part of	the fea	iture.

Profile Dese	cription: (Describe t	o the dept	h needed to docu	ment the i	indicator	or confirm	the absence of i	indicators.)	
Depth	Matrix		Redo	ox Feature	<u>s</u> 1				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
					·				
		<u> </u>							
					·				
					·				
					·				
					·			-	
¹ Type: C=C	oncentration, D=Depl	etion, RM=I	Reduced Matrix, M	S=Masked	d Sand Gra	ains.	² Location: P	L=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:						Indicators for	Problematic Hydric Soils ³ :	
Histosol	(A1)		Polyvalue Belo	w Surface	(S8) (LRF	R 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, MI	LRA 149B)	5 cm Mucl	ky 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	x (F3)			Thin Dark	Surface (S9) (LRR K, L)	
Thick Da	ark Surface (A12)	. , _	Redox Dark Su	urface (F6)	1		Iron-Mang	anese Masses (F12) (LRR K, L, R)	
Sandy N	Aucky Mineral (S1)	_	Depleted Dark	Surface (F	-7)		Piedmont	Floodplain Soils (F19) (MLRA 149B)	
Sandy C	Gleyed Matrix (S4)		Redox Depress	sions (F8)			Mesic Spo	odic (TA6) (MLRA 144A, 145, 149B)	
Sandy F	Redox (S5)						Red Parer	nt Material (F21)	
Stripped	Matrix (S6)						Very Shall	low Dark Surface (TF12)	
Dark Su	Inface (S7) (LRR R, M	LRA 149B))				 Other (Explain in Remarks) 		
³ Indicators o	f hydrophytic vegetat	on and wet	land hydrology mu	st be prese	ent, unless	s disturbed	or problematic.		
Restrictive	Layer (if observed):								
Type:									
Depth (in	ches):						Hydric Soil Pre	esent? Yes 🖌 No	
Remarks:									
The soils	s were not sam	pled du	e to the loca	tion of	the we	etland w	ithin a road	side ditch. The soils are	
assume	to be hydric h	' ased o	n hydrophyti	c veget	tation a	and wet	land hydrolc	NUN	
accumet			in ny alophy a	o rogo				·9)·	



wbad1004e_w_E



wbad1004e_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/AGG			
File #:	Date of visit(s):			
wbad1004	2020-06-12			
Location:	Ecological Landscape:			
PLSS: sec 05 T047N R005W	Superior Coastal Plain			
Lat: <u>46.574761</u> Long: <u>-91.032618</u>	Watershed:			
	LS08, Fish Creek			
County: <u>Bayfield</u> Town/City/Village: Elleen town				
SITE DESCRIPTION	1			
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Kellogg-Allendale-Ashwabay complex, 6 to 15 percent slopes	Wetland Type(s):			
	PEM - Fresh (wet) meadow			
Field Verified:		-		
Series not verified.	Wetland Size:	Wetland Area Impacted		
	0.0183	0.0183		
	Vegetation:			
	Plant Community E	Description(s):		
Hydrology:	The vegetation is re	presentative of a fresh (wet) meadow		
The hydrologic regime is seasonally saturated with recharge hydrology.	dominated by sensitive fern. Shrubs are present along			
from a roadside ditch wetland to the east into the feature. Standing water	the margin of the wetland providing some minimal cover.			
is present within the lowest part of the landscape nearest the culvert.	Ground cover is limited by inundation at the lowest part of			
	the landscape and le	eaf litter.		

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	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	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	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 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	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	Y	Y	Water flow through wetland is NOT channelized
3	Ν	N	Dense, persistent vegetation
4	Ν	N	Evidence of flashy hydrology
5	Y	Y	Point or non-point source inflow
6	Ν	N	Impervious surfaces cover >10% of land surface within the watershed
7	Ν	N	Within a watershed with <10% wetland
8	Ν	Ν	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	Ν	Ν	Provides substantial storage of storm and floodwater based on previous section
2	Y	Y	Basin wetland or constricted outlet
3	Y	Y	Water flow through wetland is NOT channelized
4	Ν	N	Vegetated wetland associated with a lake or stream
5	Ν	N	Dense, persistent vegetation
6	Ν	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	N	Stormwater or surface water from agricultural land is major hydrology source
8	N	N	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

HU-3: The feature is located within a roadside ditch visible to the public from the roadway. WH-10, FA-2: Shallow standing water is present within the lowest part of the wetland. ST-2, WQ-3: Water flow from a culvert to the east is diffuse throughout the wetland nearest the culvert. ST-5: The feature receives runoff from the adjacent roadway.

> 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

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,
	invasive species	reduced native	assemblage of	represented
		species	native species	
NHI plant community	S4	S3	S2	S1-S2 (S2 high quality)
тапкінд				
Relative frequency of	Abundant 🖌	Common		Rare
plant community in				
watershed				
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover,
-				Abundance)
Onoclea sensibilis*			PEM	Interrupted
Alnus incana			PEM	Rare
Cornus sericea			PEM	Rare
Juncus effusus			PEM	Rare
Phalaris arundinacea			PEM	Rare
Quercus rubra			PEM	Barren
Salix cf. discolor			PEM	Barren
Salix petiolaris			PEM	Barren
Acer rubrum			PEM	Barren
Equisetum arvense			PEM	Barren
Equisetum hyemale			PEM	Barren

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

Floristic integrity overall is low to moderate. There is low overall diversity within the feature, and generally invasive species cover is low, though some of the ground cover is bare due to inundation ans leaf litter.

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	Х		Н	С	Drainage – tiles, ditches
					Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
Х	Х		M	С	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		M	С	Roads or railroad
	Х		M	UC	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	x		L	UC	Removal of herbaceous stratum – mowing,
					grading, earthworms, etc.
					Removal of thee of shrub strata – logging,
					Human traile unneved
					Human trails – unpaved
					Ruman trans – paveu
V	V		N.4		
Χ	X		IVI		Cover of non-native and/or invasive species
					Residential land use
					Dipan, commercial or industrial use
					Graver pil
					Recreational use (boating, ATVS, etc.)
					Excavation or soil grading
	1			1	

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The roadside ditch is impacted by the adjacent roadway and associated runoff stressors. Invasive species are present within and surrounding the feature but have a higher impact on the surrounding area than within the wetland. The surrounding area is impacted by an above-ground utility corridor to the north, with a gravel access road.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	There is low overall diversity wihin the feature. Invasive species are present, though some of the ground cover is bare due to inundation ans leaf litter.
Human Use Values	The feature is visible to the public from a roadway but does not provide human use value.
Wildlife Habitat	Shrub and herbaceous strata are represented, potentially providing habitat for avians. There is shallow standing water present within the feature that may provide habitat for frogs and toads.
Fish and Aquatic Life Habitat	Shallow standing water may provide habitat for aquatic invertebrates but not fish.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a roadside ditch that receives water from the surrounding area and a separate roadside ditch feature to the east, when water levels are high enough to flow through a partially-functioning culvert. The feature is limited in stormwater storage capacity by its small size.
Water Quality Protection	The wetland receives runoff from the adjacent road and may provide limited filtration, but high water flows through a culvert.
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.	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: Bayfiel	Id Sampling Date: 2020-06-12
Applicant/Owner: Enbridge		State: Wisconsin Sampling Point: wbad1004_u
Investigator(s): AGG/KDF	Section, Township, Rar	nge: <u>sec 05 T047N R005W</u>
Landform (hillslope, terrace, etc.): Side Slope	Local relief (concave, conv	vex, none): <u>Convex</u> Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): Morthcentral Forests Lat: 46	3.574859 Long	g: <u>-91.032601</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Kellogg-Allendale-Ashwaba	y complex, 6 to 15 percer	nt slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this	is time of year? Yes 🔽 No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologys	significantly disturbed? Are "	Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology n	naturally problematic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N	lo∕ Is the Sampled	Area
Hydric Soil Present? Yes N	lo within a Wetlan	nd? Yes No <u>/</u>
Wetland Hydrology Present? Yes N	Io If yes, optional V	Netland Site ID:
Remarks: (Explain alternative procedures here or in a sep The upland sample plot is located on a	^{parate report.)} side slope dominated b	by paper birch and red maple.

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: wbad1004_u

I. Acer rubrum 50 Y FAC 1. Acer rubrum 50 Y FAC 2. Betula papyrifera 25 Y FACU 3. Quercus rubra 10 N FACU 4. 10 N FACU 5. 10 N FACU 6.	(A) (B) (A/B) (A/B)
2. Betula papyrifera 25 Y FACU 3. Quercus rubra 10 N FACU 4. 10 N FACU 5. 9 Percent of Dominant Species 5. 9 Percent of Dominant Species 6. 9 9 7. 85 = Total Cover 85 = Total Cover 9 85 = Total Cover 9 9 9 9 9 9 9 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10	(A) (B) (A/B) <u>2v:</u>)) (A/B)
2. Details papyment 20 1 14. 10 N FACU Species Across All Strata: 5. 4.	(B) (A/B) <u>>y:</u> <u>></u> 50
4.	(A/B) (A/B)
4.	(A/B)
3.	<u>2y:</u>)) iO
6.	<u>2y:</u>))
Total % Cover of: Multiply Sapling/Shrub Stratum (Plot size: 15 1. . . 2. . . 3. . .	<u>by:</u>) 50
	<u>)</u>) 50
Sapling/Shrub Stratum(Plot size: 15)FACW species 0 x 2 = 11. $ -$ 2. $ -$ 3. $ -$	<u>50</u>
1. .	<u> </u>
2 \square	10
3.	<u>)</u>
Column Totals: 102 (A) 3	58 (B)
4	<u>/o</u> (-/
5 Prevalence Index = B/A = <u>3.509803921</u>	5686274
6 Hydrophytic Vegetation Indicators:	
7. 1 - Rapid Test for Hydrophytic Vegetat	on
0 = Total Cover 2 - Dominance Test is >50%	
Herb Stratum (Plot size: 5)	
1 Elymus repens	e supporting
2 Majanthomum canadonso 5 V EACL Problematic Hydrophytic Vegetation ¹	=xplain)
	Lypiani)
3. <u>Poa praternsis</u> <u>5</u> <u>Y</u> FACU Indicators of hydric soil and wetland hydro	ogy must
4. <u>Malanthemum racemosum</u> <u>2</u> <u>N</u> FACU be present, unless disturbed or problematic	-
5 Definitions of Vegetation Strata:	
6 Tree – Woody plants 3 in. (7.6 cm) or more	in diameter
7 at breast height (DBH), regardless of heigh	t.
8 Sapling/shrub – Woody plants less than 3	in. DBH
9 and greater than or equal to 3.28 ft (1 m) ta	ıll.
10 Herb – All herbaceous (non-woody) plants,	regardless
11 of size, and woody plants less than 3.28 ft	all.
12 Woody vines – All woody vines greater that	an 3.28 ft in
<u>17</u> = Total Cover	
Woody Vine Stratum (Plot size: 30)	
1	
2	
Vegetation	
Present? Yes <u>No v</u>	_
= Total Cover	
The sample plot is located within a mesic hardwood forest dominated by red maple and pap	er birch.

Profile Desc	cription: (Describe	to the depth	needed to docur	nent the i	ndicator	or confirm	the absence of indicate	ors.)	
Depth	Matrix		Redo	x Features	\$				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
	<u>7.5YR 4/1</u>	100		None			SIL		
3-20	<u>7.5YR 5/4</u>	100		None			SIL		
		<u> </u>					· ·		
		<u> </u>					· ·		
		<u> </u>					······		
							·		
				<u> </u>					
¹ Type: C=C	oncentration, D=Depl	etion, RM=R	educed Matrix, M	S=Masked	Sand Gra	ains.	² Location: PL=Pore	Lining, M=Matrix.	
Hydric Soil	Indicators:						Indicators for Proble	matic Hydric Soils [°] :	
Histosol	(A1)		Polyvalue Belov	w Surface	(S8) (LRF	RR,	2 cm Muck (A10)	(LRR K, L, MLRA 149B)	
Black Hi	(A2)		Thin Dark Surfa) ace (S9) (I		RA 149R)	5 cm Mucky Peat	or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A4)		Loamy Mucky N	Mineral (F1) (LRR K	, L)	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)		_ Redox Dark Su	rface (F6)	7)		Iron-Manganese I	Masses (F12) (LRR K, L, R)	
Sandy N	Aucky Mineral (ST)		_ Depleted Dark	Surface (F	7)		Pleamont Floodplain Solis (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A 145 149B)		
Sandy C	Redox (S5)						Red Parent Material (F21)		
Stripped	I Matrix (S6)						Very Shallow Dar	k Surface (TF12)	
Dark Su	rface (S7) (LRR R, N	ILRA 149B)					Other (Explain in	Remarks)	
2									
Indicators o	f hydrophytic vegetat	ion and wetla	nd hydrology mus	st be prese	ent, unless	s disturbed	or problematic.		
Restrictive	Layer (if observed):								
Type:			_				Ukudnia Cail Dragont?	Vac Na (
Depth (in	ches):		_				Hydric Soll Present?	resNo	
Remarks:	o opil indiantar	o oboon	ad						
INO NYON	c soil indicator	s observ	ea.						



wbad1004_u_N



wbad1004_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County:	Sampling D	ate: <u>2020-06-12</u>
Applicant/Owner: Enbridge		State: Wisconsin Sampling	Point: wbad1001e_w
Investigator(s): KDF/AGG	Section, Township, Range: S	ec 05 T047N R005W	,
Landform (hillslope terrace etc.): Depression	Local relief (concave, convex, nc	ne): Concave	Slope (%): 0-2%
Subragian (I BB or MI BA). Northcentral Forests Lat. 46 5747		1 0321/18 г	otum: WGS84
	<u>UUIII9</u> Nov. C to 15 norroent ala		
Soil Map Unit Name: <u>Kellogg-Allendale-Ashwabay com</u>	plex, 6 to 15 percent sio	Des NVVI 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 "Norma	I Circumstances" present? Ye	s 🖌 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed,	explain any answers in Remark	s.)
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point locati	ons, transects, importar	nt 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 remarks)	Is the Sampled Area within a Wetland? If yes, optional Wetlan port.)	Yes _ ✔ _ No d Site ID:	
The feature is located within a roadside ditch the feature, but coverage does not constitute	. Shrub cover is prese a shrub community.	ent within the northwe	estern part of
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (minimu	m of two required)
Primary Indicators (minimum of one is required; check all that appl	<u>y)</u>	Surface Soil Cracks (B6)	
_ Surface Water (A1) Water-Staine	ed Leaves (B9)	Drainage Patterns (B10)	
High Water Table (A2) Aquatic Faul	าล (B13)	Moss Trim Lines (B16)	
Saturation (A3) Marl Deposit	s (B15)	Dry-Season Water Table	(C2)
Water Marks (B1) Hydrogen Si	ulfide Odor (C1)	Crayfish Burrows (C8)	
Sediment Deposits (B2) Oxidized Rh	zospheres on Living Roots (C3)	Saturation Visible on Aeria	al Imagery (C9)
Drift Deposits (B3) Presence of	Reduced Iron (C4)	Stunted or Stressed Plant	ts (D1)
Algal Mat or Crust (B4) Recent Iron	Reduction in Tilled Soils (C6)	Geomorphic Position (D2))
Iron Deposits (B5) Thin Muck S	urface (C7)	Shallow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7) Other (Expla	in in Remarks)	Microtopographic Relief (I	D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present? Yes <u> Ves No</u> Depth (inch	es): <u>1</u>		
Water Table Present? Yes No Depth (inch	es):		
Saturation Present? Yes <u>No</u> Depth (inch (includes capillary fringe)	es): Wetland	Hydrology Present? Yes	⊻No
Describe Recorded Data (stream gauge, monitoring well, aerial ph	otos, previous inspections), if ava	ailable:	
Remarks:			
The feature is a roadside ditch with a culvert	to the west. The hydr	ologic regime is seas	onally
saturated with recharge hydrology. Standing feature receives water from an ephemeral st	water is present within ream to the north that	n portions of the featu ends at the wetland f	ure. The feature.

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wbad1001e_w</u>

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1/				Number of Dominant Species That Are OBL_EACW_or EAC ² (A)
2.				
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				Total % Cover of:
	0	= Total Cov	/er	$\begin{array}{c c} \hline \hline 10tai \% Cover 01. \\ \hline 00tai \% Cover 01. \\ \hline 00tai \% Cover 01. \\ \hline 10tai \% C$
Sapling/Shrub Stratum (Plot size: 15)				FACW species $72 \times 2 = 144$
1 Acor rubrum	0	N	EAC	FAC species $2 \times 3 = 6$
		<u> </u>		FACU species x 4 =
2. <u>Alfus incana</u>			FACW	UPL species x 5 =
3		. <u></u>		Column Totals: <u>99</u> (A) <u>175</u> (B)
45				Prevalence Index = B/A = <u>1.7676767676767677</u>
6				Hydrophytic Vegetation Indicators:
7				 1 - Rapid Test for Hydrophytic Vegetation
/·		- Total Ca		2 - Dominance Test is >50%
			/er	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>3</u>)	40	V		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	25	<u> </u>	FACW	
3. <u>Scirpus microcarpus</u>	10	<u> </u>	OBL	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Typha sp.</u>	10	<u> N </u>	OBL	be present, unless disturbed or problematic.
5. <u>Carex crinita</u>	5	<u> N </u>	OBL	Definitions of Vegetation Strata:
6. <u>Onoclea sensibilis</u>	5	<u> N </u>	<u>FACW</u>	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Symphyotrichum sp.</u>	5	<u> N </u>		at breast height (DBH), regardless of height.
8. <u>Solidago gigantea</u>	2	N	FACW	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Athyrium angustum</u>	2	<u>N</u>	FAC	and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	104	= 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 <u>v</u> No
Remarks: (Include photo numbers here or on a separate	sheet.)	Total Co		
The vegetation is representative of a from throughout.	esh (we	t) mead	ow dom	inated by graminoids and fern species

Color (moist)	<u>%</u>	Color (moist)		Type ¹		Texture	Rema	rks
	· ·							
	· ·							
	· ·							
	· ·							
					<u> </u>			
	· ·				·			
	. <u> </u>		<u>.</u>					
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	· ·		·					
exertise D-Den	lation DM-	Doduced Metrix M	- Maakad			² Leastian: DL	-Doro Lipipa M-	Motrix
dicators:	ielion, Rivi=	Reduced Matrix, Ma	5=IVIASKed	i Sanu Gr	airis.	Indicators for I	Pole Lining, M-	ric Soils ³
			o ((00) (I D				
41) 		Polyvalue Belov	w Surface	(S8) (LRI	κĸ,	2 cm Muck	(A10) (LRR K, L	, MLRA 149B)
bedon (A2)		MLRA 149B))			Coast Prair	ie Redox (A16) (LRR K, L, R)
ic (A3)		Thin Dark Surfa	ace (S9) (L	RR R, M	LRA 149B)	5 cm Mucky	y Peat or Peat (S	³) (LRR K, L, R)
Sulfide (A4)		Loamy Mucky N	Vineral (F	1) (LRR K	., L)	Dark Surfac	ce (S7) (LRR K, I	L)
Layers (A5)		Loamy Gleyed	Matrix (F2)		Polyvalue E	Below Surface (S	8) (LRR K, L)
Below Dark Surfac	e (A11)	Depleted Matrix	(F3)			Thin Dark S	Surface (S9) (LRI	R K, L)
k Surface (A12)		Redox Dark Su	rface (F6)			Iron-Manga	inese Masses (F	12) (LRR K, L, R)
icky Mineral (S1)		Depleted Dark \$	Surface (F	7)		Piedmont F	loodplain Soils (I	F19) (MLRA 149 E
eyed Matrix (S4)		Redox Depress	sions (F8)			Mesic Spoo	dic (TA6) (MLRA	144A, 145, 149B
dox (S5)						Red Parent	Material (F21)	
/latrix (S6)						Very Shallo	w Dark Surface	(TF12)
ace (S7) (LRR R, N	ILRA 149B	.)				Other (Expl	ain in Remarks)	
nydrophytic vegetal	tion and we	tland hydrology mus	st be prese	ent, unless	s disturbed of	or problematic.		
ayer (if observed):								
voc):						Hvdric Soil Pres	sent? Yes	✓ No
ies).								
were not san	npled du	le to the loca	tion of	the we	etland w	thin a roads	ide ditch. I	he soils are
to be hydric l	based o	n hydrophytic	c veget	ation a	and weth	and hydrolog	av.	
,		, , ,	U			, ,		
	icentration, D=Dep dicators: A1) Dedon (A2) ic (A3) Sulfide (A4) .ayers (A5) Below Dark Surfact < Surface (A12) cky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R, M hydrophytic vegetat nyer (if observed): mes): were not san to be hydric l	icentration, D=Depletion, RM= dicators: A1) bedon (A2) ic (A3) Sulfide (A4) .ayers (A5) Below Dark Surface (A11) < Surface (A12)	icentration, D=Depletion, RM=Reduced Matrix, Midicators: A1) Polyvalue Below bedon (A2) MLRA 149B ic (A3) Thin Dark Surface Sulfide (A4) Loamy Mucky N ayers (A5) Loamy Gleyed Below Dark Surface (A11) Depleted Matrix < Surface (A12)		iccentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Gr dicators: A1) Polyvalue Below Surface (S8) (LRI MLRA 149B) ic (A3) Thin Dark Surface (S9) (LRR R, MI Sulfide (A4) ayers (A5) Loamy Mucky Mineral (F1) (LRR K ayers (A5) Depleted Matrix (F2) Below Dark Surface (A11) Depleted Matrix (F3) < Surface (A12)	incentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. dicators: A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) ic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) .ayers (A5) Loamy Gleyed Matrix (F2) Below Dark Surface (A11) Depleted Matrix (F3) < Surface (A12)	centration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL dicators: Indicators for I A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck Pathons) bedon (A2) MLRA 149B) ic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Suffice (A4) Loamy Mucky Mineral (F1) (LRR K, L) ayers (A5) Loamy Gleyed Matrix (F2) ayers (A5) Redox Dark Surface (F6) sufface (A12) Redox Depressions (F8) sed Variar (S4) Redox Depressions (F8) datrix (S6)	centration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M= dicators: Indicators for Problematic Hyc All Polyvalue Below Surface (S8) (LRR R, MLRA 149B) 2 cm Muck (A10) (LRR K, L16) bedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L16) Suffide (A4) Loamy Mucky Mineral (F1) (LRR K, L17) Dark Surface (S7) (LRR K, L16) Suffide (A4) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S9) (LR C, K, L17) ayers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S9) (LR K, L17) Below Dark Surface (A12) Redox Dark Surface (F7) Piedmont Floodplain Soils (I vyed Matrix (S4) (Storface (S7) (LR R, MLRA 149B) Redox Depressions (F8) Mesic Spodic (TA6) (MLR A dox (S5) (Storface (S7) (LR R, MLRA 149B) vyer Shallow Dark Surface (F7) Piedmont Floodplain Soils (I vyed Matrix (S4) (S6) Redox Depressions (F8) Mesic Spodic (TA6) (MLR A dox (S5) (S7) (LR R, MLRA 149B) voltare (S7) (LR R, MLRA 149B) (S6) Very Shallow Dark Surface (S7) (LR R, MLRA 149B) voltare (S7) (LR R, MLRA 149B) (S6) Were not sampled due to the location of the wetland within a roadside ditch. T to be hydric based on hydrophytic vegetation and wetland hydrology.



wbad1001e_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/AGG		
File #:	Date of visit(s):		
wbad1001	2020-06-12		
Location:	Ecological Landsca	ape:	
PLSS: sec 05 T047N R005W	Superior Coastal Plain		
	Ouperior Obdotarr Idin		
Lat: <u>46.574763</u> Long: <u>-91.032148</u>	Watershed:		
	LS08, Fish Creek		
County: <u>Bayfield</u> Town/City/Village: Elleen town			
SITE DESCRIPTION	1		
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Kellogg-Allendale-Ashwabay complex, 6 to 15 percent slopes	Wetland Type(s):		
	PEM - Fresh (wet) meadow		
Field Verified:	, , , , , , , , , , , , , , , , , , ,	,	
The soil series was not verified.	Wetland Size:	Wetland Area Impacted	
	0.1040	0.1040	
	Vegetation:	·	
	Plant Community D	Description(s):	
Hydrology:	The vegetation is repres	entative of a fresh (wet) meadow dominated	
The feature is a roadside ditch with a culvert to the west. The hydrologic	by graminoids and fern	species throughout. Cattails are most	
regime is seasonally saturated with recharge hydrology. Standing water is present within portions of the feature. The feature receives water from an	red maple, and willow sr	ven to the west. Shrub-sized speckled alder,	
ephemeral stream to the north that terminates at the wetland.	coverage does not cons	titute a shrub 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	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 <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	N	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other plans
8	N	N	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present > 45 days
10	N	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	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	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
<u> </u>			Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
2	N	N	water levels or high flows – if no, not applicable
3	Ν	N	Densely rooted emergent or woody vegetation
ST			Storm and Floodwater Storage
1	Y	Y	Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	Ν	N	Water flow through wetland is NOT channelized
3	Y	Y	Dense, persistent vegetation
4	N	N	Evidence of flashy hydrology
5	Y	Y	Point or non-point source inflow
6	N	N	Impervious surfaces cover >10% of land surface within the watershed
7	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	N	N	Water flow through wetland is NOT channelized
4	N	N	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	Ν	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	Ν	N	Stormwater or surface water from agricultural land is major hydrology source
8	Ν	N	Discharge to surface water
9	Ν	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	Ν	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

HU-3: The feature is located within a roadside ditch visible to the public from the roadway. WH-10, FA-2: Shallow standing water is present within the lowest part of the wetland. FA-4: Vegetation may be inundated in spring, but water flows out of the feature through a culvert to the west, limiting the amount of standing water within the feature at a given time. ST-5: The feature receives runoff from an adjacent roadway to the south.

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

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 invertberates

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 crinita*			PEM	Patchy
Scirpus microcarpus*			PEM	Patchy
Impatiens capensis*			PEM	Rare
Onoclea sensibilis			PEM	Rare
Phalaris arundinacea			PEM	Rare
Typha sp.			PEM	Rare
Alnus incana			PEM	Rare
Athyrium filix-femina			PEM	Barren
Equisetum sylvaticum			PEM	Barren
Salix cf. lucida			PEM	Barren
Symphyotrichum sp.			PEM	Barren
Acer rubrum			PEM	Barren
Carex stipata			PEM	Barren
Equisetum arvense			PEM	Barren
Equisetum pratense			PEM	Barren
Heracleum maximum			PEM	Barren
Poa pratensis			PEM	Barren
Quercus rubra			PEM	Barren
Salix cf. discolor			PEM	Barren
Salix petiolaris			PEM	Barren
Solidago gigantea			PEM	Barren

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

The floristic integrity is low to moderate due to relative native diversity, but presence of invasive species and location within a disturbed roadside ditch.

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		M	С	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		Н	С	Roads or railroad
	Х		M	UC	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	x		L	UC	Removal of herbaceous stratum – mowing,
					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 roadside ditch is impacted by the adjacent roadway and associated runoff stressors. There is a high cover of invasive species within and surrounding the feature. The surrounding area is impacted by an above-ground utility corridor to the north, with a gravel access road. Directly below the utility line is a mowed trail.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	There is moderate overall diversity within the feature, but the wetland is disturbed and has a high cover of non-native and invasive species.
Human Use Values	The feature is visible to the public from a roadway bit does not provide human use value.
Wildlife Habitat	Shrub and herbaceous strata are represented, potentially providing habitat for birds. There is shallow standing water present within the feature that may provide habitat for frogs and toads.
Fish and Aquatic Life Habitat	Shallow standing water may provide habitat for aquatic invertebrates but not fish.
Shoreline Protection	Only a small portion of the wetland is connected to the stream where it terminates into the wetland. Minimal shoreline protection is provided.
Flood and Stormwater Storage	The feature is a roadside ditch with flow-through mediated water inputs from an ephemral strean north of the feature on the east side to a culvert to the west. The feature is limited in stormwater storage capacity by its small size.
Water Quality Protection	Dense vegetation may provide some filtration of groundwater.
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.	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:	Bayfield	Sampling Date: <u>2020-06-12</u>
Applicant/Owner: Enbridge		State: Wisco	nsin Sampling Point: wbad1001_u
Investigator(s): AGG/KDF	N R005W		
Landform (hillslope, terrace, etc.): Side Slope	E Local relief (conca	ave, convex, none): <u>None</u>	Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA): Northcentral Forest	³ Lat: <u>46.574884</u>	Long: <u>-91.032172</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Kellogg-Allendale-As	shwabay complex, 6 to 15	percent slopes NWI classi	fication:
Are climatic / hydrologic conditions on the site typ	cal for this time of year? Yes	No (If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	" present? Yes _ ✔_ No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any ansv	vers in Remarks.)
SUMMARY OF FINDINGS – Attach si	te map showing sampling p	point locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes _	No 🖌 Is the S	ampled Area	
Hydric Soil Present? Yes	No <u>v</u> within a	a Wetland? Yes	No <u></u>
Wetland Hydrology Present? Yes _	No If yes, c	ptional Wetland Site ID:	
Remarks: (Explain alternative procedures here	or in a separate report.)		an ar hireh. The sevents

The upland sample point is located on a slope dominated by red maple and paper birch. The sample plot is representative of the 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	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc	bils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>No</u> Depth (inches):	
Water Table Present? Yes <u>No</u> Depth (inches):	
Saturation Present? Yes <u>Ves</u> No <u>V</u> Depth (inches): <u>(includes capillary fringe)</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. The lan	dscape position of the area does not
support wetland hydrology.	

VEGETATION – Use scientific names of plants.

Sampling Point: wbad1001_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Acer rubrum	25	Y	FAC	Number of Dominant Species That Are OBL EACW, or EAC: 3 (A)
2 Betula papyrifera	25	Ŷ	FACU	
3 Abies balsamea	15	Y	FAC	Total Number of Dominant Species Across All Strata: 6 (B)
A Pinus strobus	<u> 10 </u> 10	 N	FACU	
5			1400	That Are OBL, FACW, or FAC: <u>50</u> (A/B)
6				
7				Prevalence Index worksheet:
/	75	- Tatal Ca		Total % Cover of:Multiply by:
Oralias (Ohrada Ohradama (Dhadaisan 16	_/5_		/er	$\begin{array}{c} \text{OBL species} \\ \text{EACW species} \\ \text{OBL species} $
Sapling/Shrub Stratum (Plot size: 15)	-	V		FAC species $54 \times 3 = 162$
1. <u>Acer rubrum</u>	5	<u> </u>	FAC	FACU species $70 \times 4 = 280$
2. <u>Betula papyrifera</u>	5	<u> Y </u>	<u>FACU</u>	UPL species $0 \times 5 = 0$
3				Column Totals: <u>124</u> (A) <u>442</u> (B)
4				
5				Prevalence Index = $B/A = \frac{3.564516129032258}{2.564516129032258}$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	10	= Total Cov	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)				3 - Prevalence Index is $\leq 3.0^{\circ}$
1. Pteridium aquilinum	25	Y	FACU	data in Remarks or on a separate sheet)
2. Maianthemum canadense	5	Ν	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Osmunda clavtoniana	5	N	FAC	
4 Equisetum arvense	2	N	FAC	¹ Indicators of hydric soil and wetland hydrology must
5 Trientalis borealis	2	 N	FAC	
6			17.0	Definitions of Vegetation Strata:
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
0				at breast height (DBH), regardless of height.
o				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3 28 ft (1 m) tall
9				
				Herb – All herbaceous (non-woody) plants, regardless 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.
	39	= Total Cov	/er	
Woody Vine Stratum (Plot size: 30)				
1				
2			. <u> </u>	
3				Hydrophytic
4				Vegetation Present? Yes No ✓
	0	= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate	sheet.)			
I ne sample plot is located within a mes	sic nara	wood to	rest dor	ninated by red maple and paper birch.
L				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth		Matrix		Redo	x Features	<u> </u>	. 2				
(inches)		(moist)		Color (moist)	<u>%</u>	Туре		<u>Texture</u>		Remarks	
<u> </u>		<u>Z.3/1</u>	100		None						
<u> 4-8 </u>	<u> 51 R</u>	<u>0/0</u>	100		<u>None</u>						
8-20	<u>5YR</u>	6/3	100		None			LVFS			
								. <u></u>			
¹ Type: C=C		n D=Depl	etion RM	=Reduced Matrix M	S=Masked	Sand Gr	ains	² Location:	PI =Pore I	ining M=Ma	trix
Hydric Soil	Indicators	:		,				Indicators f	or Problem	natic Hydric	Soils ³ :
Histosol	(A1)	2)		Polyvalue Belov	<i>N</i> Surface	(S8) (LR	RR,	2 cm M	uck (A10) (I	LRR K, L, MI	_RA 149B)
Black Hi	stic (A3)	2)		Thin Dark Surfa	, ace (S9) (L	.RR R, MI	LRA 149B) 5 cm M	ucky Peat c	or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)		Loamy Mucky Mucky	∕lineral (F1) (LRR K	, L)	Dark Su	urface (S7)	(LRR K, L)	
Stratified	d Layers (A d Below Da	\5) ark Surface	(A11)	Loamy Gleyed Depleted Matrix	Matrix (F2) (F3))		Polyvali Thin Da	ue Below Si ark Surface	urface (S8) (I (S9) (LRR K	LRR K, L) . L)
Thick Da	ark Surface	e (A12)	, (,)	Redox Dark Su	rface (F6)			Iron-Ma	Iron-Manganese Masses (F12) (LRR K, L, R)		
Sandy N	lucky Mine	eral (S1)		Depleted Dark	Surface (F	7)		Piedmo	Piedmont Floodplain Soils (F19) (MLRA 149B)		
Sandy G	Redox (S5)	fix (54)		Redux Depress				Red Pa	rent Materia	al (F21)	A, 145, 149D)
Stripped	Matrix (Se	3)						Very Sh	allow Dark	Surface (TF	12)
Dark Su	rface (S7)	(LRR R, M	LRA 149	B)				Other (I	Explain in R	lemarks)	
³ Indicators o	f hydrophy	tic vegetati	on and w	etland hydrology mus	st be prese	ent, unless	s disturbed	l or problematic.			
Restrictive	Layer (if o	bserved):									
Type:								Hydric Soil I	Prosont?	Vos	No 1/
Depth (In	cnes):								resent:	163	
No hydri	c soil in	dicator	s obse	rved.							
,											



 $wbad1001_u_E$



wbad1001_u_N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	ity/County: Bayfield Sampling Date: 2020-06-2					
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wbaa1001e					
Investigator(s): DMP/AGG	Section Township Pages: Sec 05 T0/7N P005W/					
Landform (hillolong torrage of a): Depression	$\frac{1}{2} = \frac{1}{2} = \frac{1}$					
Northcentral Forests						
Subregion (LRR or MLRA): Lat: 40.5/4831	Long: <u>-91.020761</u> Datum: <u>VVG564</u>					
Soil Map Unit Name: Kellogg-Allendale-Ashwabay comple	X, 2 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 di	sturbed? Are "Normal Circumstances" present? Yes <u>·</u> No					
Are Vegetation, Soil, or Hydrology naturally problem	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>~</u> No If yes, optional Wetland Site ID:					
The feature is a wet meadow that occurs within hardwood swamp complex.	a roadside ditch. The wetland is part of a larger					
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)					
_r Surface Water (A1) Water-Stained Le	aves (B9) Drainage Patterns (B10)					
High Water Table (A2) Aquatic Fauna (B	13) Moss Trim Lines (B16)					
Saturation (A3) Marl Deposits (B'	15) Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide	Odor (C1) Craytish Burrows (C8)					
Sediment Deposits (B2) Oxidized Rhizosp	neres on Living Roots (C3) Saturation Visible on Aenal Imagery (C9)					
Algal Mat or Crust (B4)	$\underline{\nu}$ Stated of Stressed Fights (DF)					
Iron Deposits (B5) Thin Muck Surfac	xe (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 <u>v</u> No Depth (inches):	6					
Water Table Present? Yes <u>No</u> Depth (inches):						
Saturation Present? Yes <u>No</u> Depth (inches): (includes capillary fringe)	Wetland 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.	Standing water was observed within the sample plot					
during the field survey.						

VEGETATION – Use scientific names of plants.

Sampling Point: <u>wbaa1001e_w</u>

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator	Dominance Test worksheet:
1 Quercus rubra	<u>- 70 00001</u> 5	V		Number of Dominant Species
2 Acer saccharum	<u>_</u>	 		That are OBL, FACW, of FAC: (A)
				Total Number of Dominant
0			·	
۳				That Are OBL, FACW, or FAC: 50 (A/B)
5		·	·	
0			·	Prevalence Index worksheet:
7		Tatal Oa		Total % Cover of: Multiply by:
		= Total Co	ver	OBL species 82 $x_1 = 82$
<u>Sapling/Snrub Stratum</u> (Plot size: 15)	-	V		FAC species $2 \times 3 = 6$
1. <u>Alnus Incana</u>		<u> </u>		FACU species 9 $x4 = 36$
2. <u>Corylus cornuta</u>		<u> </u>	FACU	UPL species x 5 =
3			·	Column Totals: <u>105</u> (A) <u>148</u> (B)
4				Prevalence Index = $B/A = -1.4095238095238096$
5			·	
6		·		Hydrophytic Vegetation Indicators:
7		·		1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
	7	= Total Co	ver	\sim 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Scirpus microcarpus</u>	50	<u> Y </u>	OBL	data in Remarks or on a separate sheet)
2. <u>Typha sp.</u>	25	<u> </u>	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Phalaris arundinacea</u>	5	<u> N </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Carex crinita</u>	5	<u> N </u>	OBL	be present, unless disturbed or problematic.
5. <u>Onoclea sensibilis</u>	2	<u>N</u>	FACW	Definitions of Vegetation Strata:
6. <u>Carex stipata</u>	2	N	OBL	Trop Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Ranunculus acris</u>	1	N	FAC	at breast height (DBH), regardless of height.
8. <u>Equisetum arvense</u>	1	N	FAC	Sapling/shrub – Woody plants less than 3 in. DBH
9			. <u> </u>	and greater than or equal to 3.28 ft (1 m) tall.
10			. <u> </u>	Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	91	= Total Co	ver	height.
Woody Vine Stratum (Plot size:30)				
1				
2				
3				Hydrophytic
4				Vegetation
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			1
I he plot vegetation is representative o	t the dito	ch portic	on of the	e wetland.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth <u>Matrix</u>	Redo	x Features	1	. 2					
<u>(inches)</u> <u>Color (moist)</u> %	Color (moist)		Type'	Loc	Texture	Remarks			
					·				
· ·									
				<u> </u>					
					<u> </u>				
					. <u></u>				
				·	<u> </u>				
¹ Type: C=Concentration, D=Depletion, RM	I=Reduced Matrix, M	S=Masked S	Sand Gra	ains.	² Location:	PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators:	· · · ·				Indicators f	or Problematic Hydric Soils ³ :			
Histosol (A1)	Polyvalue Belo	w Surface (S	58) (I RE	R	2 cm Mi	uck (A10) (I RR K. I. MI RA 149B)			
Histic Epipedon (A2)	MI RA 1498)		,	<u> </u>	Prairie Redox (A16) ($\mathbf{IRR} \mathbf{K} \mathbf{I} \mathbf{R}$)			
Black Histic (A3)	Thin Dark Surf:	/ ace (S9) (I E		RA 1498) 5 cm Mi	ucky Peat or Peat (S3) (I RR K I R)			
Hydrogen Sulfide (A4)		Mineral (F1)) <u> </u>	rface (S7) (IRR K I)			
Stratified Layors (A5)		Matrix (E2)		, ⊑/	Daik Ot	In Bolow Surface (S8) (I PP K I)			
Depleted Below Dark Surface (A11)	Loaniy Gleyeu	(E2)			Folyvall	$\frac{1}{2} = \frac{1}{2} = \frac{1}$			
Thigh Dark Surface (A12)	Depieted Math	((F3)			Inin Da	nganaga Magaga (E12) (LRR R, L)			
Thick Dark Surface (A12)	Redux Dark Su	пасе (го) Счибала (Г7	``			nganese Masses (F12) (LRR R, L, R)			
	Depleted Dark)		Piedmo	nt Floodplain Solis (F19) (MLRA 149B)			
Sandy Gleyed Matrix (S4)	Redox Depress	sions (F8)			Mesic S	podic (1A6) (MLRA 144A, 145, 149B)			
Sandy Redox (S5)					Red Pa	rent Material (F21)			
Stripped Matrix (S6)					Very Sh	allow Dark Surface (TF12)			
Dark Surface (S7) (LRR R, MLRA 149	B)				_∠ Other (E	Explain in Remarks)			
³ Indicators of hydrophytic vegetation and w	etland hydrology mus	st be preser	nt, unless	s disturbed	or problematic.				
Restrictive Layer (if observed):									
Type:									
					Hydric Soil F	Prosent? Ves 🗸 No			
Depth (Inches):					Tryane boilt				
Remarks:									
The soils were not sampled of	lue to the loca	tion of tl	he we	tland w	/ithin a roa	dside ditch. The soils are			
assumed to be hydric based	on the presen	ce of hv	droph	vtic ve	netation ar	nd hydrologic indicators			
		00 01 119	aropn		gotation a				
1									





wbaa1001e_w_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City.	/County: Bavfield Sampling Date: 2020-06-22
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wbaa1001f_w
Investigator(s): DMP/AGG Sec	tion, Township, Range: sec 05 T047N R005W
Landform (billslope terrace etc.): Depression	elief (concave, convex, none): Concave, Slope (%): 0-2%
Subregion (LRB or MLRA). Northcentral Forests Lat: 16 575316	Long: -91 030128 Datum: WGS84
Sublegion (ERR of MERA) Lat. 40.575510	<u></u> Long. <u>-91.000120</u> Datum. <u>WCO04</u>
Soli Map Unit Name: <u>Reliogy-Alteridate-Astrwabay complex</u> ,	
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes <u>Y</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	natic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🗸 No	Is the Sampled Area
Hydric Soil Present? Yes ✓ No	within a Wetland? Yes <u> V</u> No
Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
I he wetland is part of a wet meadow/hardwood s	wamp complex. The wet meadow component is
located within a roadside ditch to the south. The f	orested component is located within a swale on a
slight slope and there is discharge throughout the	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 Leave 	ves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	3) Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide C	dor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosphe	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduct	ed Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduct	ion in Tilled Soils (C6)
Iron Deposits (B5) Thin Muck Surface	(C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Re	emarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	✓ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u> Ves No</u> 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 (inches): 0</u>	Wetland Hydrology Present? Yes <u>v</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	revious inspections), if available:
Remarks:	pere was standing water within the wetland during
the field curvey	iere was standing water within the wetland during

VEGETATION – Use scientific names of plants.

Sampling Point: wbaa1001f_w

Tree Stratum (Plot size: 30)	Absolute	Dominan	t Indicator	Dominance Test worksheet:
1 Fraxinus nigra	<u>50</u>	V	FACW	Number of Dominant Species That Are $OBL = FACING = FACING = ACING = $
2 Betula alleghaniensis	2	 N	FAC	That are OBL, FACW, of FAC: $\underline{4}$ (A)
				Total Number of Dominant Species Across All Strata: 4 (B)
۵ ۸			·	
			·	That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6	_			
7				Prevalence Index worksheet:
/·	52			OPL appealer 20 x 1 = 20
Conling/Chruh Stratum (Distaire) 15			ver	$\begin{array}{c c} \text{OBL species} & \underline{20} & x & 1 & \underline{20} \\ \text{FACW species} & 62 & x & 2 & \underline{20} \\ \end{array}$
<u>Saping/Shrub Stratum</u> (Plot size: 13)				FAC species $2 \times 3 = 6$
1		- <u></u>	·	FACU species $0 \times 4 = 0$
2		·	·	UPL species x 5 =
3	_			Column Totals: <u>84</u> (A) <u>150</u> (B)
4			·	Prevalence index = $B/A = 1.7857142857142858$
5		<u></u>	·	Hudronbutio Vogetation Indicatoro
6		<u></u>	·	1 - Rapid Test for Hydrophytic Vegetation
7		·	·	\sim 2 - Dominance Test is >50%
_	0	= Total Co	ver	\sim 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Carex crinita</u>	10	<u> </u>		data in Remarks or on a separate sheet)
2. <u>Carex projecta</u>	10	<u> </u>	FACW	Problematic Hydrophytic Vegetation (Explain)
3. <u>Carex scabrata</u>	10	<u> </u>	OBL	¹ Indicators of hydric soil and wetland hydrology must
4. Impatiens capensis	2	<u> N </u>	FACW	be present, unless disturbed or problematic.
5		·	·	Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8		·	·	Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12		<u></u>		Woody vines – All woody vines greater than 3.28 ft in
	32	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1		·	·	
2		<u> </u>	<u> </u>	
3				Hydrophytic
4.				Vegetation
	0	= Total Co	ver	Present? Tes <u>/</u> NO
Remarks: (Include photo numbers here or on a separate	sheet.)			· · · · · · · · · · · ·

The plot vegetation is representative of the wetland. The canopy is dominated by black ash at the sample plot. Balsam fir becomes more abundant in other areas of the feature. The ground layers cover is patchy due to inundation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth Matrix Redox Features												
(inches)	Color (r	<u>moist)</u>	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-3	<u>10YR</u>	2/1	100		0	- <u> </u>		<u> </u>				
3-18	<u>10YR</u>	2/1	98	<u>7.5YR 4/6</u>	2	C	Μ	FSL				
18-20	5YR	4/2	100		0			FSL				
		D-Dool	otion PM	-Poducod Matrix M	S-Maskov			² Location	· PL-Poro Lining M-Matrix			
Hydric Soil	Indicators:				J-IVIASKE		airi5.	Indicators	for Problematic Hydric Soils ³ :			
Histosol	(A1)			Polyvalue Belov	w Surface	(S8) (LRF	RR,	2 cm N	/uck (A10) (LRR K, L, MLRA 149B)			
Histic Ep	oipedon (A2	2)		MLRA 149B))	. , .		Coast	Prairie Redox (A16) (LRR K, L, R)			
Black Hi	stic (A3)			Thin Dark Surfa	ace (S9) (I	LRR R, MI	_RA 149B)) 5 cm N	lucky Peat or Peat (S3) (LRR K, L, R)			
Hydroge	en Sulfide (A	4) =)		Loamy Mucky N	Aineral (F	1) (LRR K	, L)	Dark S	Surface (S7) (LRR K, L)			
Stratilied	d Below Da	o) rk Surface	(A11)	Depleted Matrix	(F3)	2)		Polyva Thin D	Polyvalue Below Surface (S8) (LRR K, L)			
Thick Da	ark Surface	(A12)	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	 Redox Dark Su 	rface (F6))		Iron-Manganese Masses (F12) (LRR K, L, R)				
Sandy M	lucky Miner	al (S1)		Depleted Dark	Surface (F	=7)		Piedm	Piedmont Floodplain Soils (F19) (MLRA 149B)			
Sandy G	Bleyed Matri	ix (S4)		Redox Depress	ions (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
Sandy F	Redox (S5)	、 、						Red Parent Material (F21)				
Stripped Dark Su	rface (S7) () IRRR M	I RA 149	B)				Very S	Other (Explain in Remarks)			
				2)								
³ Indicators o	f hydrophyti	c vegetati	on and w	etland hydrology mus	st be pres	ent, unless	disturbed	or problematio	2.			
Restrictive	Layer (if ob	served):										
Type:								Ukudula Cali				
Depth (in	ches):							Hydric Soll	Present? res <u>v</u> No			
Remarks:	orofilo c	oncieta	of a c	hark loam ovo	r two le	avore o	f fina s	andy loam	Podox concontrations			
woro obs	prome c	brough	out th	and lo lover	and P	ayers 0 odov D	i iiiie Se Iark Qu	rfaco was	obsorved			
were out		nougn			anu n		ark Su	nace was	observed.			



wbaa1001f_w_N



wbaa1001f_w_W

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	DMP/AGG			
File #:	Date of visit(s):			
wbaa1001	2020-06-22			
Location:	Ecological Landscape:			
PLSS: sec 05 T047N R005W	Superior Coostal Diain			
Lat: <u>46.575316</u> Long: <u>-91.030128</u>	Watershed: LS08, Fish Creek			
County: <u>Bayfield</u> Town/City/Village: <u>Eileen town</u>				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	T3/5Kr			
Kellogg-Allendale-Ashwabay complex, 6 to 15 percent slopes	Wetland Type(s):			
	PEM - Wet meadow/PFO - Hardwood swamp			
Field Verified:				
The soil profile was not verified. The soil profile consisted of a	Wetland Size [.]	Wetland Area Impacted		
dark loam over a dark and depleted fine sandy loam. Redox	0.92	0.92		
concentrations were observed throughout the middle layer	Vegetation:			
and redox dark surface was observed.	Plant Community Description(s)			
Hydrology:	The wetland is a hardwood swamp-wet meadow complex. The canopy of the hardwood swamp was dominated by black ash at the sample plot. The ground layers cover was patchy due to inundation.			
The hydrologic regime is seasonally				
saturated There was standing water within the				
saturated. There was standing water within the	while reed canary grass, and fruited sedge and fringed sedge were			
wetiand during the field survey.	common.			

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty		
1	Ν	N	Used for recreation (hunting, birding, hiking, etc.). List:		
2	N	N	Used for educational or scientific purposes		
3	Y	Y	Visually or physically accessible to public		
4	N	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation		
5	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	Ν	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>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>		
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	N	N	Ephemeral pond with water present <u>> 45</u> days		
10	Y	Y	Standing water provides habitat for amphibians and aquatic invertebrates		
11	Ν	N	Seasonally exposed mudflats present		
12	Ν	N	Provides habitat scarce in the area (urban, agricultural, etc.)		
FA			Fish and Aquatic Life Habitat		
1	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		
3	N	N	Densely rooted emergent or woody vegetation		
ST	IN	IN	Storm and Floodwater Storage		
1	N	N	Basin wetland constricted outlet has through-flow or is adjacent to a stream		
2			Water flow through wetland is NOT channelized		
3	V V	V V	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	Ν	N	Provides substantial storage of storm and floodwater based on previous section		
2	N	N	Basin wetland or constricted outlet		
3	Y	Y	Water flow through wetland is NOT channelized		
4	Ν	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	Y	Y	Springs, seeps or indicators of groundwater present		
2	N	N	Location near a groundwater divide or a headwater wetland		
3	Ν	N	Wetland remains saturated for an extended time period with no additional water inputs		
4	N	Ν	Wetland soils are organic		
5	N	N	Wetland is within a wellhead protection area		

Section 1 Comments (Refer to Section 1 numbers)

WH-2/6/7. Three strata are present within the wetland and a variety of different bird species were observed within and around the feature.

WH-10: There was standing water throughout the feature during the survey. and frogs were observed. FA-4: The vegetation is likely inundated during the spring.

ST-2: The feature is a water flow through wetland the occurs within a swale in the landscape that leads to a roadside ditch.

ST-3: Dense persistent vegetation was observed within the roadside ditch.

- ST-5: The feature is adjacent to a paved road, the road could be a source of non point inputs.
- GW-1: Groundwater seepage was observed throughout the hardwood swamp.

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	Mammals		
Y	Y	Garder snake		
Y	Y	Indigo bunting, clay colored sparrow, wood thrush		

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

Observed	Potential	Species/Habitat
Y	Y	Frogs

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Abies balsamea*			PFO/PEM	Rare
Acer saccharum*			PFO/PEM	Rare
Carex crinita			PFO/PEM	Rare
Carex projecta			PFO	Rare
Carex scabrata*			PFO	Rare
Fraxinus nigra			PFO	Rare
Onoclea sensibilis*			PFO/PEM	Rare
Osmunda claytoniana*			PFO	Rare
Scirpus microcarpus*			PEM	Rare
Alnus incana			PFO/PEM	Barren
Carex stipata			PFO	Barren
Equisetum arvense			PFO/PEM	Barren
Phalaris arundinacea			PEM	Barren
Rubus pubescens			PFO/PEM	Barren
Solidago gigantea			PEM	Barren
Betula alleghaniensis			PFO	Barren
Corylus cornuta			PFO/PEM	Barren
Glyceria striata			PFO/PEM	Barren
Hieracium aurantiacum			PEM	Barren
Impatiens capensis			PFO/PEM	Barren
Juncus effusus			PFO/PEM	Barren
Osmunda cinnamomea			PFO	Barren
Quercus rubra			PFO	Barren
Ranunculus acris			PFO/PEM	Barren
Rubus idaeus			PEM	Barren
Symphyotrichum sp.			PEM	Barren
Typha sp.			PEM	Barren

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

The floristic integrity is moderate ranked due to low invasive species cover and moderate native plant diversity.

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

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

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland complex was located between a road at the south end and a power line corridor to the north. There were some non native species present within the roadside ditch, but the cover was low. There is potential for non point inputs to enter the wetland from the road.
SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The floristic integrity was moderately ranked due to low invasive species cover and moderate native plant diversity.
Human Use Values	
Wildlife Habitat	During the field survey we observed interspersion of habitat structures as well as standing water. We observed numerous bird species as well as some frogs. There is potential for other species to utilize the wetland.
Fish and Aquatic Life Habitat	There was standing water and seepage observed in the wetland, and frogs were observed during the field survey.
Shoreline Protection	
Flood and Stormwater Storage	The wetland is rather small and it is a flow through wetland. There is not much potential for storm water storage.
Water Quality Protection	Most of the water from the wetland leads to a densely vegetation roadside ditch that has the potential to filter out pollutants.
Groundwater Processes	We observed groundwater discharge in some areas of the wetland; other parts of the wetland serve as groundwater discharge.

Section 4: Project Impact Assessment

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

Expected Project Impacts

IMPACT: describe (+ or -)	Permanence/Reversibility	Significance (Low, Medium, High)
Direct Impacts	Temporary ditching/fill impacts/logging	Medium
Secondary Impacts (including impacts which are indirectly attributable to the project)	Temporary potential sedimentation/compaction impacts	Low
Cumulative Impacts	Temporary construction impacts	Low
Spatial/Habitat Integrity	Temporary construction impacts	Low
Rare Plant/Animal Communities/ Natural Areas	N/A	N/A

Project/Site: Line 5 Relocation Project	ty/County: Bavfield Sampling Date: 2020-06-22					
icant/Owner: Enbridge State: Wisconsin Sampling Point: wbaa100						
Investigator(s): AGG/DMP Section, Township, Range: sec 05 T047N R005W						
Landform (hillslope, terrace, etc.): Talf Local relief (concave, convex, none): None Slope (%):						
Subregion (LRR or MLRA). Northcentral Forests Lat: 46 574914 Long: -91 026690 Datum: WGS84						
Soil Map Unit Name: Kellogg-Allendale-Ashwabay comple	x 2 to 6 percent slopes NWI classification					
Are climatic / hydrologic conditions on the site typical for this time of year	2 Voc \mathbf{v} No (If no ovelain in Remarke)					
Are climate / hydrologic conditions on the site typical for this time of yea						
Are vegetation, soil, or Hydrology significantly d	sturbed? Are Normal Circumstances present? Yes <u>v</u> No					
Are Vegetation, Soil, or Hydrology naturally prob	ematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing a	ampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No 🗸	Is the Sampled Area					
Hydric Soil Present? Yes No 🖌	within a Wetland? Yes <u>No</u>					
Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.	forest Within the sample plat, white pipe is					
deminant in the energy and bracken form in dem	e forest. Within the sample piot, white pine is					
dominant in the canopy and bracken term is don	inant in the herbaceous layer.					
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1) Water-Stained Le	aves (B9) Drainage Patterns (B10)					
High Water Table (A2) Aquatic Fauna (E	13) Moss Trim Lines (B16)					
Saturation (A3) Marl Deposits (B	15) Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide	Odor (C1) Crayfish Burrows (C8)					
Sediment Deposits (B2) Oxidized Rhizos	heres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)					
Drift Deposits (B3) Presence of Red	Jeed Iron (C4) Stunted or Stressed Plants (D1)					
Algal Mat or Crust (B4) Recent Iron Red	iction 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	Remarks) Microtopographic Relief (D4)					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)					
Surface Water Present? Ves No 🖌 Depth (inches):						
Water Table Present? Yes No						
Saturation Present? Yes No V Depth (inches):	Watland Hydrology Prosent? Voc No v					
(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: wbaa1001e_u

	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>Pinus strobus</u>		<u> </u>	FACU	That Are OBL, FACW, or FAC:(A)
2. <u>Betula papyritera</u>	10	<u>N</u>	FACU	Total Number of Dominant
3. <u>Acer saccharum</u>	5	<u> N </u>	<u>FACU</u>	Species Across All Strata: <u>2</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:
	90	= Total Co	over	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =0
1. <u>Abies balsamea</u>	2	N	FAC	FAC species <u>15</u> x 3 = <u>45</u>
2	_			FACU species <u>141</u> x 4 = <u>564</u>
3.				UPL species $0 \times 5 = 0$
4.				Column Totals: <u>156</u> (A) <u>609</u> (B)
5	_			Prevalence Index = B/A = <u>3.9038461538461537</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
·	- <u> </u>			2 - Dominance Test is >50%
Had Obstance (Distributed E			Dvei	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>5</u>)	50	V	EACU	4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Prendum aquilinum</u>		<u> </u>		Cata In Remarks or on a separate sneet)
2. <u>Osmunda ciaytoniana</u>	0	<u> </u>		
3. <u>Athyrium angustum</u>	2	<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Trientalis borealis</u>	1	<u> </u>	FAC	be present, unless disturbed or problematic.
5. <u>Maianthemum canadense</u>	1	<u> N </u>	<u>FACU</u>	Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				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
	64	= Total Co	over	height.
Woody Vine Stratum (Plot size:				
1				
··	_			
2				
S	_			Hydrophytic Vegetation
4				Present? Yes <u>No v</u>
Demarka: (Include abeta numbera bara ar en a conorata		= Total Co	over	
White pine is dominant in the canopy a	and brac	ken fer	n is dom	inant in the herbaceous laver at the
sample point. Interrupted fern is more	prevaler	nt in oth	er areas	outside the plot.
	-			•

Profile Desc	cription: (D	Describe	to the dept	th needed to docum	nent the	indicator	or confirm	the absence of indicat	ors.)
Depth		Matrix		Redox	<u>k Feature</u>	es			
(inches)	Color (I	moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	<u>7.5YR</u>	3/2	100		0			FS	
6-20	5YR	3/3	100		0			FS	
								·	
·								·	
·								·	
		n D=Den	letion RM=	Peduced Matrix MS	-Masko	d Sand Gr	aine	² Location: PL=Pore	
Hydric Soil	Indicators:						ams.	Indicators for Proble	ematic Hydric Soils ³ :
Histosol				Polyvalue Below	v Surface	(S8) (I R	R	2 cm Muck (A10)	
Histic E	pipedon (A2	2)		MLRA 149B)	Currace	, (00) (L IU	· · · · ,	Coast Prairie Re	dox (A16) (LRR K. L. R)
Black H	istic (A3)	,		Thin Dark Surfa	ce (S9) (LRR R, MI	LRA 149B)	5 cm Mucky Pea	t or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A	\ 4)		Loamy Mucky N	lineral (F	1) (LRR K	(, L)	Dark Surface (S7	7) (LRR K, L)
Stratifie	d Layers (A	5)		Loamy Gleyed N	Matrix (F2	2)		Polyvalue Below	Surface (S8) (LRR K, L)
Deplete	d Below Da	rk Surface	e (A11)	Depleted Matrix	(F3)			Thin Dark Surface	e (S9) (LRR K, L)
Thick Da	ark Surface	(A12)		Redox Dark Sur	face (F6))		Iron-Manganese	Masses (F12) (LRR K, L, R)
Sandy N	Aucky Miner	ral (S1)		Depleted Dark S	Surface (I	F7)		Piedmont Floodp	lain Soils (F19) (MLRA 149B)
Sandy C	Gleyed Matri	ix (S4)		Redox Depressi	ions (F8)			Mesic Spodic (TA	A6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)							Red Parent Mate	rial (F21)
Stripped	Matrix (S6)) 						Very Shallow Da	rk Surface (TF12)
Dark Su	mace (57) (LKK K, N	ILRA 1498)				Other (Explain in	Remarks)
³ Indicators o	of hydronhyti	ic venetat	ion and we	tland hydrology mus	t he nres	ent unles	s disturbed	or problematic	
Restrictive	l aver (if ob	served)							
Type:									
туре								Hydria Sail Brasant?	
Depth (in	ches):							Hydric Soli Fresent?	
Remarks:									
No hydri	c soil ind	dicator	's were	observed.					





wbaa1001e_u_NW

Project/Site: Line 5 Relocation	Project	City/County: Bay	/field	Sampling Date: <u>2020-06-22</u>
Applicant/Owner: Enbridge			State: Wisco	nsin Sampling Point: wbaa1001f_u
Investigator(s): <u>DMP/AGG</u>		Section, Township	, Range: <u>SEC 05 T047</u>	'N R005W
Landform (hillslope, terrace, etc.): Side	e Slope	_ Local relief (concave,	convex, none): Concav	e Slope (%): <u>3-7%</u>
Subregion (LRR or MLRA):	al Forests Lat: 46.575	5255	Long: <u>-91.030234</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Kellogg-Allen	<u>dale-Ashwabay cor</u>	<u>mplex, 6 to 15 per</u>	<u>cent slopes</u> NWI classi	fication:
Are climatic / hydrologic conditions on th	e site typical for this time	of year? Yes 🖌 🖌	No (If no, explain in	Remarks.)
Are Vegetation, Soil, or H	-lydrology signific	antly disturbed?	Are "Normal Circumstances"	" present? Yes _ ✔_ No
Are Vegetation, Soil, or H	-lydrology natural	ly problematic?	(If needed, explain any ansv	vers in Remarks.)
SUMMARY OF FINDINGS - At	tach site map show	ving sampling poi	nt locations, transect	s, important features, etc.
Hydrophytic Vegetation Present?	Yes No 🖌	Is the Sam	pled Area	
Hydric Soil Present?	Yes No 🔽	/ within a W	etland? Yes	No
Wetland Hydrology Present?	Yes No	/ If yes, optio	nal Wetland Site ID:	
Remarks: (Explain alternative procedu	res here or in a separate	report.)	forest No bydric s	oil indicators were
observed			TOTEST. NO HYUNC S	
The upland sample plot wa observed.	as taken on a side	e slope within a	forest. No hydric s	oil indicators were

HYDROLOGY

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

Sampling Point: wbaa1001f_u

Tree Stratum (Plot size: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1 Quercus rubra	<u>78 Cover</u>	<u>Species</u>		Number of Dominant Species
Acor saccharum	_ <u>_ 25</u>	 		That Are OBL, FACW, or FAC:(A)
			LACO	Total Number of Dominant
S			·	Species Acioss Ali Strata (b)
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:
	50	= Total Co	ver	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =0
1. <u>Abies balsamea</u>	2	N	FAC	FAC species x 3 =2
2				FACU species 77 x 4 = 308
3.				UPL species $0 \times 5 = 0$
4.				Column Totals: <u>81</u> (A) <u>320</u> (B)
5				Prevalence Index = $B/A = 3.95$
o			·	Hydronhytic Vegetation Indicators:
0			·	1 - Rapid Test for Hydrophytic Vegetation
/			·	2 - Dominance Test is >50%
	2	= Total Co	ver	$3 - Prevalence Index is \leq 3.0^{1}$
Herb Stratum (Plot size: <u>5</u>)	25	V	FACU	4 - Morphological Adaptations ¹ (Provide supporting
2. Equipotum optopo	<u></u>	 N		Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Malanthemum canadense</u>		N	FACU	¹ Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5			·	Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				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
	29	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)		rotar oo		
(i fot size. <u>50</u>)				
			·	
2			·	
3			·	Hydrophytic
4				Present? Yes No 🖌
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)	and Th	0.00000	wis dominated by sugar maple and
red oak while the herbaceous laver is	enareoli	domin [.]	e canop atod by	bracken fern
	oparociy	GOTTIN	alou by	

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matr	rix	Redo	ox Feature	s			
(inches)		t) <u>%</u>	Color (moist)		Type'	Loc ²	Texture	Remarks
0-6	<u>7.5YR 2.5</u>	<u>0/1_100</u>			·			
6-12	<u>7.5YR 4/</u>	<u>3 100</u>			·	·	<u>FSL</u>	
<u>12-20</u>	<u>5YR 4/</u>	<u>3 100</u>	<u>-</u>	0	·		<u> FS </u>	
			<u> </u>		·			
					<u> </u>			
					·			
<u> </u>							·	
<u> </u>					·		·	
					·	·		
					·			
			<u> </u>					
				_				
¹ Type: C=C	oncentration, D=	Depletion, R	M=Reduced Matrix, M	S=Masked	d Sand Gra	ains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators f	or Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Belo	w Surface	(S8) (LRF	RR,	2 cm Mi	uck (A10) (LRR K, L, MLRA 149B)
Black H	istic (A3)		Thin Dark Surfa) ace (S9) (I	LRR R. MI	LRA 149B)) 5 cm Mi	ucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)		Loamy Mucky	Mineral (F	1) (LRR K	, L)	Dark Su	urface (S7) (LRR K, L)
Stratifie	d Layers (A5)		Loamy Gleyed	Matrix (F2	2)		Polyvalu	ue Below Surface (S8) (LRR K, L)
Deplete	d Below Dark Su ark Surface (A12	Inface (A11)	Depleted Matri	x (F3) urface (E6)			I hin Da	Irk Sufface (S9) (LRR K, L)
Sandy N	/ucky Mineral (S	-) 51)	Depleted Dark	Surface (F	-7)		Piedmo	nt Floodplain Soils (F19) (MLRA 149B)
Sandy C	Bleyed Matrix (S4	4)	Redox Depress	sions (F8)	,		Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)						Red Pa	rent Material (F21)
Stripped	I Matrix (S6)						Very Sh	nallow Dark Surface (TF12) Explain in Remarks)
³ Indicators o	f hydrophytic veg	getation and	vetland hydrology mu	st be pres	ent, unless	s disturbed	or problematic.	
Restrictive	Layer (if observ	ved):						
Type:							Hydric Soil [Prosent? Vas No 4
Depth (in	ches):						Hyunc Son P	
The soil	profile cons	sists of a	dark loam ove	r a fine	sandv	loam a	and a fine s	sand. No hydric soil
indicator	s were obs	erved.			canay	iouni o		



wbaa1001f_u_N



wbaa1001f_u_W

City/County: Ashland	Sampling Date: <u>2020-06-10</u>
S	State: <u>Wisconsin</u> Sampling Point: <u>wasc1058e_w</u>
Section, Township, Range: <u>SEC</u>	03 T047N R004W
Image: concave, convex, none): 1 Long:90.8 Cut or fill ear? Yes No (If redisturbed? Are "Normal Circoblematic?	Concave Slope (%): 0-2% 62902 Datum: WGS84 NWI classification:
Is the Sampled Area within a Wetland? If yes, optional Wetland Sit ort.) ated by soft rush and re ovel road and driveway,	Yes _ ✓ No e ID: ed-tinged bulrush. The feature and receives drainage from a
	City/County: <u>Ashland</u> S Section, Township, Range: <u>Sec</u> cal relief (concave, convex, none): 1 Long: <u>-90.8</u> <u>cut or fill</u> ear? Yes <u>_ √ No (If n</u> disturbed? Are "Normal Cir oblematic? (If needed, expl g sampling point locations Is the Sampled Area within a Wetland? If yes, optional Wetland Sit of the source of the

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
✓ Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hvdrogen Sulfide Odor (C1)	 Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Cravfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living I Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Presence of Reduced Iron (C4)	Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) bils (C6) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?Yes \checkmark No Depth (inches): 1Water Table Present?Yes No \checkmark 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: The feature is a seasonally saturated depression within a d time of survey; precipitation occurred a few hours prior to th	litch. Standing water was observed at the ne survey. The feature primarily exhibits

recharge hydrology, and receives drainage from a culvert.

Sampling Point: <u>wasc1058e_w</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)	1
2				Total Number of Dominant	
3			·	Species Across All Strata: (B)	
4	·		·	Percent of Dominant Species	
5				That Are OBL, FACW, or FAC: (AI	в)
6				Prevalence Index worksheet:	
7				Total % Cover of: Multiply by:	
	0	= Total Co	ver	OBL species <u>64</u> x 1 = <u>64</u>	
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>5</u> x 2 = <u>10</u>	
1				FAC species x 3 =7	
2.				FACU species x 4 = 88	
3				UPL species <u>0</u> x 5 = <u>0</u>	
а				Column Totals: <u>100</u> (A) <u>189</u> (B	3)
5.				Prevalence Index = B/A = <u>1.89</u>	
6.				Hydrophytic Vegetation Indicators:	
7				✓ 1 - Rapid Test for Hydrophytic Vegetation	
<u></u>	0	- Total Ca		∠ 2 - Dominance Test is >50%	
		- 10tal C0	vei	3 - Prevalence Index is ≤3.0 ¹	
Herb Stratum (Plot size: <u>5</u>)	20	V		4 - Morphological Adaptations ¹ (Provide supporti	ng
		<u> </u>		data in Remarks or on a separate sheet)	
2. <u>Scirpus microcarpus</u>	30	<u> </u>	OBL		
3. Lotus corniculatus	12	N	FACU	¹ Indicators of hydric soil and wetland hydrology must	
4. <u>Equisetum arvense</u>	9	N	FAC	be present, unless disturbed or problematic.	
5. <u>Trifolium repens</u>	7	N	FACU	Definitions of Vegetation Strata:	
6. <i>Phalaris arundinacea</i>	5	N	FACW	Tree Mondy plants 2 in (7.6 am) or more in diamet	tor
7. <u>Carex stipata</u>	4	N	OBL	at breast height (DBH), regardless of height.	.er
8. <u>Dactylis glomerata</u>	3	N	FACU	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, regardles	s
11			·		
12				woody vines – All woody vines greater than 3.28 ft i height.	n
	100	= Total Co	ver		
Woody Vine Stratum (Plot size: <u>30</u>)					
1		. <u> </u>			
2					
3				Hydrophytic	
4.				Vegetation	
	0	= Total Co	ver	Present? res <u>v</u> No	
Remarks: (Include photo numbers here or on a separate s	sheet.)			1	
The feature is a wet meadow dominate	d by sof	ft rush a	and red-	tinged bulrush, with a number of	
non-native species present.					

(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
				·				
				·				
					<u> </u>			
				<u> </u>				
				·				
				<u> </u>				
Type: C=Co	ncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location: PL=	Pore Lining, M=Matrix.
Histosol (A 1)		Polyvaluo Bolov	v Surfaco	(S8) /I DE		2 cm Muck (/	
Histosof (pedon (A2)		MLRA 149B))	(30) (LR	、 Γ,	Coast Prairie	Redox (A16) (LRR K, L, R)
Black His	tic (A3)		Thin Dark Surfa	ace (S9) (L	.RR R, MI	LRA 149B)	5 cm Mucky I	Peat or Peat (S3) (LRR K, L, R)
Hydrogen	Sulfide (A4)		Loamy Mucky N	/lineral (F1) (LRR K	, L)	Dark Surface	(S7) (LRR K, L)
Depleted	Below Dark Surface	(A11)	Depleted Matrix	(F3))		Thin Dark Su	rface (S9) (LRR K, L)
Thick Dar	k Surface (A12)		Redox Dark Su	rface (F6)			Iron-Mangan	ese Masses (F12) (LRR K, L, R)
Sandy Mu	ucky Mineral (S1)		Depleted Dark S	Surface (F	7)		Piedmont Flo	odplain Soils (F19) (MLRA 149E
Sandy Gi Sandy Re	eyed Matrix (S4)		Redox Depress	ions (F8)			Red Parent N	(TA6) (MLRA 144A, 145, 149B /aterial (F21)
Stripped i	Matrix (S6)						Very Shallow	Dark Surface (TF12)
Dark Surf	ace (S7) (LRR R, M	LRA 149E	3)				_∠_ Other (Explai	n in Remarks)
Indicators of	hydrophytic vegetati	on and we	tland hydrology mus	t he prese	nt unless	s disturbed	or problematic	
Restrictive L	ayer (if observed):		land hydrology mae					
Туре:								
Depth (incl	hes):						Hydric Soil Prese	nt? Yes <u>√</u> No
Remarks:								
he soils	were not sam	pled d	ue to the locat	tion of	the we	etland w	ithin a roadsio	le ditch. The soils are
issumed	to be hydric k	based o	on the hydrolo	gy and	domir	nance o	f hydrophytic	vegetation.



wasc1058e_w_NW



wasc1058e_w_SE

Project/Site: Line 5 Relocation Project	City/County: Ashland Sampling Date: 2020-06-10
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasc1058s_w
Investigator(s): FJO/JSW	Section, Township, Range: sec 03 T047N R004W
Landform (hillslope terrace etc.): Depression	pocal relief (concave, convex, none); CONCAVE Slope (%); 0-2%
Subragian (I DD as MI DA), Northcentral Forests Lat. 46 5979	2 Long: 00.862821 Deture: WGS84
Lat. <u>40.3070</u>	<u>5</u> Long. <u>-90.002021</u> Datum. <u>W6504</u>
Soil Map Unit Name: <u>UDOITINENTS and UDIPSAMMENTS</u> ,	CUT OF TIII NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes <u>v</u> No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	/ disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally p	oblematic? (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 V No	within a Wetland? Yes <u>v</u> No
Wetland Hydrology Present? Yes V No	If ves, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate rep	prt.)
The feature is a saturated shrub-carr dominat	ed by glossy buckthorn in the shrub layer and red osier
dogwood, giant goldenrod, and wild black cur	ant in the groundlayer. The feature is a depression
that primarily exhibits recharge hydrology, and	connects to the wet meadow wasc1058e.
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-Staine	Leaves (B9) Drainage Patterns (B10)
High Water Table (A2)	(B13) Moss Trim Lines (B16)
Saturation (A3) Marl Deposits	(B15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Su	ide 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	educed Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron F	eduction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Su	face (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 (inche	s):
Water Table Present? Yes <u>No</u> Depth (inche	s):
Saturation Present? Yes No 🖌 Depth (inche	s): Wetland Hydrology Present? Yes <u>v</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial pho	os, previous inspections), if available:
Remarks:	ion that connects to a wat meadow community
The realure is a seasonally saturated depress	ion that connects to a wet meadow community.

Sampling Point: wasc1058s_w

Tree Stratum (Plot size: 30)	Absolute	Dominant	t Indicator	Dominance Test worksheet:			
1 Populus halsamifera	<u>- 76 00001</u>	V		Number of Dominant Species			
			<u>17011</u>	That are OBL, FACW, or FAC: 3 (A)			
2			·	Total Number of Dominant			
3			·				
4			·	Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)			
5			·				
0			·	Prevalence Index worksheet:			
1				<u>Total % Cover of:</u> <u>Multiply by:</u>			
		= Total Co	ver	OBL species $()$ $x_1 = 0$			
Sapling/Shrub Stratum (Plot size: 15)	40	V	F 40	FACW species 35 x 2 - 110 FAC species 45 x 3 = 135			
1. <u>Frangula alnus</u>	40	<u> </u>	FAC	FACU species $20 \times 4 = 80$			
2. <u>Salix petiolaris</u>		<u> N </u>	FACW	UPL species $0 \times 5 = 0$			
3				Column Totals: <u>120</u> (A) <u>325</u> (B)			
4			·				
5				Prevalence Index = $B/A = 2.708333333333333333333333333333333333333$			
6			·	Hydrophytic Vegetation Indicators:			
7				1 - Rapid Test for Hydrophytic Vegetation			
	47	= Total Co	ver	\sim 2 - Dominance Test is >50%			
Herb Stratum (Plot size: 5)				\sim 3 - Prevalence Index is \leq 3.0'			
1. <u>Solidago gigantea</u>	12	Y	FACW	data in Remarks or on a separate sheet)			
2. Cornus alba	6	Y	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)			
3. Ribes americanum	5	Y	FACW				
A Parthenocissus inserta	5	 N	FACU	¹ Indicators of hydric soil and wetland hydrology must			
5. Frangula alnus	5	N	FAC				
6 Valeriana officinalis		<u> </u>	<u> </u>	Definitions of Vegetation Strata:			
7			·	Tree – Woody plants 3 in. (7.6 cm) or more in diameter			
8			·	at breast height (DBH), regardless of height.			
9.			·	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
10				Herb – All herbaceous (non-woody) plants, regardless			
11			·	of size, and woody plants less than 3.28 ft tall.			
12			·	Woody vines – All woody vines greater than 3.28 ft in			
	37	= Total Co	ver	neight.			
Woody Vine Stratum (Plot size: <u>30</u>)							
1. <u>Parthenocissus inserta</u>	15	Y	FACU				
2							
3				Hydrophytic			
4.				Vegetation			
	15	= Total Co	ver	Present? Yes <u>v</u> No			
Remarks: (Include photo numbers here or on a separate	sheet.)			1			
The feature is a shrub-carr dominated by glossy buckthorn in the shrub layer, and giant goldenrod,							

red osier dogwood, and wild black currant in the ground layer. The sample plot is not representative of the entire feature, as willow shrubs become more dominant outside of the plot.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix		Redo	ox Feature	s ,	0				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	ŀ	Remarks	
					·					
-										
						<u> </u>				
		<u> </u>			·	<u> </u>				
-										
- <u></u>					·					
					·					
¹ Type: C=C	oncentration D=Den	letion RM=F	Reduced Matrix M	IS=Masker	Sand Gr	ains	² Location: E	PI =Pore Linir	na M=Matr	ix
Hydric Soil	Indicators:		toddood matrix, m				Indicators for	r Problemati	ic Hydric S	inils ³ .
Listers			Debuselus Dele				are Mus			
Histoso	I (A1)	-	_ Polyvalue Belo	w Surrace	(58) (LR	КК ,		к (А10) (LRi	RK, L, MLI	RA 149B)
Histic E	pipedon (A2)		MLRA 149B	5)			Coast Pra	airie Redox (/	A16) (LRR	K, L, R)
Black H	listic (A3)	—	Thin Dark Surfa	ace (S9) (I	_RR R, MI	LRA 149B)	5 cm Muc	ky Peat or P	eat (S3) (L	RR K, L, R)
Hydrog	en Sulfide (A4)	_	Loamy Mucky	Mineral (F	1) (LRR K	(, L)	Dark Surf	ace (S7) (LR	RR K, L)	
Stratifie	d Layers (A5)	_	Loamy Gleyed	Matrix (F2	2)		Polyvalue	Below Surfa	ace (S8) (LI	RR K, L)
Deplete	d Below Dark Surface	e (A11)	Depleted Matri	x (F3)			Thin Dark	Surface (S9) (LRR K, I	L)
Thick D	ark Surface (A12)		Redox Dark Su	urface (F6)			Iron-Mano	anese Mass	ses (F12) (L	RR K, L, R)
Sandy I	Mucky Mineral (S1)	_	Depleted Dark	Surface (F	7)		Piedmont	Floodplain S	Soils (F19)	(MI RA 149B)
Sandy (Gleved Matrix (S4)	-	Redox Depress	sions (F8)	•)		Mesic Sp	odic (TA6) (N		145 149B)
Candy (-		310113 (1 0)			Nicsic Opt	nt Matarial (=01)	(, 145, 1450)
Sanuy n								ni ivialenai (r	-21) -faia (TE40	
Stripped	d Matrix (S6)						Very Shai	llow Dark Su	mace (TF12	2)
Dark Su	urface (S7) (LRR R, N	ILRA 149B)					_∠ Other (Ex	plain in Rem	iarks)	
³ Indicators of	of hydrophytic vegetat	ion and wetl	and hydrology mu	st be prese	ent, unless	s disturbed	or problematic.			
Restrictive	Layer (if observed):									
Type [.]										
. , p e							Undria Cail Dr	aaanto Va		No
Depth (ir	iches):						Hydric Soli Pro	esent? re	<u></u>	NO
Remarks:										
Soils we	re not sampled	d due to	the proximit	v of the	e wetla	nd to ro	ads and a s	structure	. Soils a	are
	d to be bydrie k		a a a marabi	o nooiti	ion one	d tha da	minonoo of	bydroph		nototion
assume		Jaseu u	rgeomorphi	ic positi	ion and	une uo		nyulopi		jelalion.



wasc1058s_w_E



wasc1058s_w_W

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

WETLAND IDENTIFICATION					
Project name:	Evaluator(s):				
Line 5 Relocation Project	EJO/JSW				
File #:	Date of visit(s):				
wasc1058	2020-06-10				
Location:	Ecological Landsca	ipe:			
PLSS: sec 03 T047N R004W	Superior Coastal Blain				
Lat: <u>46.587588</u> Long: <u>-90.862943</u>	Watershed:				
	LS08, Fish Creek				
County: Ashland Town/City/Village: Ashland city					
SITE DESCRIPTION					
Soils:	WWI Class:				
Mapped Type(s):	T3/S3Kr				
Udorthents and Udipsamments, cut or fill	Wetland Type(s):				
1 ,	PSS/PEM - Shrub-carr/Fresh (wet) meadow complex				
Field Verified:					
Series were not verified. The soils were not sampled due to	Wetland Size:	Wetland Area Impacted			
the location of the wetland within a roadside ditch. The soils	0.2257	0.2257			
are assumed to be hydric due to the wetland's hydrology and	Vegetation:				
dominance of hydrophytic vegetation.	Plant Community Description(s):				
Hydrology:	The wet meadow is dominated by soft rush and small-fruited bulrush.				
The wet meadow is a saturated depression within a ditch. Standing water	with a number of non-native species present. The shrub-carr is				
was observed at the time of survey; precipitation had occurred a few	dominated by glossy buckthorn in the shrub layer, and giant				
hours prior to the survey. The shrub-Carr is also a saturated depression.	goldenrod, red osier dogwood, and wild black currant. Shrub willows				
bour components are connected and primarily exhibit recharge hydrology.	become more dominant	in part of the wettand.			

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	Ν	N	In or adjacent to archaeological or cultural resource site
WH			Wildlife Habitat
1	Ν	N	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	Ν	Y	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
7	N	Y	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
8	N	N	Part of a large habitat block that supports area sensitive species
0		N	For the second with water present > 45 days
10			Standing water provides habitat for amphibians and aquatic invertebrates
10	IN N	T N	Seasonally exposed mudflats present
12	IN N	IN NI	Provides pabitat scarce in the area (urban, agricultural, etc.)
	IN	IN	Fish and Aquatic Life Habitat
	NI	NI	Wetland is connected or contiguous with perceptial stream or lake
2	IN N	IN X	Standing water provides babitat for amphibians and aquatic invertebrates
2	IN NI	Y NI	Natural Haritaga Investory (NHI) listed aquatic aposics within aquatic system
3	IN N	N N	Vegetation is inundated in apring
4	N	Ý	Shereline Protection
3P	N 1	N	Shoreline Protection
- 1	N	N	Along shoreline of a stream, lake, pond of open water area (21 acre) - If no, not applicable
2	Ν	Ν	Potential for erosion due to wind fetch, waves, neavy boat traffic, erosive soils, fluctuating
2	NI	NI	Dependence of thigh hows – if ho, hot applicable
о Ст	IN	IN	Storm and Eleadwater Storage
31	V	X	Basin watland, constricted outlet, has through flow or is adjacent to a stream
2	Y NI	Y	Water flow through wetland in NOT channelized
2	N X	Y	
3	Y	Y	Dense, persistent vegetation
4	N	N	Evidence of hashy hydrology
5	Y	Y	Point of hon-point source innow
0	N	N	Impervious surfaces cover > 10% of land surface within the watershed Within a watershed with at 00% watershed
/	N	N	Within a watershed with $\leq 10\%$ wetland Detential to hold $\geq 10\%$ of the number of form contribution area from a 2 upon 24 hour storm quant
0	N	N	Weter Quality Protection
1	V	V	Travidos substantial storage of storm and floodwater based on providus section
- 1	Y	Y	Provides substantial storage of storm and hoodwater based on previous section
2	N	Y Y	Basin weiland <u>or</u> constructed outlet
3	N	Y N	Vereteted wetland is NOT channelized
4	N	N	
5	Y	Y	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, neavy macrophyte growth
/	N	N	Stormwater or surface water from agricultural land is major hydrology source
8	N	N	
9	Y	<u> </u>	Natural land cover in 100m putter area < 50%
GW			Groundwater Processes
1	N	N	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	Ν	N	Wetland is within a wellhead protection area

ST-5: The feature is a depression adjacent to a gravel driveway/road and likely receives stormwater from the road.
 WQ-5: The feature is densely vegetated.
 FA-2: Standing water may support aquatic life at times.
 WH-6: the wetland is a complex of wet meadow and shrub-carr communities.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Song sparrow heard near wetland; other birds may use the wetland
	Y	Mammals, herpetofauna

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

Observed	Potential	Species/Habitat
	Y	Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 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)
Fragaria virginiana			PSS	
Frangula alnus*			PSS	Patchy
Juncus effusus*			PEM	Patchy
Scirpus microcarpus*			PEM	Patchy
Populus balsamifera*			PSS	Patchy
Parthenocissus inserta*			PSS	Rare
Tanacetum vulgare			PSS/PEM	Rare
Lotus corniculatus			PEM	Rare
Solidago gigantea			PSS	Rare
Equisetum arvense			PEM	Rare
Salix petiolaris			PSS	Rare
Trifolium repens			PEM	Rare
Cornus alba			PSS	Rare
Phalaris arundinacea			PEM	Rare
Ribes americanum			PSS	Rare
Dactylis glomerata			PEM	Rare
Populus tremuloides			PSS	Rare
Carex stipata			PEM	Barren
Valeriana officinalis			PSS	Barren
Ranunculus acris			PSS/PEM	Barren
Carex vulpinoidea			PEM	Barren
Juncus cf. brevicaudatus			PEM	Barren
Lonicera x bella			PSS	Barren
Lythrum salicaria			PEM	Barren
Poa pratensis			PEM	Barren
Carex atherodes			PEM	Barren
Carex buxbaumii			PEM	Barren
Juncus canadensis			PEM	Barren

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

The wetland has a high abundance of both native and exotic species, and is significantly disturbed. Additional species: Juncus torreyi (Plant Communities: PEM, Abundance: Barren), Schedonorus arundinaceus (Plant Communities: PEM, Abundance: Barren)

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
X	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		M	С	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					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		I		Removal of herbaceous stratum – mowing,
	^		L	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	С	Cover of non-native and/or invasive species
					Residential land use
	Х		М	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)

Part of the wetland is located in a ditch adjacent to a gravel road; fill may have been used to construct the road. The wetland has a high abundance of invasive species which have degraded the wetland's floristic integrity. Buildings and commercial land use are present nearby.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The wetland has a high abundance of exotic and invasive species.
Human Use Values	The wetland is on private land, and is partially located in a ditch.
Wildlife Habitat	The wetland has multiple strata; shrubs and forbs may provide food sources for birds and pollinators; shrubs may provide nesting habitat for birds.
Fish and Aquatic Life Habitat	The wetland had some standing water at the time of survey and may support aquatic life at times.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland has dense vegetation and likely receives stormwater from the surrounding roads/driveway.
Water Quality Protection	The wetland has dense, persistent vegetation important for capturing and filtering 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.	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/C	County: <u>Ashland</u>	Sampling Date: 2020-06-10				
Applicant/Owner: Enbridge		State: <u>Wiscon</u>	sin Sampling Point: wasc1058_u				
Investigator(s): <u>JSW/EJO</u>	Secti	on, Township, Range: <u>sec 03 T047N</u>	I R004W				
Landform (hillslope, terrace, etc.): Talf	Local rel	ief (concave, convex, none): <u>None</u>	Slope (%): 0-2%				
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.5</u>	87656	Long: <u>-90.862746</u>	Datum: <u>WGS84</u>				
Soil Map Unit Name: Udorthents and Udipsamme	ents, cut c	or fill NWI classifie	cation:				
Are climatic / hydrologic conditions on the site typical for this tir	ne of year? Υ	∕es _ ✔ No (If no, explain in F	temarks.)				
Are Vegetation, Soil, or Hydrology sign	ificantly distur	bed? 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 sh	SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No	<u>v</u> v	Is the Sampled Area within a Wetland? Yes	No				
Wetland Hydrology Present? Yes No _	<u> </u>	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located in a clearing near a road. The area is dominated by non-native species.							

HYDROLOGY

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

Sampling Point: wasc1058_u

	Absolute	Dominan	t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	Species?	<u>Status</u>	Number of Dominant Species
1				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>25</u> (A/B)
6.				
7				Tetal % Cover of:
		- Total Co		
Conting/Obride Charles (Distring)			JVEI	EACW species $5 \times 2 = 10$
Saphing/Siliub Stratum (Plot size. 15)	_	V		FAC species $15 \times 3 = 45$
1. <u>Rnamnus catnartica</u>	5	<u> </u>		FACU species $80 \times 4 = 320$
2. <u>Lonicera X bella</u>	5	Y	<u>FACU</u>	UPL species $0 \times 5 = 0$
3				Column Totals: 100 (A) 375 (B)
4				
5				Prevalence Index = B/A = <u>3.75</u>
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
	10	= Total Co	wer	2 - Dominance Test is >50%
Horb Stratum (Plot size: 5)				3 - Prevalence Index is $≤3.0^1$
(Plot Stratum (Plot Size. <u>J</u>)	40	V	EACU	4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Poa praterisis</u>	40	<u> </u>		Data In Remarks or on a separate sneet)
2. <u>Solidago canadensis</u>		<u> </u>	<u>FACU</u>	
3. <u>Equisetum arvense</u>	10	<u> N</u>	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Tanacetum vulgare</u>	10	N	<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Melilotus officinalis</u>	5	<u>N</u>	FACU	Definitions of Vegetation Strata:
6. <u>Lathyrus cf. latifolius</u>	5	N		
7. <u>Schedonorus arundinaceus</u>	5	N	FACU	at breast height (DBH), regardless of height.
8. Elvmus repens	5	Ν	FACU	Serling/abruh Weady plants loss than 2 in DDU
9 Symphyotrichum lanceolatum	5	N	FACW	and greater than or equal to 3.28 ft (1 m) tall.
10			<u></u>	Here All borbassours (non-woods), planta regardlass
10				of size, and woody plants less than 3.28 ft tall.
10				Woody vines All woody vines greater than 3.28 ft in
12				height.
	95	= Total Co	over	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4				Vegetation Brocont2 Yes No
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)			
The sample plot is located in a clearing	near a	road.		

Profile Des	cription: (Describe	to the dept	h needed to docu	ment the	indicator	or confirm	the absence of	of indicators.)
Depth (inchos)	<u>Matrix</u>	0/	Redo	ox Feature	S Turno ¹	1.002	Toxturo	Pomorko
				/0	<u> </u>		Texture	Reliaiks
				_				
1							2	
Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	IS=Masked	d Sand Gr	ains.	Location:	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators 1	or Problematic Hydric Soils":
— Histoso	l (A1)	_	Polyvalue Belo	w Surface	e (S8) (LR I	R R,	2 cm M	uck (A10) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)		MLRA 149B	8)			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)
Hydroge	en Sulfide (A4)	_	Loamy Mucky	Mineral (F	1) (LRR K	(, L)	Dark Su	urface (S7) (LRR K, L)
Stratifie	d Layers (A5)	_	Loamy Gleyed	Matrix (F2	2)		Polyval	ue Below Surface (S8) (LRR K, L)
Deplete	d 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	Inganese Masses (F12) (LRR K, L, R)
Sandy M	Mucky Mineral (S1)		Depleted Dark	Surface (F	=7)		Piedmo	nt Floodplain Soils (F19) (MLRA 149B)
Sandy (Gleved Matrix (S4)		Redox Depress	sions (F8)	,		Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)	-	·	()			Red Pa	rent Material (F21)
Stripped	d Matrix (S6)						Verv Sh	nallow Dark Surface (TF12)
Dark Su	urface (S7) (LRR R. N	ILRA 149B)					Other (I	Explain in Remarks)
³ Indicators o	of hydrophytic vegetat	ion and wet	land hydrology mu	st he nres	ent unles	s disturbed (or problematic	
Restrictive	l aver (if observed):		and nyarology ma					
-	Layer (il observeu).							
Type:								
Depth (in	iches):						Hydric Soil I	Present? Yes <u>No </u>
Remarks [.]								
Could no	nt sample soil (due to th	ne provimity	to road	ls and	occunie	d structur	es. Soils are assumed to
				:.:		inserter		
be non-r	iyaric based ol	n the lar	idscape pos	ition ar	ia aom	inant ve	getation.	
1								
l								
1								
1								



wasc1058_u_E



wasc1058_u_S

Project/Site: Line 5 Relocation Project City/C	County: Ashland Sampling Date: 2020-06-10
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasc1059e_w
Investigator(s): EJO/JSW Section	on, Township, Range: sec 03 T047N R004W
Landform (hillslope, terrace, etc.): Depression	ief (concave, convex, none): CONCAVE Slope (%): 0-2%
Subregion (LRB or MLRA). Northcentral Forests Lat. 46 587643	Long: -90.863489 Datum: WGS84
Soil Man Linit Name: Eldorthonts and Eldinsommonts, out of	r fill
Son wap one wante. <u>Outernetts and Outpsamments, cut c</u>	
Are climatic / hydrologic conditions on the site typical for this time of year? Y	es <u>v</u> No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing san	ppling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🗸 No	Is the Sampled Area
Hydric Soil Present? Yes Ves 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 saturated wet meadow dominated	by narrow-panicled rush and mosquito buirush.
I ne feature is located in a vegetated depression s	urrounded by gravel driveways that are part of a
retired logging yard. The feature drains into a cuive	ert.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leave	s (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Od	or (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospher	es on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced	d Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction	n in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (0	C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rer	narks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <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
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:	
The feature is a saturated depression surrounded	by gravel driveways, and exhibits recharge
hydrology. The feature drains into a culvert which	connects to wetland wasc1060e.
, , , , , , , , , , , , , , , , , , , ,	

Sampling Point: wasc1059e_w

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:	(A/B)
6 Prevalence Index worksheet:	
7. Total % Cover of: Multiply by:	_
<u>0</u> = Total Cover OBL species <u>51</u> x 1 = <u>51</u>	-
Sapling/Shrub Stratum (Plot size: 15) FACW species 4 x 2 = 8	-
1 FAC species x3 =2	-
2. FACU species <u>11</u> x 4 = <u>44</u>	-
UPL species x 5 =	-
Column Totals: <u>70</u> (A) <u>115</u>	_ (B)
5. Prevalence Index = B/A = <u>1.64</u>	_
6. Hydrophytic Vegetation Indicators:	
7 I - Rapid Test for Hydrophytic Vegetation	
0 = Total Cover 2 - Dominance Test is >50%	
Herb Stratum (Plot size: 5) $5 = 100000000000000000000000000000000000$	
<u>Herb Stratum</u> (Plot size)	orting
1. <u>Julicus ci. brevicaudalus</u> <u>20</u> <u>1</u> <u>ODL</u> data in Remarks of on a separate sheet)	2)
	1)
3. <u>Juncus effusus</u> <u>10</u> <u>N</u> <u>OBL</u> ¹ Indicators of hydric soil and wetland hydrology r	iust
4. <u>Lotus corniculatus</u> <u>8</u> <u>N</u> <u>FACU</u> be present, unless disturbed or problematic.	
5. <u>Phalaris arundinacea</u> <u>4</u> <u>N</u> <u>FACW</u> Definitions of Vegetation Strata:	
6. Lythrum salicaria 4_ N_ OBL Tree - Woody plants 3 in (7.6 cm) or more in dia	meter
7. <u>Equisetum arvense</u> <u>4</u> <u>N</u> <u>FAC</u> at breast height (DBH), regardless of height.	meter
8. <u>Dactylis glomerata</u> <u>3</u> <u>N</u> <u>FACU</u> <u>Sapling/shrub</u> – Woody plants less than 3 in. DE	3H
9 and greater than or equal to 3.28 ft (1 m) tall.	
10 Herb – All herbaceous (non-woody) plants, regar	dless
11 of size, and woody plants less than 3.28 ft tall.	
12. Woody vines – All woody vines greater than 3.2	3 ft in
70 = Total Cover	
Woody Vine Stratum (Plot size: 30)	
1	
·· <u> </u>	
3 Hydrophytic	
4 Present? Yes <u>✓</u> No	
U = Total Cover	
The feature is a wet meadow dominated by narrow-panicled rush and mosquito bulrush. The sat	nple
plot appears to be representative of the feature	

Depth Matrix	Redox Features	_
(inches) Color (moist) %	<u>Color (moist)</u> <u>%</u> <u>Type¹</u> Loc ²	Texture Remarks
Type: C=Concentration, D=Depletion, RM:	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soli Indicators: 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)
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 (A12)	Depieted Matrix (F3) 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 149E
Sandy Gleyed Matrix (S4) Sandy 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 Surface (S7) (LRR R, MLRA 149E	3)	_∠_ Other (Explain in Remarks)
Indicators of hydrophytic vegetation and we	etland hydrology must be present, unless disturbe	d or problematic.
³ Indicators of hydrophytic vegetation and we Restrictive Layer (if observed):	etland hydrology must be present, unless disturbe	d or problematic.

Remarks:

Soils were not sampled due to the potential for underground utilities near the roads and buildings. Soils are assumed to be hydric based on the geomorphic position and the dominance of hydrophytic vegetation.



wasc1059e_w_NW



wasc1059e_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):		
wasc1059	2020-06-10		
Location:	Ecological Landsca	ape:	
PLSS: sec 03 T047N R004W	Superior Coastal Plain		
Lat: <u>46.587640</u> Long: <u>-90.863489</u>	Watershed:		
	LS08, FISh Creek		
County: <u>Ashland</u> Town/City/Village: <u>AShland City</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Udorthents and Udipsamments, cut or fill	Wetland Type(s):		
	PEM - Fresh (wet) meadow		
Field Verified:	, ,	,	
Series were not verified. Soils were not sampled due to the	Wetland Size:	Wetland Area Impacted	
proximity of the wetland to a structure and potential to encounter	0.0695	0.0695	
geomorphic position and the dominance of hydrophytic vegetation.	Vegetation:	-	
	Plant Community Description(s):		
Hydrology:	The feature is a wet meadow dominated by cf. narrow-panicled rush and cf. mosquito bulrush. The vegetation is fairly uniform		
The feature is a saturated depression surrounded			
by gravel driveways, and exhibits recharge			
hydrology			
	throughout the fe	eature.	

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	N	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	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 <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	Ν	N	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present <u>> 45</u> days
10	Ν	N	Standing water provides habitat for amphibians and aquatic invertebrates
11	Ν	N	Seasonally exposed mudflats present
12	Ν	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	N	N	Wetland is connected or contiguous with perennial stream or lake
2	N	N	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	N	Vegetation is inundated in spring
SP			Shoreline Protection
1	N	N	Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable
2	N	Ν	Potential for erosion due to wind fetch, waves, heavy boat traffic, erosive soils, fluctuating
2		N	Dependence of high flows – If ho, hot applicable
ст СТ	IN	IN	Storm and Eloodwater Storage
1	N	V	Basin wetland, constricted outlet, has through-flow or is adjacent to a stream
2	IN N	I V	Water flow through wetland is NOT channelized
3		v v	Dense persistent vegetation
4	N	N	Evidence of flashy hydrology
5	N	N V	Point or non-point source inflow
6	N	N	Impervious surfaces cover >10% of land surface within the watershed
7	N	N	Within a watershed with <10% wetland
8	N	N	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	N	N	Provides substantial storage of storm and floodwater based on previous section
2	N	Y	Basin wetland <u>or</u> constricted outlet
3	Ν	Y	Water flow through wetland is NOT channelized
4	Ν	N	Vegetated wetland associated with a lake or stream
5	Y	Y	Dense, persistent vegetation
6	Ν	Ν	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	N	Stormwater or surface water from agricultural land is major hydrology source
8	N	N	Discharge to surface water
9	Ν	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	Ν	Ν	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	Ν	Wetland soils are organic
5	Ν	N	Wetland is within a wellhead protection area

ST-5: The wetland is a depression surrounded by gravel driveways and likely receives stormwater from the driveways. WQ-5: The wetland is densely vegetated.

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

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

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)
Juncus cf. brevicaudatus*			PEM	Rare
Scirpus cf. hattorianus*			PEM	Rare
Juncus effusus*			PEM	Rare
Lotus corniculatus*			PEM	Rare
Tanacetum vulgare*			PEM	Rare
Carex stipata			PEM	Rare
Phalaris arundinacea			PEM	Rare
Trifolium repens			PEM	Rare
Equisetum arvense			PEM	Rare
Lythrum salicaria			PEM	Rare
Salix eriocephala			PEM	Rare
Dactylis glomerata			PEM	Barren
Eleocharis sp.			PEM	Barren
Leucanthemum vulgare			PEM	Barren
Plantago major			PEM	Barren
Lysimachia ciliata			PEM	Barren

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

The feature has a high abundance of invasive species.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
	Х		М	С	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		L	С	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					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			C	Removal of herbaceous stratum – mowing,
	^		L	U	grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
					unprescribed fire
	Х		M	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
Х	Х		M	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)

The feature is surrounded by gravel driveways; fill may have been used in their construction. The wetland has a high abundance of non-native invasive species which have degraded the wetland's floristic integrity.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The wetland has a high coverage of non-native species.
Human Use Values	The wetland is located on private land.
Wildlife Habitat	The wetland only has a single stratum. Birds, insects (e.g. pollinators), and/or mammals may use the wetland 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 likely receives and absorbs stormwater from the surrounding gravel driveways.
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.	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

City/County: Ashland Sampling Date: 2020-06-10
State: <u>Wisconsin</u> Sampling Point: <u>wasc1059_u</u>
Section, Township, Range: <u>sec 03 T047N R004W</u>
cal relief (concave, convex, none): <u>None</u> Slope (%): <u>0-2%</u>
8Long: <u>-90.863753</u> Datum: <u>WGS84</u>
cut or fill NWI classification:
ear? Yes 🗹 No (If no, explain in Remarks.)
/ disturbed? Are "Normal Circumstances" present? Yes 🖌 No
oblematic? (If needed, explain any answers in Remarks.)
g sampling point locations, transects, important features, etc.
Is the Sampled Area
If yes, optional Wetland Site ID:
vel road. The area is dominated by non-native

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply)	0 2	Secondary Indicators (minimum of two required)				
Frinary 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 <u>v</u> Depth (inches):						
Water Table Present? Yes <u>Ves</u> No <u>v</u> Depth (inches):						
Saturation Present? Yes <u>Ves</u> Depth (inches):	Wetland Hy	/drology Present? Yes No				
(Includes capillary minde)		Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if avail	able:				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if avail	able:				
(includes capillary fingle) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if avail	able:				
Remarks:	tions), if avail	able:				
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:				
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:				
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:				
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:				
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:				
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:				
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:				
Remarks: No indicators of wetland hydrology were observed.	l tions), if avail	able:				
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:				
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:				

VEGETATION – Use scientific names of plants.

Sampling Point: wasc1059_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominar	It Indicator	Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2				Tatal 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 =0
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>5</u> x 2 = <u>10</u>
1				FAC species x 3 =
··				FACU species <u>84</u> x 4 = <u>336</u>
Z				UPL species x 5 =
3				Column Totals: <u>89</u> (A) <u>346</u> (B)
4				Prevalence Index = B/A = <u>3.8876404494382024</u>
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
/:				2 - Dominance Test is >50%
_		= Total Co	over	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. Lotus corniculatus	50	<u> </u>	FACU	data in Remarks or on a separate sheet)
2. <u>Cirsium arvense</u>	10	<u> N</u>	<u>FACU</u>	Problematic Hydrophytic Vegetation' (Explain)
3. <u>Tanacetum vulgare</u>	10	N	<u>FACU</u>	¹ Indicators of hydric soil and watland hydrology must
4. <u>Melilotus officinalis</u>	5	N	<u>FACU</u>	be present, unless disturbed or problematic.
5. <i>Phalaris arundinacea</i>	5	N	FACW	Definitions of Vegetation Strata:
6. <u>Elymus repens</u>	5	N	FACU	
7. Plantago maior	2	Ν	FACU	at breast height (DBH) regardless of height
8 Ambrosia artemisiifolia	2	N	FACU	
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb. All herbasseus (nen weedu) plante, regerdless
10				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
12	80	- Total C		height.
Manda Mine Obstance (Plat size 20			Jvei	
. (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.)			
	erroad.			

nches) Color (moist) %	Redu	x Features	3				
	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
		·		·	·		
		·		<u> </u>			
		·		·			
		·		<u> </u>			
		. <u> </u>					
· · · ·		·		·			
		·		<u> </u>			
ype: C=Concentration, D=Depletion, RM=	Reduced Matrix, MS	S=Masked	Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix.	
dric Soil Indicators:					Indicators for	or Problematic Hydric Soils ³	:
Histosol (A1)	Polyvalue Below	w Surface	(S8) (LR	RR,	2 cm Mu	uck (A10) (LRR K, L, MLRA 1 4	49B)
Histic Epipedon (A2)	MLRA 149B))			Coast P	rairie Redox (A16) (LRR K, L,	R)
Black Histic (A3)	Thin Dark Surfa	ice (S9) (L	.RR R, M	LRA 149B)	5 cm Mu	ucky Peat or Peat (S3) (LRR K	ζ, L , Ι
_ Hydrogen Sulfide (A4)	Loamy Mucky N	/lineral (F1) (LRR K	, L)	Dark Su	irface (S7) (LRR K, L)	
_ Stratified Layers (A5)	Loamy Gleyed I	Matrix (F2)		Polyvalu	Je Below Surface (S8) (LRR K	., L)
_ Depleted Below Dark Surface (ATT)	Depleted Matrix	(F3) faco (E6)			Inin Dai	rk Surrace (S9) (LRR N, L)	k I
Sandy Mucky Mineral (S1)	Redux Dark Su	Surface (F	7)		Piedmor	nt Floodplain Soils (F19) (MI R	Ω, ⊑, ΩΔ 1Δ
Sandy Gleved Matrix (S4)	Redox Depress	ions (F8)	,,		Mesic S	podic (TA6) (MLRA 144A, 145	5. 149
Sandy Redox (S5)	· · · · · · · · · · · · · ·	(Red Par	rent Material (F21)	.,
_ Stripped Matrix (S6)					Very Sh	allow Dark Surface (TF12)	
Dark Surface (S7) (LRR R, MLRA 149B)				Other (E	Explain in Remarks)	
ndicators of hydrophytic vegetation and we	tland hydrology mus	t be prese	ent, unless	s disturbed o	or problematic.		
estrictive Layer (if observed):							
Туре:							
Depth (inches):					Hydric Soil P	Present? Yes <u>No</u>	~
emarks:							
ould not sample soil due to t	he roadside lo	ocation	. Soils	are ass	umed to h	o non-hydric based	on



wasc1059_u_N



wasc1059_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation	Project	City/County: Ashland	Samp	oling Date: <u>2020-06-10</u>
Applicant/Owner: Enbridge			State: Wisconsin Sa	mpling Point: <u>wasc1060e_w</u>
Investigator(s): <u>EJO/JSW</u>		Section, Township, Range: <u>S</u>	ec 03 T047N R0)4W
Landform (hillslope, terrace, etc.): De	pression	_ Local relief (concave, convex, no	ne): <u>Concave</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcent	ral Forests Lat: 46.587	'843 Long: <u>-9</u> (0.863832	Datum: WGS84
Soil Map Unit Name: Udorthents	and Udipsamment	s, cut or fill	NWI classification:	
Are climatic / hydrologic conditions on	the site typical for this time	of year? Yes 🖌 No	(If no, explain in Remark	s.)
Are Vegetation, Soil, or	· Hydrology signific	antly disturbed? Are "Norma	I Circumstances" present	? Yes 🖌 No
Are Vegetation, Soil, or	⁻ Hydrology natural	y problematic? (If needed,	explain any answers in R	emarks.)
SUMMARY OF FINDINGS -	Attach site map show	ving sampling point location	ons, transects, imp	ortant features, etc.
I hadron ha tin Manatatian Dava anto		Is the Sampled Area		
Hydrophytic Vegetation Present?	Yes V No	within a Wetland?	Yes 🖌 N	o
Wetland Hydrology Present?	Yes 🖌 No	If ves optional Wetland	d Site ID [.]	
Remarks: (Explain alternative proceed	lures here or in a separate	report.)		
The feature is a saturated	wet meadow don	ninated by narrow-panio	cled rush and cat	tails. The feature
is a depression located w	ithin a ditch and re	eceives drainage from a	i culvert.	
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators (n	ninimum of two required)
Primary Indicators (minimum of one is	s required; check all that ap	ply)	Surface Soil Cracks	s (B6)
Surface Water (A1)	🖌 Water-Stai	ined Leaves (B9)	Drainage Patterns	(B10)
High Water Table (A2)	Aquatic Fa	iuna (B13)	Moss Trim Lines (B	16)
Saturation (A3)	Marl Depo	sits (B15)	Dry-Season Water	Table (C2)
Water Marks (B1)	Hydrogen	Sulfide Odor (C1)	Crayfish Burrows ((8)
Sediment Deposits (B2)	Ovidized F	hizospheres on Living Roots (C3)	Saturation Visible of	n Aerial Imagery (C9)

Water Marks (B1)	Hydrogen Sulfide Odor (C) 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 T	illed 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 <u>No</u> (includes capillary fringe)	Depth (inches):	Wetland Hydrology Present? Yes <u> </u>
Describe Recorded Data (stream gauge, monitor	ing well, aerial photos, previous	inspections), if available:

Remarks:

The feature is a seasonally saturated depression that exhibits recharge hydrology. Standing water is present in part of the wetland, but not at the sample point; precipitation occurred a few hours before the survey. The feature is located in a ditch adjacent to a gravel driveway and receives drainage from a culvert.

VEGETATION – Use scientific names of plants.

Sampling Point: wasc1060e_w

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species
2				That Are OBL, FACW, or FAC: (A)
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:
Capling (Charle Strature (Distaire) 15		= Total Cov	/er	OBL species $61 \times 1 = 61$
<u>Sapling/Shrub Stratum</u> (Plot size: <u>13</u>)	10	V		FAC species $5 \times 3 = 15$
1. <u>Allius Incana</u>	<u></u>	 		FACU species <u>10</u> x 4 = <u>40</u>
		<u> </u>	FACW	UPL species x 5 =
3				Column Totals: <u>88</u> (A) <u>140</u> (B)
4				Prevalence Index = B/A = <u>1.5909090909090908</u>
6.				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
	12	= Total Cov	/er	∠ 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is ≤3.0 ¹
1. Juncus cf. brevicaudatus	30	Y	OBL	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Juncus effusus	9	N	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Typha sp.	9	Y	OBL	
4. Poa pratensis	8	N	FACU	¹ Indicators of hydric soil and wetland hydrology must
5. Scirpus cf. hattorianus	7	N	OBL	Definitions of Vegetation Strata:
6. Equisetum arvense	5	Ν	FAC	
7. <u>Carex stipata</u>	3	Ν	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8. <u>Lythrum salicaria</u>	3	N	OBL	Sanling/chrub – Woody plants less than 3 in DBH
9. <u>Tanacetum vulgare</u>	2	Ν	FACU	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
	76	= Total Cov	/er	height.
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.)		olod w	uch and activity. The facture is
herdered by a parrow band of shrubs to	a by na	rtbwost	of the s	ample plot

(inches) Color (moist) %	Color (moist)	% Type ¹	Loc ²	Texture	Remarks
<u> </u>					
		·			
		·			
			<u> </u>		
			<u> </u>		
······································					
Type: C=Concentration, D=Depletion, R	M=Reduced Matrix, MS	=Masked Sand G	rains.	² Location: PL=F	Pore Lining, M=Matrix.
lydric Soil Indicators:				Indicators for Pro	blematic Hydric Soils ³ :
Histosol (A1)	Polyvalue Below	/ Surface (S8) (LR	RR,	2 cm Muck (A	10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	MLRA 149B)			Coast Prairie	Redox (A16) (LRR K, L, R)
Black Histic (A3)	Thin Dark Surface	ce (S9) (LRR R, N	ILRA 149B)	5 cm Mucky F	Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)	Loamy Mucky M	lineral (F1) (LRR I	K , L)	Dark Surface	(S7) (LRR K, L)
Stratified Layers (A5)	Loamy Gleyed N	/latrix (F2)		Polyvalue Bel	ow Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11)	Depleted Matrix	(F3)		Thin Dark Sur	face (S9) (LRR K, L)
Thick Dark Surface (A12)	Redox Dark Sur	face (F6)		Iron-Mangane	ese Masses (F12) (LRR K, L, R
Sandy Mucky Mineral (S1)	Depleted Dark S	Surface (F7)		Piedmont Floor	odplain Soils (F19) (MLRA 149
Sandy Gleyed Matrix (S4)	Redox Depressi	ons (F8)		Mesic Spodic	(TA6) (MLRA 144A, 145, 149B
Sandy Redox (S5)				Red Parent M	aterial (F21)
Stripped Matrix (S6)				Very Shallow	Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 14	9B)			✓ Other (Explain	n in Remarks)
Indiantary of hydrophytic vegetation and	watland by dralagy must	the present uples	a diaturhad	or problematic	
Indicators of Hydrophytic vegetation and	wettand hydrology musi	t be present, unles	s disturbed	or problematic.	
Turner					
Туре:					
Depth (inches):				Hydric Soil Preser	nt? Yes <u> </u>
Remarks:					
Soils were not sampled due	to the potential	for undergro	ound utili	ties near an o	ccupied structure and
ravel driveway Soils are a	ssumed to be hy	vdric based	on the a	eomorphic pos	sition and the
lominance of hydrophytic y	antation		en alo g		
	systation.				



wasc1060e_w_NE



wasc1060e_w_SW

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

WETLAND IDENTIFICATION				
Project name:	Evaluator(s):			
Line 5 Relocation Project	EJO/JSW			
File #:	Date of visit(s):			
wasc1060	2020-06-10			
Location:	Ecological Landsca	ipe:		
PLSS: <u>sec 03 T047N R004W</u>	Superior Coastal Plain			
Lat: <u>46.587838</u> Long: <u>-90.863842</u>	Watershed: LS08, Fish Creek			
County: <u>Ashland</u> Town/City/Village: <u>Ashland city</u>				
SITE DESCRIPTION				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Udorthents and Udipsamments, cut or fill	Wetland Type(s):			
	PEM - Fresh (wet) meadow			
Field Verified:				
the wetland to an occupied structure and gravel driveway, and potential to	Wetland Size:	Wetland Area Impacted		
encounter underground utilities. Soils are assumed to be hydric based on	0.0234	0.0234		
geomorphic position and the dominance of hydrophytic vegetation.	Vegetation:			
Hydrology	Plant Community D	escription(s):		
The feature is a saturated depression that exhibits recharge hydrology	The feature is a wet meadow dominated by			
Standing water is present in part of the wetland; precipitation had occurred	narrow-panicled	narrow-panicled rush and cattails. The feature		
a few hours before the survey. The feature receives drainage from culvert cvasc1014, and the feature is in a ditch adjacent to a gravel driveway.	is bordered by a narrow band of shrubs to the			
	norunwest.			

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	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 <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
8	N	N	Part of a large habitat block that supports area sensitive species
0		N	For the second with water present > 45 days
10	IN N		Standing water provides habitat for amphibians and aquatic invertebrates
10	IN N	T N	Seasonally exposed mudflate present
12	IN N	IN NI	Provides babitat scarce in the area (urban, agricultural, etc.)
	IN	IN	Fish and Aquatic Life Habitat
	NI	NI	Wetland is connected or contiguous with perceptial stream or lake
2	IN N	IN X	Standing water provides habitat for amphibians and aquatic invertebrates
2	IN NI	Y NI	Natural Haritaga Investory (NHI) listed aquatic aposics within aquatic system
3	IN N	N N	
4	N	Ý	Sharaling Protection
3P	N 1	N	Shoreline Protection
- 1	N	N	Along shoreline of a stream, lake, pond of 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
2	NI	NI	Dependent reversion of the second sec
о Ст	IN	IN	Storm and Eleadwater Storage
1	V	V	Basin watland, constricted outlet, has through flow or is adjacent to a stream
2	Y N	ř V	Water flow through wetland is NOT channelized
2		ř V	
3	Ý NI	Y NI	Evidence of floopy
4	IN X		Deint er nen neint eguree inflew
5	Ý NI	Y NI	Found of hom-point source innow
7	IN N	IN N	Within a watershed with <10% or land surface within the watershed
- /	IN N	IN N	$\frac{1}{2}$
0	IN	IN	Water Quality Protection
1	NI	NI	Provides substantial storage of storm and floodwater based on providus soction
2			Resin wetland or constricted outlet
2	IN NI	ř V	Water flew through wetland in NOT channelized
3	IN NI	Y NI	Vegeteted wetland essesiated with a lake or stream
4	IN X	IN N	
5	Y	Ý	Cigne of evenes putriante, such as along blogme, begun meansplute growth
0	N	N	Signs of excess numerics, such as algae blooms, neavy macrophyte growin
/	N	N	Stormwater of surface water from agricultural land is major hydrology source
0	N	N	Discharge to suitable water
9	N	N	Natural land cover in Toom buller 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 ditch and receives stormwater from an adjacent driveway and drainage from a culvert. FA-2: The wetland had standing water at the time of survey, which may support aquatic life.

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

Observed	Potential	Species/Habitat/Comments
	Y	Bird, 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, Conservative species
	invasive species	reduced native species	assemblage of native 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,
lunque ef broviegudatue*			DEM	Abundance)
				Paro
				Bara
				Bara
Pop protopsis				Bara
Scirpus of battorianus				Bara
Equicotum anyonso				Bara
				Barron
				Barron
Salix babbiana				Barron
Barbaroa vulgaria				Barron
				Barron
				Barron
Parthenocissus inserta				Barron
Partiferiocissus inserta				Barron
Salix petiolaris				Barron
				Barron
				Dallell
		1		

SUMMARY OF FLORISTIC INTEGRITY (Include general comments on plant communities) The wetland has a high abundance of non-native species.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
X	Х		М	С	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		М	С	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					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			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
	Х		M	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)

The feature is located in a ditch adjacent to a gravel driveway; fill may have been used to construct the driveway. The wetland receives drainage from a culvert. The wetland has a high abundance on invasive species that have degraded its floristic integeity.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The wetland has a high coverage of non-native species.
Human Use Values	The wetland is on private land.
Wildlife Habitat	The wetland mainly has a single stratum. Birds, insects (e.g. pollinators), and/or mammals may use the wetland at times.
Fish and Aquatic Life Habitat	Standing water observed in the wetland may support aquatic life at times.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland likely receives and absorbs stormwater from the surrounding gravel driveways. The wetland also receives drainage from a culvert.
Water Quality Protection	The wetland has dense, persistent vegetation. Vegetative litter present in the wetland may help slow the flow of water through the wetland.
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:	ity/County: Ashland Sampling Date: 2020				
Applicant/Owner: Enbridge		State: V	lisconsin Sampling Point: wasc1060_u			
Investigator(s): JSW/EJO	Section, Tow	nship, Range: <u>sec 03 T</u>	047N R004W			
Landform (hillslope, terrace, etc.): Talf	Local relief (con	ave, convex, none): <u>Non</u>	B Slope (%): 0-2%			
Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.587775</u> Long: <u>-90.863976</u> Datum: <u>WGS84</u>						
Soil Map Unit Name: Udorthents and Udipsamments, cut or fill NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time	e of year? Yes <u></u>	No (If no, expla	iin in Remarks.)			
Are Vegetation, Soil, or Hydrology signifi	cantly disturbed?	Are "Normal Circumsta	nces" present? Yes 🖌 No			
Are Vegetation, Soil, or Hydrology natura	ally problematic?	(If needed, explain any	answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map sho	wing sampling	point locations, tran	sects, important features, etc.			
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	✓ Is the ✓ Uf ves	Sampled Area a Wetland? Yes	No			
Remarks: (Explain alternative procedures here or in a separate The upland sample point is located near a species.	gravel road.	The area is domina	ited by non-native			

HYDROLOGY

Wetland Hydrology Indicators:	Se	econdary 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	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 <u>No</u> Depth (inches):		
Saturation Present? Yes No <u>v</u> Depth (inches):	Wetland Hyd	Irology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if availal	ble:
No indicators of wetland hydrology were observed.		

VEGETATION – Use scientific names of plants.

Sampling Point: wasc1060_u

	Absolute	Dominar	nt Indicator	Dominance Test worksheet:
<u>Iree Stratum</u> (Plot size: <u>30</u>)	% Cover	Species	<u>? Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Tatal Number of Daminant
3				Species Across All Strata: 2 (B)
				()
4				Percent of Dominant Species That Are OPL EACW or EAC: \mathbf{O} (A/P)
5				$\begin{array}{c} \text{matrice OBL, FACW, OFFAC.} \\ \underline{\mathbf{U}} \\ \end{array} $
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	over	OBI species 0 x 1 = 0
Conting (Christian (Distaine) 15		rotar ov		EACW species $10 \times 2 = 20$
<u>Saping/Shrub Stratum</u> (Piot size. 15)				$\frac{1}{10} \times 2 = 20$
1				$\frac{1}{1} = \frac{1}{1} = \frac{1}$
2				FACU species 73 x 4 - 300
3				$\begin{array}{c} \text{OPL species} \underline{5} x \underline{5} = \underline{25} \\ \text{Opluses Tatalax} \underline{00} (A) \underline{245} (B) \end{array}$
4				Column lotals: <u>90</u> (A) <u>345</u> (B)
				Prevalence Index = B/A = 3.8333333333333333333
5				
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co	over	2 - Dominance Test is >50%
Harb Stratum (Plat aiza: 5				3 - Prevalence Index is $≤3.0^1$
	00	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Lotus corniculatus</u>		<u> </u>	FACU	data in Remarks or on a separate sheet)
2. <u>Trifolium hybridum</u>	25	<u> </u>	<u>FACU</u>	Problematic Hydrophytic Vegetation (Explain)
3. <u>Tanacetum vulgare</u>	10	N	FACU	1
4 Melilotus officinalis	10	N	FACU	Indicators of hydric soil and wetland hydrology must
Agrostic gigantoa	<u> </u>	 N		
5. <u>Agrostis gigantea</u>				Definitions of Vegetation Strata:
6. <u>Daucus carota</u>	5	N		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Solidago gigantea</u>	5	N	FACW	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				
				of size, and woody plants less than 3.28 ft tall.
11				
12				Woody vines – All woody vines greater than 3.28 ft in bound
	90	= Total Co	over	neight.
Woody Vine Stratum (Plot size: 30)				
1				
··				
2				
3				Hydrophytic
4				Vegetation Present? Yes No v
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)			
The sample plot is located near a grave	el road.			

(inches)			Redo	x Feature	s				
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remar	ks
	<u> </u>			·					
				·					
<u>.</u>	·			·			· ·		
		<u> </u>							
	· ·			·					
	<u> </u>	<u> </u>		· . <u></u>		·			
				·					
				·		· ·			
		<u> </u>		·		<u> </u>			
Type: C=Conce	entration, D=Deple	etion, RM=F	Reduced Matrix, MS	S=Masked	I Sand Gr	ains.	² Location:	PL=Pore Lining, M=	Matrix.
ydric Soil Indi	cators:			. <i>.</i>			Indicators fo	or Problematic Hyd	ric Soils":
_ Histosol (A1) dan (A2)	_	Polyvalue Below	w Surface	(S8) (LR	RR,	2 cm Mu	ICK (A10) (LRR K, L,	
Black Histic	(A3)		Thin Dark Surfa) ICE (S9) (1		I RA 149R)	5 cm Mu	icky Peat or Peat (S	-RRR, L, R) 3) (IRRK I R
Hvdrogen Si	ulfide (A4)	_	Loamy Mucky N	/lineral (F	1) (LRR K	(.L)	Dark Sur	rface (S7) (LRR K. I	_) (ERR R, E, R
Stratified La	yers (A5)	_	Loamy Gleyed I	Matrix (F2	2)	, ,	Polyvalu	e Below Surface (St	, 3) (LRR K, L)
Depleted Be	low Dark Surface	(A11)	Depleted Matrix	(F3)			Thin Dar	k Surface (S9) (LRF	R K, L)
Thick Dark S	Surface (A12)	_	Redox Dark Su	rface (F6)			Iron-Mar	nganese Masses (F1	2) (LRR K, L, F
Sandy Muck	y Mineral (S1)	_	_ Depleted Dark S	Surface (F	7)		Piedmon	nt Floodplain Soils (F	⁻ 19) (MLRA 14 9
_ Sandy Gleye	ed Matrix (S4)	-	Redox Depress	ions (F8)			Mesic Sp	podic (TA6) (MLRA	144A, 145, 149
Sandy Redo Strippod Ma	X(S5)						Red Pare	ent Material (F21)	TE12)
_ Suippeu Ma	(117 (30) e (S7) (IRRR MI	RA 149B)					Other (F	anow Dark Surface (Explain in Remarks)	1612)
ndicators of hyd	drophytic vegetatic	on and wetl	and hydrology mus	t be prese	ent, unles	s disturbed o	or problematic.		
estrictive Laye	er (if observed):								
Туре:									
Depth (inches	s):						Hydric Soil P	resent? Yes	No 🖌
emarks:									
could not s	ample soil d	lue to th	ne proximity t	o the r	oad ar	nd occur	bied structu	ures. Soils are	assumed
	ric based on	the lar	decane nosi	tion or		in out of			



wasc1060_u_N



wasc1060_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City	//County: <u>Ashland</u> Sampling Date: <u>2020-06-10</u>				
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasc1061e_w				
Investigator(s): EJO/JSW Se	Section, Township, Range: Sec 03 T047N R004W				
Landform (billslope terrace etc.): Depression	relief (concave convex none): Concave Slope (%): 0-2%				
Subregion (I BR or MI BA): Northcentral Forests Lat: 46 587375	Long: -90.862898 Datum: WGS84				
Soil Map Linit Name: I Idorthents and I Idinsamments cut	Or fill NWI classification:				
Are alimettic / hudrele ris conditions on the site turical for this time of user?					
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 <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	ampling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes 🖌 No	Is the Sampled Area				
Hydrophyllo Vegetation recent?	within a Wetland? Yes <u>v</u> No				
Wetland Hydrology Present? Yes V No	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)					
The feature is a saturated wet meadow dominate	d by rushes. The feature is a depression within a				
ditch adjacent to a gravel road associated with a	retired lumber yard. The feature drains into a				
culvert.					
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	ves (B9) Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B1	3) Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15	5) Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide (Ddor (C1) Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizosph	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduc	ced Iron (C4) Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Reduc	tion in Tilled Soils (C6) _ Geomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface	(C7) Shallow Aguitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in F	Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	✓ FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes 🗸 No Depth (inches): 4					
Water Table Present? Yes No 🗸 Depth (inches):					
Saturation Present? Yes No 🗸 Depth (inches):	Wetland Hydrology Present? Yes 🗸 No				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:				
Remarks:					
The feature is a seasonally saturated depression	with standing water observed at the time of survey.				
The depression is located at the edge of a grave	driveway and is in a ditch. The feature drains into a				

VEGETATION – Use scientific names of plants.

Sampling Point: wasc1061e_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator	Dominance Test worksheet:	
1.				Number of Dominant Species	(A)
2.					
3.				Species Across All Strata: <u>2</u> ((B)
4				Percent of Dominant Species	
5				That Are OBL, FACW, or FAC: <u>100</u> ((A/B)
6				Prevalence Index worksheet	
7	<u> </u>			Total % Cover of: Multiply by:	
	0	= Total Co	ver	OBL species <u>60</u> x 1 = <u>60</u>	
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =	
1.				FAC species x 3 =	
2				FACU species x 4 =	
3			·	UPL species x 5 =	
3				Column Totals: <u>60</u> (A) <u>60</u>	(B)
45				Prevalence Index = $B/A = 1.00$	<u>.</u>
6.				Hydrophytic Vegetation Indicators:	
7				1 - Rapid Test for Hydrophytic Vegetation	
··	0	= Total Co		2 - Dominance Test is >50%	
Horb Stratum (Plot aize: 5			VEI	$_$ 3 - Prevalence Index is ≤3.0 ¹	
1 Elopoborio polustrio	20	V		4 - Morphological Adaptations ¹ (Provide support	orting
1. <u>Eleocharis palustris</u>	<u> </u>	 		Problematic Hydrophytic Vegetation ¹ (Evplain))
		 			,
3. <u>Juncus effusus</u>	<u> </u>	<u>IN</u>		¹ Indicators of hydric soil and wetland hydrology mu	ust
4. <u>Scirpus ci. nattorianus</u>	<u> </u>	<u>IN</u>		be present, unless disturbed or problematic.	
5. <u>Alisma triviale</u>	4	<u> </u>		Definitions of Vegetation Strata:	
6. <u>Carex vulpinoidea</u>	4	<u> </u>		Tree – Woody plants 3 in. (7.6 cm) or more in diam	neter
7. <u>Lythrum salicaria</u>	2	<u> N </u>	OBL	at breast height (DBH), regardless of height.	
8			·	Sapling/shrub – Woody plants less than 3 in. DBH	н
9				and greater than or equal to 3.28 ft (1 m) tall.	
10				Herb – All herbaceous (non-woody) plants, regard	less
11			·	of size, and woody plants less than 3.28 ft tall.	
12				Woody vines – All woody vines greater than 3.28	ft in
	60	= Total Co	ver	neight.	
Woody Vine Stratum (Plot size: <u>30</u>)					
1					
2					
3				Hydrophytic	
4.				Vegetation	
	0	= Total Co	ver	Present? Yes <u>v</u> No	
Remarks: (Include photo numbers here or on a separate	sheet.)				
The feature is a wet meadow dominate	d by rus	shes. Ca	attails (1	lypha sp.) become dominant southe	east
or the sample plot.					ſ

	Matrix		Redo	x Features	3					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
		· ·		·			_			
		·								
		· ·		·		······································				
		· ·		·		·				
		· ·		·						
		· ·		·						
		· ·								
Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location:	PL=Pore L	ining, M=Mat	rix.
ydric Soil	Indicators:		,				Indicators for	or Problen	natic Hydric	Soils ³ :
Histosol	l (A1)		Polyvalue Belov	v Surface	(S8) (LRF	RR,	2 cm Mu	uck (A10) (I	LRR K, L, ML	RA 149B)
Histic E	pipedon (A2)				. , .		Coast P	rairie Redo	x (A16) (LRR	K, L, R)
Black H	istic (A3)		Thin Dark Surfa	ce (S9) (L	.RR R, MI	LRA 149B)	5 cm Mu	ucky Peat o	or Peat (S3) (I	RR K, L, R
Hydroge	en Sulfide (A4)		Loamy Mucky M	lineral (F1) (LRR K	, L)	Dark Su	rface (S7)	(LRR K, L)	
Stratifie	d Layers (A5)		Loamy Gleyed I	Matrix (F2)		Polyvalu	e Below S	urface (S8) (L	.RR K, L)
Deplete	d Below Dark Surface	e (A11)	Depleted Matrix	: (F3)			Thin Da	rk Surface	(S9) (LRR K,	L)
Thick Da	ark Surface (A12)		Redox Dark Sui	face (F6)			Iron-Mar	nganese M	asses (F12) (LRR K, L, F
Sandy N	Mucky Mineral (S1)		Depleted Dark S	Surface (F	7)		Piedmor	nt Floodpla	in Soils (F19)	(MLRA 149
_ Sandy C	Gleyed Matrix (S4)		Redox Depress	ions (F8)			Mesic S	podic (TA6) (MLRA 144	A, 145, 149E
Sandy F	Redox (S5)						Red Par	ent Materia	аl (F21) Оштаас (ТГ4	2)
_ Stripped	n Matrix (S6)						Very Sn	allow Dark	Surface (IF1	2)
_ Dark Su		ILKA 149D)					хріані н к	emarks)	
ndicators o	of hydrophytic vegetat	ion and we	tland hydrology mus	t he nrese	nt unless	s disturbed (or problematic			
	I aver (if observed):		tiand hydrology mus	t be plese	int, unicoa		problematic.			
Tures	Layer (il observeu).									
Type:										
Depth (in	iches):						Hydric Soil P	resent?	Yes 🔽	NO
• •										
emarks:						انبياه متصلك	AL 1		LAD The	soils are
emarks: he soils	s were not san	npled du	ue to the locat	tion of	the we	etiand wi	thin a road	dside di	iich. The	
emarks: he soils ssumed	s were not san d to be hvdric l	npled du based o	ue to the locat on the hvdrolo	tion of av and	the we domir	nance of	thin a road hvdrophv	dside di rtic vear	etation.	
emarks: he soils ssumed	s were not san d to be hydric l	npled du based o	ue to the locat on the hydrolo	tion of gy and	the we domir	nance of	thin a road hydrophy	dside di rtic vegi	etation.	
emarks: he soils ssumed	s were not san d to be hydric l	npled du based o	ue to the locat on the hydrolo	tion of gy and	the we domir	nance of	thin a road hydrophy	dside di ⁄tic vegi	etation.	
emarks: he soils ssumed	s were not san d to be hydric l	npled du based o	ue to the locat on the hydrolo	tion of gy and	the we domir	nance of	thin a road hydrophy	dside di ⁄tic vegi	etation.	
emarks: he soils ssumed	s were not san d to be hydric l	npled du based o	ue to the locat on the hydrolo	tion of gy and	the we domir	nance of	thin a road hydrophy	dside di rtic vego	etation.	
iemarks: he soils ssumed	s were not san d to be hydric l	npled du based o	ue to the locat	tion of gy and	the we domir	nance of	thin a road hydrophy	dside di rtic vego	etation.	
iemarks: he soils ssumed	s were not san d to be hydric l	npled du based o	ue to the locat	tion of gy and	the we domir	nance of	thin a road	dside di rtic vegi	etation.	
emarks: he soils ssumed	s were not san d to be hydric l	npled du based o	ue to the locat	tion of gy and	the we domir	nance of	thin a road	dside di rtic vegi	etation.	
emarks: he soils ssumed	s were not san d to be hydric l	npled du based o	ue to the locat	tion of gy and	the we domir	nance of	thin a road	dside di rtic vegi	etation.	
emarks: ne soils ssumed	s were not san d to be hydric l	npled du based o	ue to the locat	tion of gy and	the we domir	nance of	thin a road	dside di rtic vegi	etation.	



wasc1061e_w_NW



wasc1061e_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):				
wasc1061	2020-06-10				
Location:	Ecological Landsca	ape:			
PLSS: sec 03 T047N R004W	Superior Coastal Plain				
Lat: <u>46.587353</u> Long: <u>-90.862899</u>	Watershed:				
	LS08, Fish Creek				
County: <u>Ashland</u> Town/City/Village: <u>AShland City</u>					
SITE DESCRIPTION	1				
Soils:	WWI Class:				
Mapped Type(s):	N/A				
Udorthents and Udipsamments, cut or fill	Wetland Type(s):				
	PEM - Fresh (wet) meadow				
Field Verified:					
Series were not verified. The soils were not sampled due to	Wetland Size:	Wetland Area Impacted			
the location of the wetland within a roadside ditch. The solis	0.1176	0.1176			
deminance of hydrophytic vegetation	Vegetation:				
	Plant Community Description(s):				
Hydrology:	The feature is a wet meadow dominated by cf.				
The feature is a saturated depression, with standing	hald spikerush a	and cf_narrow-panicled rush			
water observed at the time of survey. The depression is	Cattails (Typha	sp) become dominant in the			
located at the edge of a gravel driveway and is more or	Cattails (Typha)	sp.) become dominant in the			
less a ditch.	southeastern po				

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	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	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
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		Standing water provides habitat for amphibians and aquatic invertebrates
11	N	I N	Seasonally exposed mudflats present
12	IN N	N 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		Standing water provides babitat for amphibians and aquatic invertebrates
2	IN N	T N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
3	IN N	IN X	Vogotation is inundated in spring
4 SD	IN	ř	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	N	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	T N	T N	Water flow through wetland is NOT channelized
2			
3	T N	T N	Evidence of flashy hydrology
-			Doint or non point source inflow
5	Ý NI	Y 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	NI	Provides substantial storage of storm and floodwater based on providus soction
2		N N	Provides substantial storage of storm and hoodwater based on previous section
2	Ý NI	Y N	Water flew through wetland in NOT channelized
3	IN NI	IN N	Vegeteted wetland essesiated with a lake or stream
4	IN X	N N	
5	Y	Y 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	Signification of surface water from agricultural land is major hydrology source
8	N	N	Discharge to surface water
9	Y	Y	Inatural land cover in 100m putter area < 50%
GW			Groundwater Processes
1	N	N	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	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 wetland is a depression within a ditch and likely receives stormwater from the adjacent gravel road. FA-2: Standing water observed in the wetland may support aquatic life.

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

Observed	Potential	Species/Habitat/Comments
	Y	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,
	invasive species	reduced native species	assemblage of native species	represented
NHI plant community ranking	S4	S3	S2	S1-S2 (S2 high quality)
Relative frequency of plant community in watershed	Abundant 🖌	Common	Uncommon	Rare
FQI (optional)	<13	13-23	23-32	>32
Mean C (optional)	<2.4	2.4-4.2	4.3-4.7	>4.7

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Eleocharis cf. erythropoda*			PEM	Rare
Juncus cf. brevicaudatus*			PEM	Rare
Juncus effusus*			PEM	Rare
Phalaris arundinacea*			PEM	Rare
Scirpus cf. hattorianus*			PEM	Rare
Typha sp.*			PEM	Rare
Alisma triviale			PEM	Barren
Carex vulpinoidea			PEM	Barren
Equisetum arvense			PEM	Barren
Lotus corniculatus			PEM	Barren
Trifolium repens			PEM	Barren
Carex stipata			PEM	Barren
Lysimachia ciliata			PEM	Barren
Salix petiolaris			PEM	Barren
Scirpus microcarpus			PEM	Barren
Tanacetum vulgare			PEM	Barren
Carex atherodes			PEM	Barren
Cicuta maculata			PEM	Barren
Daucus carota			PEM	Barren
Euthamia graminifolia			PEM	Barren
Leucanthemum vulgare			PEM	Barren
Lythrum salicaria			PEM	Barren
Salix discolor			PEM	Barren
Sonchus arvensis			PEM	Barren

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

The wetland is dominated by native species in some area and non-native species in others, giving it an overall low floristic integrity.

SECTION 3: Condition Assessment of Wetland Assessment	Area (AA) and Buffe	r (100 m)
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Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
X	Х		М	C	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
					Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					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
	X		NA	C	Removal of herbaceous stratum – mowing,
	~		IVI	U U	grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
				_	unprescribed fire
	Х		M	С	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
	Х		M	UC	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 ditch adjacent to a gravel road; fill may have been used to construct the road. The wetland is associated with three culverts. The wetland has a high abundance of non-native and invasive species, which has degraded its 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 has a high abundance of non-native species in areas.
Human Use Values	The wetland is on private land in a roadside ditch.
Wildlife Habitat	The wetland only has one stratum; it may be used by small mammals, birds, or insect at times.
Fish and Aquatic Life Habitat	Standing water observed in the wetland may support aquatic life at times.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland receives stormwater from the adjacent gravel road.
Water Quality Protection	The wetland has areas of dense, persistent vegetation in areas, which may slow water flow and filter 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

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: A	shland s	Sampling Date: <u>2020-06-10</u>
Applicant/Owner: Enbridge		State: Wisconsin	Sampling Point: <u>wasc1061_u</u>
Investigator(s): <u>JSW/EJO</u>	Section, Townsh	nip, Range: <u>sec 03 T047N</u>	R004W
Landform (hillslope, terrace, etc.): Talf	Local relief (concav	re, convex, none): <u>None</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests Lat: 4	6.587381	Long: <u>-90.863015</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Udorthents and Udipsam	ments, cut or fill	NWI classificat	iion:
Are climatic / hydrologic conditions on the site typical for th	is time of year? Yes	No (If no, explain in Ren	marks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" pre	esent? 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 I	No 🖌 Is the Sa	mpled Area	

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No <u></u> No <u></u> _	within a Wetland? Yes No <u>v</u>
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 i	a separate report.) in a disturbed	area dominated by non-native species.

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: wasc1061_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominan	t Indicator	Dominance Test worksheet:				
1			Status	Number of Dominant Species That Are OBL_FACW. or FAC: 0 (A)				
2.				Tatal Number of Densis and				
3				Species Across All Strata: (B)				
4			<u> </u>	Percent of Dominant Species				
5			<u> </u>	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 <u>5</u> x 2 = <u>10</u>				
1				FAC species <u>5</u> x 3 = <u>15</u>				
2.				FACU species <u>40</u> x 4 = <u>160</u>				
3				UPL species <u>10</u> x 5 = <u>50</u>				
4				Column Totals: <u>60</u> (A) <u>235</u> (B)				
5			·	Prevalence Index = B/A = <u>3.92</u>				
6.				Hydrophytic Vegetation Indicators:				
7				1 - Rapid Test for Hydrophytic Vegetation				
		- Total Co	vor	2 - Dominance Test is >50%				
Had Obstance (Distained F			VCI	3 - Prevalence Index is ≤3.0 ¹				
<u>Herb Stratum</u> (Plot size: <u>5</u>)	10	V	FACU	4 - Morphological Adaptations ¹ (Provide supporting				
2. Trifolium hybridum	10	 		Problematic Hydrophytic Vegetation ¹ (Explain)				
3. <u>Lotus corniculatus</u>	10	<u> </u>	FACU	¹ Indicators of hydric soil and wetland hydrology must				
4. <u>Lathyrus sylvestris</u>	10	<u> </u>	·	be present, unless disturbed or problematic.				
5. <u>Daucus carota</u>	10	<u> N</u>	UPL	Definitions of Vegetation Strata:				
6. <u>Medicago lupulina</u>	5	N	FACU	Tree – Woody plants 3 in (7.6 cm) or more in diameter				
7. <u>Trifolium pratense</u>	5	N	<u>FACU</u>	at breast height (DBH), regardless of height.				
8. <u>Barbarea vulgaris</u>	5	N	FAC	Sapling/shrub – Woody plants less than 3 in. DBH				
9. <u>Phalaris arundinacea</u>	5	<u> N</u>	FACW	and greater than or equal to 3.28 ft (1 m) tall.				
10			·	Herb – All herbaceous (non-woody) plants, regardless				
11				Woody vines All woody vines greater than 3.28 ft in				
12		- Total Ca		height.				
Marchelling Oberham (Distributed 20			ver					
Woody vine Stratum (Plot size: 30)								
1			<u> </u>					
2			<u> </u>					
3			·	Hydrophytic				
4			<u> </u>	Present? Yes No <u>v</u>				
	0	= Total Co	ver					
Remarks: (Include photo numbers here or on a separate	sheet.)							
	a area r	iear a g	graver to	au.				
Depth	Matrix		Redo	x Feature	S			or manualor si
---------------------------	-------------------------------	---------------	-------------------------------	-----------------------------------	-------------------	------------------	------------------------	---
(inches)	Color (moist)	% Co	lor (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
	·,	<u> </u>			·			
	·							
					·			
	·				·			
	·							
	·							
	·							
¹ Type: C=C	oncentration, D=Depletio	n, RM=Redu	ced Matrix, MS	S=Masked	d Sand Gra	ains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators	for Problematic Hydric Soils ³ :
Histoso	l (A1)	P	olyvalue Belov	w Surface	(S8) (LRF	R,	2 cm M	luck (A10) (LRR K, L, MLRA 149B)
Histic E	pipedon (A2)	-	MLRA 149B))			Coast F	Prairie Redox (A16) (LRR K, L, R)
Black H	ISTIC (A3) en Sulfide (A4)		nin Dark Suna oamy Mucky N	ace (59) (L Mineral (F	1) (IRR K	LRA 149B) (1)	5 CM M Dark Si	lucky Peat of Peat (S3) (LRR K, L, R) $($
Stratifie	d Lavers (A5)	L	oamy Gleved	Matrix (F2		, ⊑)	Polvval	ue Below Surface (S8) (LRR K. L)
Deplete	d Below Dark Surface (A	11) <u> </u>	epleted Matrix	k (F3)	,		Thin Da	ark Surface (S9) (LRR K, L)
Thick D	ark Surface (A12)	R	edox Dark Su	rface (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Sandy M	Mucky Mineral (S1)	D	epleted Dark	Surface (F	7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy (Gleyed Matrix (S4)	R	edox Depress	sions (F8)			Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy F	Redox (S5)						Red Pa	arent Material (F21)
Stripped	I Matrix (50)	A 1/0R)					Very Sr	nallow Dark Surface (TFT2) Explain in Remarks)
		A 149D)						
³ Indicators o	of hydrophytic vegetation a	and wetland h	hydrology mus	st be prese	ent, unless	s disturbed	or problematic	
Restrictive	Layer (if observed):							
Type:								
Depth (in	ches):						Hydric Soil	Present? Yes No
Remarks:								
Could no	ot sample soil due	e to the p	proximity t	to a roa	ad and	occupie	ed structu	res. Soils are assumed to
be non-h	vdric based on t	ne landso	cape posi	ition an	nd dom	inant ve	egetation	
	iyano bacca ch a						gotation	



wasc1061_u_N



wasc1061_u_W

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling Date: <u>2020-06-10</u>
Applicant/Owner: Enbridge		State: Wisconsin Sampling Point: wasc1062e_w
Investigator(s): EJO/JSW	Section, Township, Range: <u></u>	sec 03 T047N R004W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, n	one): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat:	: <u>46.586464</u> Long: <u>-9</u>	0.862395 Datum: WGS84
Soil Map Unit Name: Udorthents and Udips	amments, cut or fill	NWI classification:
Are climatic / hydrologic conditions on the site typical for	or this time of year? Yes No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Norm	al Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology	naturally problematic? (If needed,	explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site m	nap showing sampling point locati	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>v</u> Hydric Soil Present? Yes <u>v</u> Wetland Hydrology Present? Yes <u>v</u> Remarks: (Explain alternative procedures here or in The feature is a saturated wet meac located within a ditch in a retired log	No Is the Sampled Area within a Wetland? No If yes, optional Wetlar a separate report.) dow dominated by willows, rush gging yard; the ditch drains into	Yes <u>v</u> No <u>nd Site ID:</u> hes, and forbs. The feature is a culvert.
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; chec	k all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)	Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	 Geomorphic Position (D2)

Remarks:

Iron Deposits (B5)

Field Observations:

Surface Water Present?

(includes capillary fringe)

Water Table Present? Saturation Present?

____ Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

The feature is a seasonally saturated depression located within a ditch between two gravel lots. In parts of the wetland, a narrow channel runs through the center of the wet meadow. The wetland eventually drains into a culvert. Standing water was observed in parts of the wetland at the time of survey, but not at the sample point.

____ Thin Muck Surface (C7)

Yes _____ No _
 Depth (inches): _

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

Yes _____ No ____ Depth (inches): _____

Other (Explain in Remarks)

____ Shallow Aquitard (D3)

FAC-Neutral Test (D5)

Wetland Hydrology Present? Yes _

____ Microtopographic Relief (D4)

Sampling Point: wasc1062e_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 Species Across All Strata: 5 (B)
аа	<u> </u>			
T				That Are OBL, FACW, or FAC: 80 (A/B)
5				
o				Prevalence Index worksheet:
/			·	Total % Cover of: Multiply by:
	0	= Total Cov	/er	OBL species <u>26</u> x 1 = <u>26</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species 20 x 2 = 40
1. <u>Salix interior</u>	2	<u> N </u>	<u>FACW</u>	FAC species $6 \times 3 = 18$
2. <u>Salix petiolaris</u>	2	N	FACW	FACU species 14 $x 4 = 56$
3				$\begin{array}{c} \text{OPL species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Column Totals} 66 (A) 140 (B) \end{array}$
4				$\frac{140}{140}$
5				Prevalence Index = B/A = <u>2.12121212121212121</u>
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
	4	= Total Cov	/er	∠ 2 - Dominance Test is >50%
Horb Stratum (Plot size: 5)	<u>ı</u>			$_$ 3 - Prevalence Index is ≤3.0 ¹
1. Lotus corniculatus	8	Y	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2 Salix petiolaris	7	Ý	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3 Juncus offusus	7	 		
A luncus of brovicaudatus		 		¹ Indicators of hydric soil and wetland hydrology must
 Juncus Cr. brevicaduatus 1 ythrum salicaria 	<u> </u>	 		be present, unless disturbed or problematic.
6. Equisetum anyense	<u> </u>	 N		Definitions of Vegetation Strata:
 Solidado digantea 	<u> </u>	<u>N</u>	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8 Salix discolor	4	 N	FACW	
9 Muhlenbergia cf. glomerata	4	 N	OBI	and greater than or equal to 3.28 ft (1 m) tall.
10 Trifolium repens	<u> </u>	<u> </u>	FACU	Herb. All herbasseus (non woody) plants, regardless
11 Sonchus arvensis	2	<u>N</u>	FACU	of size, and woody plants less than 3.28 ft tall.
12 Typha sp	2	<u> </u>	OBI	Woody vines – All woody vines greater than 3.28 ft in
	62	- Total Cov		height.
Woody Vine Stratum (Plot size: 30)		- 10(a) CO		
2			·	
3				Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
	<u>0</u>	= Total Cov	/er	
The feature is a wet meadow dominate	d bv me	adow w	/illow. se	oft rush, narrow-panicled rush, and
purple loosestrife.			, 0	······································

Deptn Matrix	$\frac{\text{RedOX Features}}{\text{Color (moist)}} \frac{\%}{1000} \frac{1000}{1000} 1000$	Toxturo Domarka	
		, ,,	
Type: C=Concentration, D=Depletion, RM	=Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matri	Х.
lydric Soil Indicators:		Indicators for Problematic Hydric S	oils³:
Histosol (A1)	Polyvalue Below Surface (S8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLF	RA 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) (LI	RR 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) (L	RR K, L)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	I nin Dark Sufface (S9) (LRR K, I	-)
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	Piedmont Floodplain Soils (F12) (L	.ΚΚ Κ, L, Κ) ΜΙ ΡΔ 149F
Sandy Gleved Matrix (S4)	Depieted Dark Surface (17) Redox Depressions (F8)	Mesic Spodic (TA6) (MI RA 144A	145 149R
Sandy Redox (S5)		Red Parent Material (F21)	.,,
Stripped Matrix (S6)		Very Shallow Dark Surface (TF12	2)
Dark Surface (S7) (LRR R, MLRA 149	B)	Other (Explain in Remarks)	
Indicators of hydrophytic vegetation and w	etland hydrology must be present, unless disturbed	or problematic.	
Restrictive Layer (if observed):			
Туре:			
Depth (inches):		Hydric Soil Present? Yes <u>v</u>	No
Remarks:			
Soils were not sampled due t	o the proximity of the wetland to oc	cupied structures and grav	el roads
Soils are assumed to be hvd	ic based on the hydrology and the	dominance of hvdrophytic	
regetation			
ogotation			



wasc1062e_w_NW



wasc1062e_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):		
wasc1062	2020-06-10		
Location:	Ecological Landsca	ape:	
PLSS: sec 03 T047N R004W	Superior Coastal Plain		
Lat: <u>46.586456</u> Long: <u>-90.862393</u>	Watershed:		
	LS08, Fish Creek		
County: <u>Ashland</u> Town/City/Village: <u>Ashland city</u>			
SITE DESCRIPTION			
Soils:	WWI Class:		
Mapped Type(s):	N/A		
Udorthents and Udipsamments, cut or fill	Wetland Type(s):		
	PEM - Fresh (wet) meadow		
Field Verified:	X	/	
Series were not verified. Soils were not sampled due to the	Wetland Size:	Wetland Area Impacted	
proximity of the wetland to occupied structures and gravel roads.	0.0993	0.0993	
soils are assumed to be hydrophytic based on on geomorphic position	Vegetation:		
and the dominance of hydrophytic vegetation.	Plant Community Description(s):		
Hydrology:	The feature is a wet meadow dominated by		
The feature is a saturated depression located within a ditch between two gravel	mondow willow post ruch of porrow posicled		
drains into culvert cvasc1017 (and another culvert, cvasc1018, is associated with	meadow willow, soit rush, ci. narrow-panicled		
the other side of this linear feature). Standing water was observed in parts of the	rush, and purple	e loosestrife.	
wetland at the time of survey, but not at the sample point.			
Mapped Type(s): Udorthents and Udipsamments, cut or fill Field Verified: Series were not verified. Soils were not sampled due to the proximity of the wetland to occupied structures and gravel roads. Soils are assumed to be hydric based on on geomorphic position and the dominance of hydrophytic vegetation. Hydrology: The feature is a saturated depression located within a ditch between two gravel lots. A narrow channel runs through the center of the wet meadow and eventually drains into culvert cvasc1017 (and another culvert, cvasc1018, is associated with the other side of this linear feature). Standing water was observed in parts of the wetland at the time of survey, but not at the sample point.	N/A Wetland Type(s): PEM - Fresh (we Wetland Size: 0.0993 Vegetation: Plant Community E The feature is a meadow willow, rush, and purple	et) meadow Wetland Area Impacted 0.0993 Description(s): wet meadow dominated by soft rush, cf. narrow-panicled e loosestrife.	

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

ST-5: The wetland is a depression which receives stormwater from surrounding gravel lots. FA-2: The wetland has areas of standing water that may support aquatic life.

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

Observed	Potential	Species/Habitat/Comments
	Y	Herpetofauna

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

Observed	Potential	Species/Habitat
	Y	Aquatic invertebrates

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Euphorbia esula*			PFM	Rare
Lotus corniculatus*			PEM	Rare
Juncus cf. brevicaudatus*			PEM	Rare
Juncus effusus*			PEM	Rare
Salix petiolaris			PEM	Rare
Equisetum arvense*			PEM	Rare
Lythrum salicaria*			PEM	Rare
Phalaris arundinacea			PEM	Rare
Solidago gigantea			PEM	Rare
Typha sp.			PEM	Rare
Helianthus giganteus			PEM	Barren
Muhlenbergia cf. glomerata			PEM	Barren
Salix discolor			PEM	Barren
Trifolium repens			PEM	Barren
Euthamia graminifolia			PEM	Barren
Ranunculus acris			PEM	Barren
Salix interior			PEM	Barren
Salix petiolaris			PEM	Barren
Scirpus cf. hattorianus			PEM	Barren
Sonchus arvensis			PEM	Barren
Juncus dudleyi			PEM	Barren

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

The wetland is dominated by both native and non-native species is different parts of the wetland.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
X	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		М	С	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					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
	X				Removal of herbaceous stratum – mowing,
	~			00	grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
					unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
X	Х		H	С	Cover of non-native and/or invasive species
					Residential land use
	Х		M	С	Urban, commercial or industrial use
					Parking lot
	-				Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):
	ļ				

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is located in a ditch between two gravel lots and drains into culvert cvasc1017, with another culvert also associated with the other side of the feature. The culvert flows under a gravel driveway; fill may have been used to construct the the driveway. The wetland has a high abundance of invasive species that have degraded its 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 has a high abundance of invasive species.
Human Use Values	The wetland is on private land, and is a ditch feature.
Wildlife Habitat	The wetland only has a single stratum, and is disturbed.
Fish and Aquatic Life Habitat	Standing water and dense vegetation may support aquatic life at times.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is a depression in a relatively flat landscape and receives stormwater from the surrounding relatively impervious driveway surfaces.
Water Quality Protection	The wetland has a narrow channel running through it; some runoff may be filtered by the wetland 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.	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: Ashlan	<u>d</u>	Sampling Date: 2020-06-10
Applicant/Owner: Enbridge		State: Wisco	nsin Sampling Point: wasc1062_u
Investigator(s): <u>JSW/EJO</u>	Section, Township, Rar	nge: <u>sec 03 T047</u>	'N R004W
Landform (hillslope, terrace, etc.): Talf	Local relief (concave, conv	ex, none): <u>None</u>	Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests La	at: <u>46.586497</u> Long	g: <u>-90.862369</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Udorthents and Udips	samments, cut or fill	NWI classi	fication:
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 "l	Normal Circumstances	" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If ne	eded, explain any ansv	vers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing sampling point lo	ocations, transect	ts, important features, etc.
Hydrophytic Vegetation Present? Yes	No / Is the Sampled	Area	
Hydric Soil Present? Yes	No v within a Wetlan	d? Yes	No
Wetland Hydrology Present? Yes	No If yes, optional V	Vetland Site ID:	
Remarks: (Explain alternative procedures here or ir The upland sample point is located species.	near a gravel road. The are	a is dominated	l by non-native

HYDROLOGY

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

Sampling Point: wasc1062_u

	Absolute	Dominar	nt 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>33</u> (A/B)		
6						
7				Prevalence Index worksheet:		
1				Total % Cover of: Multiply by:		
		= Total Co	over	OBL species <u>10</u> x 1 = <u>10</u>		
Sapling/Shrub Stratum (Plot size: 15)				FACW species $1 \times 2 = 2$		
1				FAC species $10 \times 3 = 30$		
2				FACU species 45 x 4 = 180		
3.				UPL species $10 \times 5 = 50$		
4				Column Totals: <u>76</u> (A) <u>272</u> (B)		
T				Prevalence Index = B/A = 3.5789473684210527		
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:5)				3 - Prevalence Index is ≤3.0		
1. Lotus corniculatus	25	Y	FACU	data in Remarks or on a separate sheet)		
2 Muhlenbergia cf. glomerata	10	Ý	OBI	Problematic Hydrophytic Vegetation ¹ (Explain)		
2. Trifolium protonoo	10	 				
		<u>r</u>		¹ Indicators of hydric soil and wetland hydrology must		
4. <u>Equisetum arvense</u>	5	<u> </u>	FAC	be present, unless disturbed or problematic.		
5. <u>Euthamia graminifolia</u>	5	<u> N</u>	FAC	Definitions of Vegetation Strata:		
6. <u>Tanacetum vulgare</u>	5	N	FACU	Tree Woody plants 2 in (7.6 cm) or more in diameter		
7. <u>Hypericum perforatum</u>	5	N	UPL	at breast height (DBH), regardless of height.		
8. Trifolium hvbridum	5	Ν	FACU	Continue Alexandre Mandel Lass them 2 in DDU		
9 Leucanthemum vulgare	5	N		and greater than or equal to 3.28 ft (1 m) tall.		
10 Phalaris arundinacoa		<u> </u>				
		IN		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		
		= Total Co	over			
Woody Vine Stratum (Plot size: <u>30</u>)						
1						
2						
3				Hudronbutio		
				Vegetation		
4				Present? Yes No 🗸		
		= Total Co	over			
Remarks: (Include photo numbers here or on a separate	sheet.)	vol roa	Ч			
The sample plot is located at the edge	oi a yia	veritua	u.			

Depth	Matrix		Redo	ox Feature	S			
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
	·	·			·			
					·			
	·	·					·	
					- <u> </u>			
	·				·			
					·			
		·						
					<u> </u>			
¹ Type: C=C	Concentration. D=Deple	tion. RM=	Reduced Matrix. M	S=Maske	d Sand Gra	ains.	² Location: PL	-=Pore Lining, M=Matrix,
Hydric Soil	Indicators:	,	, , ,				Indicators for	Problematic Hydric Soils ³ :
Histoso	l (A1)		Polvvalue Belo	w Surface	(S8) (LR	R.	2 cm Muck	(A10) (LRR K. L. MLRA 149B)
Histic E	pipedon (A2))	(,	Coast Prair	rie Redox (A16) (LRR K. L. R)
Black H	listic (A3)		Thin Dark Surfa	, ace (S9) (l	LRR R, MI	LRA 149B)	5 cm Muck	v Peat or Peat (S3) (LRR K, L, R)
Hydrog	en Sulfide (A4)		Loamy Mucky I	Mineral (F	1) (LRR K	, L)	Dark Surfa	ce (S7) (LRR K, L)
Stratifie	d Lavers (A5)		Loamy Gleved	Matrix (F2	2)	, ,	Polyvalue E	Below Surface (S8) (LRR K, L)
Deplete	ed Below Dark Surface	(A11)	Depleted Matrix	x (F3)	,		Thin Dark S	Surface (S9) (LRR K, L)
Thick D	ark Surface (A12)	. , .	Redox Dark Su	Inface (F6))		Iron-Manga	anese Masses (F12) (LRR K, L, R)
Sandy	Mucky Mineral (S1)		Depleted Dark	Surface (I	=7)		Piedmont F	Floodplain Soils (F19) (MLRA 1498)
Sandy	Gleyed Matrix (S4)		Redox Depress	sions (F8)	,		Mesic Spoo	dic (TA6) (MLRA 144A, 145, 149B)
Sandy	Redox (S5)			()			Red Parent	t Material (F21)
Strippe	d Matrix (S6)						Very Shallo	ow Dark Surface (TF12)
Dark St	urface (S7) (LRR R, MI	LRA 149B)				Other (Exp	lain in Remarks)
			,					·
³ Indicators of	of hydrophytic vegetation	on and we	land hydrology mu	st be pres	ent, unless	s disturbed	or problematic.	
Restrictive	Layer (if observed):						-	
Type [.]	,							
Type							Undria Sail Dra	aant2 Vaa Na K
Depth (ir	nches):						Hydric Soli Pres	sent? fes No $\underline{\nu}$
Remarks:								_
Could no	ot sample soil d	lue to t	he proximity	to roac	ls and (occupie	d structures.	. Soils are assumed to
be non-h	nvdric based or	the la	ndscape pos	ition ar	nd dom	inant ve	aetation.	
	iyane bacca ci						gotationi	



wasc1062_u_NW



Project/Site: Line 5 Relocation Project City/Co	ounty: Ashland Sampling Date: 2020-06-10
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wasc1063e_w</u>
Investigator(s): EJO/JSW Section	n, Township, Range: sec 03 T047N R004W
Landform (billslope terrace etc.): Depression	ef (concave, convex, none): Concave, Slope (%): 0-2%
Subrogion (LBB or MLBA). Northcentral Forests Lat. 46 585352	Long: -00 861252 Detum: WGS84
Sublegion (LRR of MLRA) Lat. 40.30332	Long. <u>-90.001232</u> Datum. <u>VV3304</u>
Soil Map Unit Name: Udorthents and Udipsamments, cut of	[TIII NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Ye	es 🔽 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturb	oed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problemation	tic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>v</u> No <u>No</u>	Is the Sampled Area within a Wetland? Yes 🗸 No
Wetland Hydrology Present?	If yoo, antional Watland Site ID:
Pomarke: (Explain alternative precedures here or in a separate report)	If yes, optional Wetland Site ID:
feature is in a vegetated ditch between two gravel lo	ots which are a part of a retired lumber yard.
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	s (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odo	or (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosphere	s on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced	Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction	n in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C	7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rem	arks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No _ ✓ Depth (inches):	
Saturation Present? Yes No 🖌 Depth (inches):	Wetland Hydrology Present? Yes <u>v</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, prev	/ious inspections), if available:
Remarks: The feature is a seasonally saturated depression lo	ocated within a ditch between two gravel lots. The
feature drains into a culvert.	

Sampling Point: wasc1063e_w

Trop 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 (B)
4			·	Percent of Dominant Species That Are OBL_EACW_or_EAC: 67 (A/B)
5			·	
6	- <u> </u>			Prevalence Index worksheet:
7	. <u> </u>	·		Total % Cover of: Multiply by:
	0	= Total Cov	ver	OBL species $26 \times 1 = 26$
Sapling/Shrub Stratum (Plot size: 15)				FACW species 20 x 2 = 40
1		·		FAC species $2 \times 3 = 60$
2		·		UPL species $0 \times 5 = 0$
3				Column Totals: 63 (A) 132 (B)
4				Prevalence index = B/A = 2.0952380952380953
5				
0			·	1 - Rapid Test for Hydrophytic Vegetation
/				 2 - Dominance Test is >50%
-	0	= Total Cov	ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:5)			0.51	4 - Morphological Adaptations ¹ (Provide supporting
1. Juncus cf. brevicaudatus		<u> Y </u>		data in Remarks or on a separate sheet)
2. Juncus dudleyi	12	<u> Y </u>	FACW	Problematic Hydrophytic Vegetation (Explain)
3. <u>Lotus corniculatus</u>	7	<u> N </u>	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Trifolium repens</u>	7	<u> Y </u>	<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Carex vulpinoidea</u>	6	<u> N </u>	OBL	Definitions of Vegetation Strata:
6. <u>Lysimachia ciliata</u>	4	<u> N </u>	FACW	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Salix petiolaris</u>	4	N	<u>FACW</u>	at breast height (DBH), regardless of height.
8. <u>Juncus effusus</u>	3	N	OBL	Sapling/shrub – Woody plants less than 3 in. DBH
9. <u>Euthamia graminifolia</u>	2	<u> N </u>	FAC	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Scirpus cf. hattorianus</u>	2	N	OBL	Herb – All herbaceous (non-woody) plants, regardless
11. Ambrosia artemisiifolia	1	<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
	63	= Total Cov	ver	height.
Woody Vine Stratum (Plot size: 30)				
1.				
2.				
3				Hydrophytic
4				Vegetation
	0	= Total Cov	ver	Present? Yes <u> </u>
Remarks: (Include photo numbers here or on a separate s	sheet.)	. 5147 001		1
The feature is a wet meadow dominate	d bý na	rrow-pa	nicled ru	ush, Dudley's rush, and white clover.
The vegetation is sparse in areas presu	umably o	due to r	ecent in	undation.

Depth	Matrix		Redox	K Features	6			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	 			Remarks
'Type: C=C Hydric Soil Histoso Histic E Black H Hydroge Stratifie Deplete Thick D Sandy N Sandy N Stripped Dark Su ³ Indicators c	ioncentration, D=Deple Indicators: I (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) d Matrix (S6) urface (S7) (LRR R, Mill of hydrophytic vegetation	(A11) (A11) LRA 149B)	educed Matrix, MS Polyvalue Belov MLRA 149B) Thin Dark Surfa Loamy Mucky M Loamy Gleyed N Depleted Matrix Redox Dark Sur Depleted Dark Sur Redox Depressi	S=Masked v Surface (S9) (L lineral (F1 Matrix (F2) (F3) face (F6) Surface (F6) Surface (F8) t be prese	<u>Sand Gr</u> ; (S8) (LRF . RR R, MI)) (LRR K) 7)	ains. R R, LRA 149B) , L) s disturbed	² Location: P Indicators for 2 cm Muc 5 cm Muc 5 cm Muc Dark Surfa Dark Surfa Dark Surfa Thin Dark Thin Dark Thin Dark Piedmont Piedmont Nesic Spo Red Paren Very Shal Other (Exp 	PL=Pore Lining, M=Matrix. r Problematic Hydric Soils ³ : tk (A10) (LRR K, L, MLRA 149B) airie Redox (A16) (LRR K, L, R) ky Peat or Peat (S3) (LRR K, L, R) ace (S7) (LRR K, L) E Below Surface (S8) (LRR K, L) Surface (S9) (LRR K, L) ganese Masses (F12) (LRR K, L, R) Floodplain Soils (F19) (MLRA 149B) odic (TA6) (MLRA 144A, 145, 149B) nt Material (F21) Ilow Dark Surface (TF12) plain in Remarks)
Restrictive Type: Depth (in	Layer (if observed):		_				Hydric Soil Pre	esent? Yes <u> </u>
Remarks: Soils we assumed vegetatio	re not sampled d to be hydric b on.	due to t ased on	the proximity the geomor	v to occ	cupied	structur and the	res and gra dominance	vel roads. Soils are e of hydrophytic



wasc1063e_w_NW



wasc1063e_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):			
wasc1063	2020-06-10			
Location:	Ecological Landsca	ape:		
PLSS: sec 03 T047N R004W	Superior Coastal Plain			
Lat: <u>46.585357</u> Long: <u>-90.861262</u>	Watershed:			
	LS08, FISH Creek			
County: <u>Ashland</u> Town/City/Village: <u>Ashland City</u>				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Udorthents and Udipsamments, cut or fill	Wetland Type(s):			
	PEM - Fresh (wet) meadow			
Field Verified:				
Series were not verified. Soils were not sampled due to the	Wetland Size:	Wetland Area Impacted		
Soils are assumed to be hydric based on on geomorphic position	0.0509	0.0509		
and the dominance of hydrophytic vegetation.	Vegetation:			
	Plant Community Description(s):			
Hydrology:	The feature is a	disturbed wet meadow		
The feature is a seasonally saturated depression	dominated by cf. narrow-nanicled rush			
located within a ditch between two gravel lots.	dudlay's rush and white alover			
The feature drains into culvert cvasc1018	uuuley s rush, al			

SITE MAP

SECTION 1: Functional Value Assessment

HU	Y/N	Potential	Human Use Values: recreation, culture, education, science, natural scenic beauty
1	Ν	N	Used for recreation (hunting, birding, hiking, etc.). List:
2	Ν	N	Used for educational or scientific purposes
3	Ν	Y	Visually or physically accessible to public
4	Ν	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	N	Supports or provides habitat for endangered, threatened or special concern species
7	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 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	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	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	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	Ν	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	N	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	Y	Y	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	N	N	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
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 feature is a ditch associated with 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)
Juncus cf. brevicaudatus*			PEM	Rare
Juncus dudleyi*			PEM	Rare
Lotus corniculatus*			PEM	Rare
Trifolium repens*			PEM	Rare
Carex vulpinoidea*			PEM	Rare
Carex crinita			PEM	Barren
Lysimachia ciliata			PEM	Barren
Melilotus sp.			PEM	Barren
Salix petiolaris			PEM	Barren
Juncus effusus			PEM	Barren
Phalaris arundinacea			PEM	Barren
Salix bebbiana			PEM	Barren
Carex gracillima			PEM	Barren
Daucus carota			PEM	Barren
Euthamia graminifolia			PEM	Barren
Hieracium caespitosum			PEM	Barren
Scirpus cf. hattorianus			PEM	Barren
Ambrosia artemisiifolia			PEM	Barren

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

The wetland is dominated by both native and non-native species is different parts of the wetland.

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

Assessment Area (AA)	Buffer	Historic	Impact Level*	Relative Frequency**	Stressor
X	Х		М	C	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		М	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
	X			C	Removal of herbaceous stratum – mowing,
	~			U U	grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
					unprescribed fire
Х	Х		M	C	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
X	Х		H	C	Cover of non-native and/or invasive species
					Residential land use
Х	Х		M	C	Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is located in a ditch between two gravel lots and drains into culvert cvasc1018. The culvert flows under a gravel driveway; fill may have been used to construct the the driveway. The wetland has a high abundance of invasive species that have degraded its floristic integrity.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The wetland has a high abundance of invasive species.
Human Use Values	The wetland is on private land.
Wildlife Habitat	The wetland only has a single stratum and is surrounded by disturbed land use.
Fish and Aquatic Life Habitat	The wetland offers only a very marginal potential for aquatic invertebrates.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is a depression in a relatively flat landscape and receives stormwater from the surrounding landscape.
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.	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/Coun	y: Ashland	Sa	ampling Date: <u>2020-06-10</u>
Applicant/Owner: Enbridge				State: Wisconsin	Sampling Point: <u>wasc1063_u</u>
Investigator(s): <u>JSW/EJO</u>		Section, 1	ownship, Range: <u>Se</u>	<u>c 03 T047N R</u>	2004W
Landform (hillslope, terrace, etc.): Tal	f	_ Local relief (oncave, convex, none	e): <u>None</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcent	ral Forests Lat: 46.585	5469	Long: <u>-90.</u>	861315	Datum: <u>WGS84</u>
Soil Map Unit Name: Udorthents	and Udipsammen	ts, cut or fi		NWI classificatio	on:
Are climatic / hydrologic conditions on t	he site typical for this time	of year? Yes	✓ No (If	no, explain in Rema	arks.)
Are Vegetation, Soil, or	Hydrology signific	antly disturbed	Are "Normal C	Circumstances" pres	ent? Yes 🖌 No
Are Vegetation, Soil, or	Hydrology natural	lly problematic?	(If needed, ex	plain any answers ir	n Remarks.)
SUMMARY OF FINDINGS – A	ttach site map show	ving sampli	ng point location	is, transects, in	nportant features, etc.
Hydrophytic Vegetation Present?	Yes No		he Sampled Area		
Hydric Soil Present?	Yes No	<u>v</u> wi	hin a Wetland?	Yes	No <u>/</u>
Wetland Hydrology Present?	Yes No 🙀	∠ lf y	es, optional Wetland S	Site ID:	
Remarks: (Explain alternative proced The upland sample point	ures here or in a separate is located near a	report.) gravel road	I. The area is c	lominated by	non-native
species.					

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply)	0 2	Secondary Indicators (minimum of two required)	
Frinary 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 <u>v</u> Depth (inches):			
Water Table Present? Yes <u>Ves</u> No <u>v</u> Depth (inches):			
Saturation Present? Yes <u>Ves</u> Depth (inches):	Wetland Hydrology Present? Yes No		
(Includes capillary minde)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if avail	able:	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if avail	able:	
(includes capillary fingle) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if avail	able:	
Remarks:	tions), if avail	able:	
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:	
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:	
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:	
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:	
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:	
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:	
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:	
Remarks: No indicators of wetland hydrology were observed.	l tions), if avail	able:	
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:	
Remarks: No indicators of wetland hydrology were observed.	tions), if avail	able:	

Sampling Point: wasc1063_u

	Absolute	Dominar	t Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u>	Species	<u>Status</u>	Number of Dominant Species		
1				That Are OBL, FACW, or FAC: (A)		
2.				Total Number of Deminent		
3				Species Across All Strata: 2 (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:		
	0	= Total Co	over	$\frac{1}{10000000000000000000000000000000000$		
				$\frac{1}{2} = \frac{1}{2}$		
Sapling/Shrub Stratum (Plot size:1)				$\frac{1}{2} = \frac{1}{2}$		
1				FACt species 0 $x_3 = 0$		
2				FACU species $\underline{95}$ $x4 = \underline{380}$		
3.				UPL species $()$ x 5 = $()$		
1				Column Totals: <u>100</u> (A) <u>390</u> (B)		
T				Prevalence Index = B/A = 20		
5						
6				Hydrophytic Vegetation Indicators:		
7		_		1 - Rapid Test for Hydrophytic Vegetation		
	0	= Total Co	over	2 - Dominance Test is >50%		
			5461	3 - Prevalence Index is ≤3.0 ¹		
Herb Stratum (Plot size:)				4 - Morphological Adaptations ¹ (Provide supporting		
1. <u>Melilotus officinalis</u>	50	<u> </u>	<u>FACU</u>	data in Remarks or on a separate sheet)		
2. Lotus corniculatus	25	Y	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)		
3. Trifolium pratense	5	N	FACU			
4 Sonchus arvensis	5	N	FACU	¹ Indicators of hydric soil and wetland hydrology must		
- Corox gracillima	 			be present, unless disturbed or problematic.		
5. <u>Carex gracillima</u>		<u> </u>	FACU	Definitions of Vegetation Strata:		
6. <u>Solidago gigantea</u>	5	N	FACW	Tree – Woody plants 3 in (7.6 cm) or more in diameter		
7. <u>Tanacetum vulgare</u>	5	N	FACU	at breast height (DBH), regardless of height.		
8.				Sanling/chrub Woody plants loss than 2 in DPH		
9				and greater than or equal to 3.28 ft (1 m) tall.		
10						
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		
	100	= Total Co	over	neight.		
Woody Vine Stratum (Plot size: 30)						
(* ***********************************						
2						
3				Hydrophytic		
4				Vegetation Procent? Yes No. 14		
	0	= Total Co	over			
Remarks: (Include photo numbers here or on a separate	sheet.)					
The sample plot is located near a grave	el road.					

Depui	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
(inches)	Color (moist)	%	Color (moist)	%		Loc ²	Texture	Remarks	
¹ Type: C=C Hydric Soil	oncentration, D=Depl Indicators:	etion, RM=I	Reduced Matrix, M	S=Maskec	Sand Gra	ains.	² Location: PL Indicators for I	.=Pore Lining, M=Matrix. Problematic Hydric Soils ³ :	
Histosol Histic E; Histic E; Black Hi Hydroge Stratified Depleted Thick Da Sandy M Sandy C Sandy F Strippec Dark Su	istosol (A1) Polyvalue Below Surface (S8) (LRR R, istic Epipedon (A2) iack Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) ydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) tratified Layers (A5) Depleted Matrix (F2) epleted Below Dark Surface (A11) Depleted Matrix (F3) hick Dark Surface (A12) Redox Dark Surface (F6) andy Mucky Mineral (S1) Depleted Dark Surface (F7) andy Redox (S5) Redox Depressions (F8) ark Surface (S7) (LRR R, MLRA 149B)					 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 			
Type:	f hydrophytic vegetati Layer (if observed):	on and wet	land hydrology mu	st be prese	ent, unless	disturbed	or problematic.		
Depth (in	ches):						Hydric Soil Pres	sent? Yes No	
Remarks: Could nc assumed	ot sample soil o to be non-hyd	due to th dric bas	ne proximity ed on the la	to grav ndscap	el road e posit	s and c ion and	occupied stru dominant ve	ictures. Soils are egetation.	



wasc1063_u_E



wasc1063_u_N

Project/Site: Line 5 Relocation Project	County: Ashland Sampling Date: 2020-06-10						
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasc1064e_w						
Investigator(s): EJO/JSW Secti	on, Township, Range: sec 03 T047N R004W						
Landform (hillslope, terrace, etc.): <u>Depression</u> Local rel Subregion (LRR or MLRA): <u>Northcentral Forests</u> Lat: <u>46.585529</u>	lief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u> Long: <u>-90.860908</u> Datum: <u>WGS84</u>						
Soil Map Unit Name: Udorthents and Udipsamments, cut of	or fill NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of year?	res 🗸 No (If no, explain in Remarks.)						
Are Vegetation , Soil , or Hydrology significantly distur	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 sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: (Explain alternative procedures here or in a separate report.) The feature is a saturated wet meadow dominated depression within a ditch between two gravel road	Is the Sampled Area within a Wetland? Yes <u>v</u> No <u>l</u> If yes, optional Wetland Site ID: I by narrow-panicled rush. The feature is a s, which are all a part of a retired lumber yard.						
HYDROLOGY Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)						
Primary Indicators (minimum of one is required; check all that apply)							
Surface Water Present? Yes No _ Depth (inches): Water Table Present? Yes No _ Depth (inches): Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Depth (inches): Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, present) Describe Recorded Data (stream gauge, monitoring well, aerial photos, present)	Wetland Hydrology Present? Yes No evious inspections), if available:						
Remarks: The feature is a saturated depression located with	in a ditch between two gravel driveways.						

Sampling Point: wasc1064e_w

22	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:3(B)		
4				Percent of Dominant Species		
5			. <u> </u>	Inat Are OBL, FACW, or FAC: <u>IUU</u> (A/B)		
6				Prevalence Index worksheet:		
7				Total % Cover of:Multiply by:		
	0	= Total Cov	/er	OBL species x 1 =46		
Sapling/Shrub Stratum (Plot size:15)				FACW species <u>25</u> x 2 = <u>50</u>		
1. Salix discolor	6	Y	FACW	FAC species x 3 =		
2 Salix petiolaris	.3	Y	FACW	FACU species <u>5</u> x 4 = <u>20</u>		
3		I	<u></u>	UPL species x 5 =		
0				Column Totals: <u>76</u> (A) <u>116</u> (B)		
4				Prevalence Index = $B/A = 1.5263157894736843$		
5				Hydrophytic Vegetation Indicators:		
o				1 - Rapid Test for Hydrophytic Vegetation		
/				2 - Dominance Test is >50%		
_	9	= Total Cov	/er	\sim 3 - Prevalence Index is $\leq 3.0^{1}$		
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting		
1. Juncus cf. brevicaudatus	35	<u> Y </u>	OBL	data in Remarks or on a separate sheet)		
2. <u>Juncus effusus</u>	5	<u> N </u>	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)		
3. <u>Lysimachia ciliata</u>	5	N	FACW	¹ Indicators of hydric soil and wetland hydrology must		
4. <u>Symphyotrichum lanceolatum</u>	5	N	FACW	be present, unless disturbed or problematic.		
5. <u>Lythrum salicaria</u>	4	<u>N</u>	OBL	Definitions of Vegetation Strata:		
6. <u>Salix petiolaris</u>	4	N	FACW			
7. <u>Lotus corniculatus</u>	3	N	<u>FACU</u>	at breast height (DBH), regardless of height.		
8. Scirpus cyperinus	2	Ν	OBL	Sepling/shrub Weedy plants loss than 2 in DPH		
9. Fraxinus nigra	2	N	FACW	and greater than or equal to 3.28 ft (1 m) tall.		
10 Fragaria virginiana	2	N	FACU	Horb All borbaccours (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.	67	- Total Co		height.		
Weady Vina Stratum (Plat aiza: 30)						
(Flot size. <u>50</u>)						
2						
3			·	Hydrophytic		
4				Present? Yes <u>v</u> No		
	0	= Total Cov	/er			
Remarks: (Include photo numbers here or on a separate sheet.)						
by short-statured willows to the southeast and cattails to the northwest						
by short-statured willows to the southeast and cattains to the horthwest.						

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth <u>Matrix</u>	Redo	x Features						
(inches) Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
		·						
· ·								
					·			
<u> </u>								
		·						
¹ Type: C=Concentration D=Depletion	RM=Reduced Matrix M	S=Masked	Sand Gr	ains	² Location: PL =	Pore Lining M=Matrix		
Hydric Soil Indicators:					Indicators for Pr	oblematic Hydric Soils ³ :		
Histosol (A1)	Polyvalue Belov	w Surface ((S8) (LR	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 Surfa	, ace (S9) (L	RR R, MI	LRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)		
Hydrogen Sulfide (A4)	Loamy Mucky M	Aineral (F1) (LRR K	, L)	Dark Surface	e (S7) (LRR K, L)		
Stratified Layers (A5)	Loamy Gleyed	Matrix (F2)	1		Polyvalue Be	elow Surface (S8) (LRR K, L)		
Depleted Below Dark Surface (A11	 Depleted Matrix 	(F3)			Thin Dark Sι	ırface (S9) (LRR K, L)		
Thick Dark Surface (A12)	Redox Dark Su	rface (F6)			Iron-Mangan	ese Masses (F12) (LRR K, L, R)		
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)					Piedmont Floodplain Soils (F19) (MLRA 149B)			
Sandy Gleyed Matrix (S4) Redox Depressions (F8)					Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
Sandy Redox (S5)					Red Parent Material (F21)			
Stripped Matrix (S6)		Very Shallow Dark Surface (TF12)						
Dark Surface (S7) (LRR R, MLRA	149B)				✓ Other (Expla	in in Remarks)		
³ Indicators of hydrophytic vocatation and watland hydrology must be process uplace disturbed or problematic								
Restrictive Laver (if observed):		st ne hiese	ni, unies					
Tuner								
rype:								
Depth (inches):					Hydric Soil Prese	ent? Yes <u>~</u> No		
Remarks:								
Soils were not sampled due to the proximity of the wetland to occupied structures and gravel roads.								
Soils are assumed to be hydric based on the geomorphic position and the dominance of hydrophytic								
vegetation.	-	-	•					



wasc1064e_w_NW



wasc1064e_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):	
wasc1064	2020-06-10	
Location:	Ecological Landsca	ipe:
PLSS: sec 03 T047N R004W	Superior Coastal Plain	
Lat: <u>46.585472</u> Long: <u>-90.860862</u>		
County Appland Town (City) (llago, Ashland city)	LOOD, I ISH CIEEK	
County: <u>Ashland</u> Town/City/Village: <u>Ashland City</u>		
SITE DESCRIPTION		
Soils:	WWI Class:	
Mapped Type(s):	N/A	
Udorthents and Udipsamments, cut or fill	Wetland Type(s):	
· · ·	PEM - Fresh (we	et) meadow
Field Verified:	, , , , , , , , , , , , , , , , , , ,	
Series were not verified. Soils were not sampled due to the	Wetland Size:	Wetland Area Impacted
Soils are assumed to be hydric based on on geomorphic position	0.2305	0.2305
and the dominance of hydrophytic vegetation.	Vegetation:	
	Plant Community Description(s):	
	The feature is a wet meadow dominated cf. narrow-pannicled rush. The feature becomes dominated by short-stature shrub willows to	
The feature is a saturated depression located		
within a ditch between two gravel driveways.		
	the southeast and cattails to the northwest	
	the southeast all	

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	Y	Visually or physically accessible to public
4	N	N	Aesthetically pleasing due to diversity of habitat types, lack of pollution or degradation
5	N	N	In or adjacent to RED FLAG areas List:
6	N	N	Supports or provides habitat for endangered, threatened or special concern species
7	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 <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	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	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 <10% wetland
8	Ν	Ν	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	Ν	Ν	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	Ν	N	Stormwater or surface water from agricultural land is major hydrology source
8	Ν	N	Discharge to surface water
9	Y	Y	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 a depression which receives stormwater from surrounding gravel lots. WQ-5: The wetland is densely vegetated. WQ-9: The surrounding gravel lots/roads limit natural land cover.

> 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

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)
Juncus cf. brevicaudatus*			PEM	Patchy
Typha sp.*			PEM	Rare
Salix discolor*			PEM	Rare
Carex crinita*			PEM	Rare
Juncus effusus			PEM	Rare
Lysimachia ciliata			PEM	Rare
Symphyotrichum lanceolatum			PEM	Rare
Lythrum salicaria			PEM	Barren
Salix petiolaris			PEM	Barren
Tanacetum vulgare			PEM	Barren
Trifolium repens			PEM	Barren
Carex gracillima			PEM	Barren
Euthamia graminifolia			PEM	Barren
Lotus corniculatus			PEM	Barren
Salix petiolaris			PEM	Barren
Fragaria virginiana			PEM	Barren
Fraxinus nigra			PEM	Barren
Hieracium caespitosum			PEM	Barren
Scirpus cyperinus			PEM	Barren
Juncus torreyi			PEM	Barren

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

The wetland is dominated by both native and non-native species in different parts of the wetland. The feature has a disturbed and degraded plant community.

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		М	С	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
	X		1	C	Removal of herbaceous stratum – mowing,
	~		L	0	grading, earthworms, etc.
					Removal of tree or shrub strata – logging,
					unprescribed fire
Х	Х		M	C	Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
Х	Х		Н	C	Cover of non-native and/or invasive species
					Residential land use
Х	Х		M	C	Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland is located in a ditch between two gravel driveways (and is likely artificially caused by this ditch hydrology); fill may have been used to construct the the driveways. The wetland has a high abundance of invasive species that have degraded its 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 has a high abundance of invasive species.
Human Use Values	The wetland is on private land in a ditch.
Wildlife Habitat	The wetland mainly has a single stratum; shrub willows in the wetland may provide an early season floral resource for pollinators, and cattails provide potential avian nesting habitat.
Fish and Aquatic Life Habitat	No standing water was observed in the wetland at the time of the survey, but the wetland may support aquatic life during periods of inundation.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland is a depression in a relatively flat landscape and receives stormwater from the surrounding roads.
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.	Low
Cumulative Impacts	Operational vegetation maintenance.	Low
Spatial/Habitat Integrity	Temporary construction impacts.	Low
Rare Plant/Animal Communities/ Natural Areas	N/A	N/A

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland Sampling Date: 2020-06-10	
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: wasd1039e_w	
Investigator(s): KDF/AGG Section, Township, Range: Sec 03 T047N R004W		
Landform (hillslope terrace etc.): Depression	cal relief (concave, convex, none); Concave, Slope (%); 0-2%	
Subregion (LRB or MLRA). Northcentral Forests Lat: 46 58782	2 Long: -90.861926 Datum: WGS84	
Sublegion (ERROR MERA).		
sol Map Unit Name: <u>UUUIIIIents and UUIPsamments, i</u>		
Are climatic / hydrologic conditions on the site typical for this time of ye	₂ar? 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 pre-	oblematic? (If needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing	y sampling point locations, transects, important features, etc.	
	Is the Sampled Area	
Hydrophytic Vegetation Present? Yes V No	within a Wetland? Yes <u>V</u> No	
Wetland Hydrology Present?	If you optional Watland Site ID:	
Remarks: (Explain alternative procedures here or in a separate repo	If yes, optional wetland Site ID.	
The feature is highly disturbed and located wit	hin a roadside ditch. Garbage debris is present	
throughout. The feature is part of a wetland co	mplex, including shrub and forested components.	
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	Stunted of Stressed Plants (D1)	
Algal Mat of Crust (B4) Recent Iron Re	souction in Tilled Solis (C6) Geomorphic Position (D2)	
Internation Visible on Aerial Imagony (PZ) Other (Explain	in Remarke) Microtonographic Poliof (D4)	
Sparcely Vegetated Conceive Surface (P8)	EAC Noutral Tast (D5)	
Field Observations:		
Surface Water Present? Yes 🖌 No Depth (inches	a): 1	
Water Table Present? Ves No 🖌 Depth (inches		
Saturation Present? Yes No V Depth (inches (includes capillary fringe)	Wetland Hydrology Present? Yes <u> V</u> No	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:	
Remarks:		
I ne nydrologic regime is seasonally saturated	with recharge hydrology. The feature functions as a	
roadside ditch along a paved roadway. The fea	ature receives input from a culvert to the southeast	
where standing water is more prevalent.		

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1039e_w

Trace Streture (District) 20	Absolute	Dominant	Indicator	Dominance Test worksheet:
(Plot size. <u>50</u>)	% Cover	<u>Species</u> ?	Status	Number of Dominant Species
l			·	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, of FAC:(A/B)
6				Prevalence Index worksheet:
7			·	Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species <u>35</u> x 1 = <u>35</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>8</u> x 2 = <u>16</u>
1			·	FAC species <u>12</u> x 3 = <u>36</u>
2				FACU species <u>3</u> x 4 = <u>12</u>
3.				UPL species $0 \times 5 = 0$
4.				$\begin{array}{c} \text{Column Lotals:} \underline{58} \\ \end{array} (A) \underline{99} \\ \end{array} (B)$
5				Prevalence Index = B/A = <u>1.71</u>
6				Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
/		- Total Ca	·	2 - Dominance Test is >50%
E S			ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>3</u>)	05	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Typha sp.</u>	25	<u> </u>		data in Remarks or on a separate sheet)
2. <u>Carex stipata</u>	10	<u> </u>		
3. <u>Salix petiolaris</u>	5	<u> N </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Barbarea vulgaris</u>	5	N	FAC	be present, unless disturbed or problematic.
5. <u>Symphyotrichum sp.</u>	5	<u>N</u>		Definitions of Vegetation Strata:
6. <u>Equisetum arvense</u>	5	N	FAC	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Geum sp.</u>	2	N		at breast height (DBH), regardless of height.
8. <u>Fragaria virginiana</u>	2	N	FACU	Sapling/shrub – Woody plants less than 3 in DBH
9. <u>Ranunculus acris</u>	2	N	FAC	and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Cornus alba</u>	2	N	FACW	Herb – All herbaceous (non-woody) plants, regardless
11. Poa pratensis	1	Ν	FACU	of size, and woody plants less than 3.28 ft tall.
12. Impatiens capensis	1	N	FACW	Woody vines – All woody vines greater than 3.28 ft in
	65	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)		i otai oo		
1			·	
2			·	
3.			·	Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate s	sneet.)	۸		Contraditions and a local state from

The vegetation is representative of a fresh (wet) meadow located within a disturbed roadside ditch. The feature is dominated by cattails and graminoids with tree saplings scattered throughout. Upland species are present within the wetland likely due to disturbance factors. Abundant remnant biomass of cattails limits the ground cover within the ditch.

Depth	Matrix	0/	Redo	x Features	3 T 1	. 2	- ·	
(inches)	Color (moist)	%	Color (moist)	%	lype	Loc	Texture	Remarks
				·				
				·				
				. <u> </u>				
Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location: PL=F	Pore Lining, M=Matrix.
ydric Soil	indicators:						Indicators for Pro	oblematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Belov	w Surface	(S8) (LRF	RR,	2 cm Muck (A	10) (LRR K, L, MLRA 149B)
Histic Ep	bipedon (A2)		MLRA 149B))	. , .		Coast Prairie	Redox (A16) (LRR K, L, R)
Black Hi	stic (A3)		Thin Dark Surfa	ace (S9) (L	.RR R, MI	LRA 149B)	5 cm Mucky F	Peat or Peat (S3) (LRR K, L, R)
Hydroge	n Sulfide (A4)		Loamy Mucky N	Aineral (F1) (LRR K	, L)	Dark Surface	(S7) (LRR K, L)
Stratified	Layers (A5)		Loamy Gleyed I	Matrix (F2)	. ,	Polyvalue Bel	ow Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	e (A11)	Depleted Matrix	(F3)			Thin Dark Sur	face (S9) (LRR K, L)
Thick Da	ark Surface (A12)	· · /	Redox Dark Su	rface (F6)			Iron-Mangane	ese Masses (F12) (LRR K, L, R
 Sandv M	luckv Mineral (S1)		Depleted Dark S	, Surface (F	7)		Piedmont Floo	odplain Soils (F19) (MLRA 149
Sandy G	leved Matrix (S4)		Redox Depress	ions (F8)	- /		Mesic Spodic	(TA6) (MLRA 144A, 145, 149E
Sandy R	edox (S5)						Red Parent M	(17.6) (112.67.17.17.17.17.16.17.16.17.16.1
Oundy N	Matrix (S6)						Very Shallow	Dark Surface (TE12)
Dark Su	faco (S7) (I PP P M		2)				Other (Explain	a in Pomarks)
Dark Su	$(\mathbf{L}\mathbf{K}\mathbf{K},\mathbf{W})$)					
Indicators of	f hydronhytic yegetat	ion and we	atland hydrology mus	t ha nrasc	nt unloca	e disturbed	or problematic	
Astrictive I	aver (if observed):		and hydrology mus		int, unicot	s distarbed		
T	Layer (il observeu).							
Type:								
Depth (ind	ches):						Hydric Soil Preser	nt? Yes <u> </u>
Remarks:								
he soils	were not sam	npled d	ue to the loca	tion of	the we	tland w	ithin a roadsid	e ditch. The soils are
	l to bo bydria k		on the process	co of h	udroph	viana n	notation and w	atland hydrology
ISSUMED		Jaseu	n me presend		yuropr		jelalion and w	ellanu nyulology.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland	_ Sampling Date: <u>2020-06-10</u>
Applicant/Owner: Enbridge	State: Wiscor	nsin Sampling Point: wasd1039f_w
Investigator(s): <u>KDF/AGG</u>	_ Section, Township, Range: <u>sec 03 T047</u>	N R004W
Landform (hillslope, terrace, etc.): Depression	ocal relief (concave, convex, none): <u>Concave</u>	<u>e</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.58681	Long: <u>-90.862106</u>	Datum: <u>WGS84</u>
Soil Map Unit Name: Udorthents and Udipsamments,	cut or fill NWI classif	ication:
Are climatic / hydrologic conditions on the site typical for this time of y	vear? Yes <u>v</u> 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 answ	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locations, transect	s, 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 yes, optional Wetland Site ID:	
Remarks: (Explain alternative procedures here or in a separate rep The feature is a forested part of a wetland cor	nplex, including shrub and emer	gent components.

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1039f_w

Trop Stratum (Plot size: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:
A Soliv of pigro	<u>% Cover</u>	<u>Species</u> ?		Number of Dominant Species
		<u>I</u>		That Are OBL, FACW, or FAC:6(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 <u>75</u> x 1 = <u>75</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species $12 \times 2 = 24$
1. <u>Fraxinus nigra</u>	5	Y	FACW	FAC species $12 \times 3 = 36$
2. <u>Acer negundo</u>	5	Y	FAC	FACU species 2 $x = 8$
3. <u>Rhamnus cathartica</u>	2	N	FAC	Column Totals: 101 (A) 143 (B)
4				
5			·	Prevalence Index = B/A = <u>1.42</u>
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)		i otal oo		3 - Prevalence Index is ≤3.0 ¹
1. Opocloa sonsibilis	Б	V		4 - Morphological Adaptations ¹ (Provide supporting
2. Equipotum protongo	<u> </u>	 		Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Equisetum arvense</u>		<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
4. <u>Partnenocissus inserta</u>		<u> </u>	FACU	be present, unless disturbed or problematic.
5. <u>Rubus Idaeus</u>		<u>N</u>	FAC	Definitions of Vegetation Strata:
6. <u>Rhamnus cathartica</u>	1	<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
	14	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2.				
3.				Hydrophytic
4			·	Vegetation
	0	= Total Co	ver	Present? Yes <u>/</u> No
Remarks: (Include photo numbers here or on a separate	sheet.)	. 5(4) 00		1
The vegetation is disturbed and repres	entative	of a ha	rdwood	swamp dominated by a willow
species. There is abundant downed wo	ody deb	oris thro	ughout	the feature limiting herbaceous cover.

(inches)		Redo	x Features			
	<u>Color (moist)</u> %	Color (moist)	<u>%</u>	/pe ¹ Loc ²	Texture	Remarks
			·			
			·		·	
······	·		·			
			·			
			·		·	
			. <u> </u>			
			·			
	·		·		·	
Type: C=Conc	entration D=Depletion	RM=Reduced Matrix M	S=Masked Sar	nd Grains	² Location: PL=Por	e Lining M=Matrix
lydric Soil Ind	icators:				Indicators for Prob	lematic Hydric Soils ³ :
Histosol (A1	1)	Polyvalue Belov	w Surface (S8)) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipe	edon (A2)	MLRA 149B)		Coast Prairie Re	edox (A16) (LRR K, L, R)
Black Histic	: (A3)	Thin Dark Surfa	ice (S9) (LRR	R, MLRA 149B) 5 cm Mucky Pea	at or Peat (S3) (LRR K, L, R)
Hydrogen S	Sulfide (A4)	Loamy Mucky N	/lineral (F1) (L	RR K, L)	Dark Surface (S	7) (LRR K, L)
Stratified La	ayers (A5)	Loamy Gleyed	Matrix (F2)		Polyvalue Belov	V Surface (S8) (LRR K, L)
Depieted Be	Surface (A12)	Redox Dark Su	rface (F6)			Masses (F12) (IRR K I R)
Sandy Much	ky Mineral (S1)	Depleted Dark	Surface (F7)		Piedmont Flood	plain Soils (F19) (MLRA 149
Sandy Gley	ved Matrix (S4)	Redox Depress	ions (F8)		Mesic Spodic (T	A6) (MLRA 144A, 145, 149B
Sandy Redo	ox (S5)				Red Parent Mat	erial (F21)
Stripped Ma	atrix (S6)				Very Shallow Da	ark Surface (TF12)
Dark Surfac	ce (S7) (LRR R, MLRA 1	49B)			_∠_ Other (Explain i	n Remarks)
Indicators of hy	drophytic vegetation and	t wetland hydrology mus	the present i	inless disturbed	l or problematic	
Restrictive Lav	ver (if observed):	a welland nyarology mac	n be present, t			
Type						
Donth (incho	o);				Hydric Soil Present	Yes 🗸 No
	s)					



wasd1039f_w_NE



wasd1039f_w_S



wasd1039e_w_E



WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashlan	d Sampling Date: <u>2020-06-10</u>
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Sampling Point: <u>wasd1039s_w</u>
Investigator(s): <u>KDF/AGG</u>	Section, Township, Ran	ge: <u>sec 03 T047N R004W</u>
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, conv	ex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.5	587632 Long	: <u>-90.861117</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Udorthents and Udipsamm	ents, cut or fill	NWI classification:
Are climatic / hydrologic conditions on the site typical for this t	me of year? Yes <u><</u> No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology sig	nificantly disturbed? Are "N	Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology nat	urally problematic? (If nee	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh	nowing sampling point lo	cations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>v</u> No Hydric Soil Present? Yes <u>v</u> No Wetland Hydrology Present? Yes <u>v</u> No Remarks: (Explain alternative procedures here or in a separ The feature is a shrub-dominated part of components.	Is the Sampled within a Wetland If yes, optional Water report.)	Area d? Yes <u>v</u> No /etland Site ID: nich includes emergent and forested
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that	it apply)	Surface Soil Cracks (B6)
Surface Water (A1)	Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquati	c Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl D	eposits (B15)	Dry-Season Water Table (C2)

				Aqualic Fauna (BTS)		
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)
Inundation Visible on Ae	erial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
Sparsely Vegetated Cor	ncave Surface	e (B8)				FAC-Neutral Test (D5)
Field Observations:						
Surface Water Present?	Yes 🖌	No		_ Depth (inches): <u>2</u>		
Water Table Present?	Yes	No	~	Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes	No_	~	_ Depth (inches):	Wetland I	Hydrology Present? Yes <u></u>
Describe Recorded Data (str	ream gauge, r	nonito	ring	well, aerial photos, previous inspec	ctions), if ava	ailable:
Remarks:						
The hydrologic regi	me is sea	asor	ally	v saturated with rechard	je hydro	logy. There are pockets of

The hydrologic regime is seasonally saturated with recharge hydrology. There are pockets of standing water present within the feature. The feature is connected to an emergent wetland within a roadside ditch.

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1039s_w

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u>)	<u>% Cover</u>	<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: <u>3</u> (B)
4				Percent of Dominant Species
5				That are OBL, FACW, of FAC(A/B)
6				Prevalence Index worksheet:
7			. <u> </u>	Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species <u>37</u> x 1 = <u>37</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>99</u> x 2 = <u>198</u>
1. <u>Alnus incana</u>	75	Y	FACW	FAC species <u>6</u> x 3 = <u>18</u>
2. <u>Salix petiolaris</u>	10	N	FACW	FACU species x 4 =
3.				UPL species $0 \times 5 = 0$
4.				Column Totals: <u>142</u> (A) <u>253</u> (B)
5.				Prevalence Index = B/A = <u>1.7816901408450705</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		- 10181 00	VEI	3 - Prevalence Index is ≤3.0 ¹
<u>Herb Stratum</u> (Plot size. <u>5</u>)	25	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Carex lacustris</u>				Broblomatic Hydrophytic Vogotation ¹ (Explain)
2. <u>Phalaris arundinacea</u>		<u> </u>	FACW	
3. <u>Glyceria striata</u>	5	<u> </u>	OBL	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Equisetum arvense</u>	5	<u> N</u>	FAC	be present, unless disturbed or problematic.
5. <u>Carex stipata</u>	5	<u> N</u>	OBL	Definitions of Vegetation Strata:
6. <u>Spiraea alba</u>	2	N	FACW	Tree – Woody plants 3 in (7.6 cm) or more in diameter
7. <u>Alnus incana</u>	2	N	FACW	at breast height (DBH), regardless of height.
8. <u>Dryopteris cristata</u>	2	N	OBL	Sapling/shrub – Woody plants less than 3 in DBH
9. <u>Rhamnus cathartica</u>	1	N	FAC	and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
	57	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1.				
2				
3				Hydrophytic
аа				Vegetation
		- Tetel O		Present? Yes <u>v</u> No
Pemarke: (Include photo numbers here or on a congrate	U		ver	
The vegetation is representative of an a	alder thi	cket do	minated	by speckled alder, with ground cover

dominated by graminoids. Bare pockets are scattered throughout the wetland at the lowest points of the landscape, where downed woody debris and standing water are present.

Depth	Matrix	Red	ox Feature	S			
(inches)	Color (moist)	Color (moist)	%				Remarks
				·			
Type: C=0 Hydric Soil Histosc Histic E Black H Hydrog Stratifie Deplete Thick D Sandy Sandy Sandy Strippe Dark Si Indicators of Restrictive	Concentration, D=Depletion Indicators: I (A1) Epipedon (A2) listic (A3) en Sulfide (A4) ed Layers (A5) ed Below Dark Surface (A1 bark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) d Matrix (S6) Jurface (S7) (LRR R, MLRA of hydrophytic vegetation a Layer (if observed):	A, RM=Reduced Matrix, M Polyvalue Belo MLRA 1498 Thin Dark Sur Loamy Mucky Loamy Gleyed Depleted Matri Redox Dark S Depleted Dark Redox Deprese A 149B)	AS=Masker MS=Masker Marce (S9) (I Mineral (F Matrix (F2 Matrix (F2) Matrix (F3) Unface (F6) Surface (F8) Matrix (F8) Matrix (F8)	d Sand Gra (S8) (LRF LRR R, MI 1) (LRR K 2) 	ains. R R, _RA 149B , L)	² Location: PL= Indicators for Pr 2 cm Muck (/ Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodio Red Parent M Very Shallow Vory Shallow Other (Explain or problematic.	Pore Lining, M=Matrix. roblematic Hydric Soils ³ : A10) (LRR K, L, MLRA 149B) Peator Peat (S3) (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) ese Masses (F12) (LRR K, L, R) podplain Soils (F19) (MLRA 149B) c (TA6) (MLRA 144A, 145, 149B) Material (F21) / Dark Surface (TF12) in in Remarks)
Type:	iches):					Hydric Soil Prese	ent? Yes ✔ No
Remarks: The soil: be hydri	s were not sample c based on the pr	ed due to the pro esence of hydror	ximity c	of poter egetati	ntial bui	ried utilities. Ti wetland hydro	he soils are assumed t



wasd1039s_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/AGG				
File #:	Date of visit(s):				
wasd1039	2020-06-10				
Location:	Ecological Landsca	ape:			
PLSS: sec 03 T047N R004W	Superior Coastal Plain				
Lat: <u>46.587610</u> Long: <u>-90.861150</u>	Watershed:				
	LS08, FISH Creek				
County: <u>Ashland</u> I own/City/Village: <u>AShland City</u>					
Soils:	WWI Class:				
Mapped Type(s):	T3/S3Kr, E1Kr				
Udorthents and Udipsamments, cut or fill	Wetland Type(s):				
	PEM/PSS/PFO - Fresh (wet) meadow/Alder				
Field Verified:	thicket/Hardwood sw	vamp complex			
Series not verified. Soils were not sampled due to	Wetland Size:	Wetland Area Impacted			
the potential for buried utilities within the roadside	4.1848	4.1848			
ditch.	Vegetation:				
	Plant Community D	Description(s):			
Hydrology:	The vegetation within the emergent com roadside ditch. The feature is dominated	ponent is representative of a fresh (wet) meadow located within a disturbed by cattails and graminoids with tree saplings scattered throughout. Upland			
The hydrologic regime is seasonally saturated, with recharge hydrology. The emergent component functions as a roadside ditch along a paved roadway. There is a a culvert to the	species are present within the wetland lik the ground cover within the ditch. The ve	kely due to disturbance factors. Abundant remnant biomass of cattails limits agetation within the shrub component is representative of an alder thicket			
southeast that allows flow into the feature, where standing water is more prevalent, as well	dominated by speckled alder, with groun the wetland at the lowest points of the la	d cover dominated by graminoids. Bare pockets are scattered throughout ndscape, where downed woody debris and standing water are present. The			
present within the shrub component within the lowest areas of the landscape.	by a willow species. There is abundant d	it is highly disturbed and representative of a hardwood swamp dominated lowned woody debris throughout the feature limiting herbaceous cover.			

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	N	N	Wetland and contiguous habitat >10 acres
2	Y	Y	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	N	N	Occurs in a Joint Venture priority township
6	Y	Y	Interspersion of habitat structure (hemi-marsh,shrub/emergent, wetland/upland complex,etc.)
-		•	Supports or provides habitat for SGCN or birds listed in the WI All-Bird Cons. Plan, or other
/	Y	Y	plans
8	N	N	Part of a large habitat block that supports area sensitive species
9	N	N	Ephemeral pond with water present > 45 days
10	Y	Ý	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	Ň	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	N	N	Wetland is connected or contiguous with perennial stream or lake
2	Y	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	Ň	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	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	Y	Water flow through wetland is NOT channelized
3	Ν	N	Dense, persistent vegetation
4	Ν	N	Evidence of flashy hydrology
5	Y	Y	Point or non-point source inflow
6	Ν	N	Impervious surfaces cover >10% of land surface within the watershed
7	Ν	N	Within a watershed with <10% wetland
8	Ν	Y	Potential to hold >10% of the runoff from contributing area from a 2-year 24-hour storm event
WQ			Water Quality Protection
1	Ν	N	Provides substantial storage of storm and floodwater based on previous section
2	Y	Y	Basin wetland or constricted outlet
3	Ν	Y	Water flow through wetland is NOT channelized
4	Ν	N	Vegetated wetland associated with a lake or stream
5	Ν	N	Dense, persistent vegetation
6	Ν	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
7	N	N	Stormwater or surface water from agricultural land is major hydrology source
8	Ν	N	Discharge to surface water
9	Y	Y	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	N	N	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
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 located along a public roadway and is visible to the public.

WH-2: Three strata are represented throughout the wetland complex.

WH-10, FA-2: Pockets of standing water are present within the ditch and the shrub component of the wetland, likely from recent heavy rains, that may provide habitat for frogs and toads, though none were observed within the feature at the time of survey.

ST-2, WQ-3: The emergent component is a linear ditch channeling water through the middle at the lowest point, with flow originating from a culvert to the southeast.

ST-3, WQ-5: Thick remnant biomass of cattails limits vegetation cover throughout the emergent component. Abundant downed woody debris significantly limits ground cover within the forested component.

ST-5: The feature receives runoff from the adjacent road.

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

Observed	Potential	Species/Habitat/Comments
Y	Y	Avians
	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
	Y	Aquatic invertebrates

Plant Community Integrity (circle)*

	Low	Medium	High	Exceptional
Invasive species	> 50%	20-50%	10-20%	<10%
cover				
Strata	Missing stratum(a)	All strata	All strata present	All strata present,
	invasive species	reduced native	assemblage of	represented
		species		
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)
Alnus incana*			PSS	Patchy
Salix cf. nigra*			PFO	Patchy
Phalaris arundinacea*			PEM, PSS	Rare
Carex lacustris			PSS	Rare
Salix petiolaris			PEM	Rare
Scirpus microcarpus			PEM	Rare
Typha sp.			PEM	Rare
Acer negundo			PFO	Barren
Carex stipata			PEM, PSS	Barren
Equisetum arvense			PEM, PSS, PFO	Barren
Fraxinus nigra			PFO	Barren
Glyceria striata			PSS	Barren
Onoclea sensibilis			PSS, PFO	Barren
Rhamnus cathartica			PSS, PFO	Barren
Barbarea vulgaris			PEM	Barren
Carex stricta			PEM, PSS	Barren
Cf. Sagittaria sp.			PEM	Barren
Cirsium cf. arvense			PEM	Barren
Cornus sericea			PEM	Barren
Crataegus sp.			PEM	Barren
Dryopteris cristata			PSS	Barren
Equisetum pratense			PSS, PFO	Barren
Fragaria virginiana			PEM	Barren
Geum sp.			PEM	Barren
Impatiens capensis			PEM, PSS	Barren
Lemna minor			PEM	Barren
Parthenocissus inserta			PFO	Barren
Poa pratensis			PEM	Barren

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

The vegetation is disturbed throughout the wetland complex, with abundant non-native and invasive species.

Additional species: Ranunculus acris (Plant Communities: PEM, Abundance: Barren), Rubus idaeus (Plant Communities: PSS, PFO, Abundance: Barren), Spiraea alba (Plant Communities: PSS, Abundance: Barren)

SECTION 3: Condition Assessment of Wetland Assessment	: Area (AA) and Bu	iffer (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		М	С	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		М	С	Roads or railroad
Х	Х		Н	С	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	v		5.4		Removal of herbaceous stratum – mowing,
	~		IVI	00	grading, earthworms, etc.
x	x		м	C	Removal of tree or shrub strata – logging,
~	~		101	Ŭ	unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
Х	Х		Н	C	Cover of non-native and/or invasive species
					Residential land use
	Х		M	C	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		L	С	Garbage debris

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The wetland complex is disturbed and includes a roadside ditch located along a paved roadway. There is an above-ground utility corridor located immediately overhead the emergent component, and the surrounding area land use is industrial (likely an old logging mill) and roadway. Woody vegetation was removed within the emergent component under the powerlines, with debris abundant throughout. There is high cover of non-native and invasive species within the wetland complex and surrounding area, as well as garbage debris. The feature is impacted by runoff from the road and surrounding area.

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 disturbed throughout the complex, with abundant non-native and invasive species.
Human Use Values	The complex is associated with a highly disturbed roadside ditch with little to no human use value.
Wildlife Habitat	The feature is a part of a wetland complex with multiple strata represented, providing potential habitat for frogs, toads, and avians.
Fish and Aquatic Life Habitat	Minimal standing water is present within the emergent and shrub components of the wetland and is likely temporary due to recent rain events. Current standing water does not provide habitat for fish.
Shoreline Protection	N/A
Flood and Stormwater Storage	The wetland complex is within a small depression, including a roadside ditch. Vegetation is interrupted throughout the feature due to remnant biomass of cattails and abundant downed woody debris. The feature is not associated with a waterbody.
Water Quality Protection	See above.
Groundwater Processes	The feature exhibits recharge hydrology. No indicators of groundwater processes were observed.

Section 4: Project Impact Assessment

Brief Project Description 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 Proj	ect City/	County: <u>Ashland</u>	S	Campling Date: <u>2020-06-10</u>	
Applicant/Owner: Enbridge			State: Wisconsin	Sampling Point: wasd1039_u	
Investigator(s): <u>KDF/AGG</u>	Sect	ion, Township, Range: <u>S</u>	ec 03 T047N I	R004W	
Landform (hillslope, terrace, etc.): <u>Rise</u>	Local re	lief (concave, convex, no	one): <u>None</u>	Slope (%): <u>0-2%</u>	
Subregion (LRR or MLRA):	Lat: <u>46.58//56</u>	Long: <u>-9</u>	0.861103	Datum: VVGS84	
Soil Map Unit Name: <u>Udorthents and</u>	Udipsamments, cut o	or fill	NWI classificat	ion:	
Are climatic / hydrologic conditions on the site	typical for this time of year?	Yes 🖌 No	(If no, explain in Ren	narks.)	
Are Vegetation, Soil, or Hydro	logy significantly distu	rbed? Are "Norma	al Circumstances" pre	sent? Yes 🖌 No	
Are Vegetation, Soil, or Hydro	logy naturally problem	atic? (If needed,	explain any answers	in Remarks.)	
SUMMARY OF FINDINGS - Attach	site map showing sar	npling point locati	ons, transects, i	mportant features, etc.	
Hydrophytic Vegetation Present? Ye Hydric Soil Present? Ye Watered Hydrolegy Present?	No <u>v</u> s No <u>v</u>	Is the Sampled Area within a Wetland?	Yes	No	
Pemarke: (Explain alternative procedures b	ere or in a separate report)	If yes, optional Wetlan	d Site ID:		
The upland is located alongsid wetland features.	de a paved roadway	and is higher in	elevation than	the surrounding	
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indicato	rs (minimum of two required)	
Primary Indicators (minimum of one is require	ed; check all that apply)		Surface Soil Cr	acks (B6)	
Surface Water (A1)	Water-Stained Leave	es (B9)	Drainage Patterns (B10)		
High Water Table (A2)	High Water Table (A2) Aquatic Fauna (B13)		Moss Trim Lines (B16)		

	'
Marl Deposits (B15)	

Saturation (A3)			Marl Deposits (B15)		Dry-Season Water Table (C2)
Water Marks (B1)			Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
Sediment Deposits (B2)			Oxidized Rhizospheres on Living	Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)			Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)			Recent Iron Reduction in Tilled S	oils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)			Thin Muck Surface (C7)		Shallow Aquitard (D3)
Inundation Visible on Aer	ial Imagery (B7)		Other (Explain in Remarks)		Microtopographic Relief (D4)
Sparsely Vegetated Cond	ave Surface (B8)			FAC-Neutral Test (D5)
Field Observations:					
Surface Water Present?	Yes No	~	Depth (inches):		
Water Table Present?	Yes No	~	Depth (inches):		
Saturation Present?	Yes No	~	Depth (inches):	Wetland H	lydrology Present? Yes No

(includes capillary fringe)

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

Remarks:

No indicators of wetland hydrology were observed.

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1039_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			<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				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 <u>5</u> x 3 = <u>15</u>
2				FACU species <u>82</u> x 4 = <u>328</u>
2				UPL species x 5 =
3				Column Totals: <u>92</u> (A) <u>353</u> (B)
45			. <u></u>	Prevalence Index = B/A = <u>3.84</u>
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
/·				2 - Dominance Test is >50%
_		= I otal Co	ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Tanacetum vulgare</u>	75	<u> </u>	<u>FACU</u>	data in Remarks or on a separate sheet)
2. <u>Lotus corniculatus</u>	5	<u> N</u>	<u>FACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Cornus alba</u>	5	N	FACW	¹ Indiastors of hydric coil and watland hydrology must
4. <u>Rubus idaeus</u>	5	N	FAC	be present, unless disturbed or problematic.
5. <u>Fragaria virginiana</u>	2	N	FACU	Definitions of Vegetation Strata:
6.				Deminions of Vegetation of data.
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	92	= Total Co	ver	neight.
Woody Vine Stratum (Plot size: 30)				
1				
·				
2				
3			·	Hydrophytic Vegetation
4				Present? Yes No 🗸
	<u> </u>	= Total Co	ver	
The vegetation is representative of the upland area dominated by common tansy. The area is highly				
disturbed with high cover of invasive sr	ecies			

Depth	Matrix	Rod	ox Feature	s			
(inches)	Color (moist) %	Color (moist)	%	 	C	Texture	Remarks
	·			 			
¹ Type: C=C	Concentration, D=Depletion,	RM=Reduced Matrix, M	IS=Maske	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=Matrix.
Histosc Histic E Black H Hydrog Stratifie Deplete Thick D Sandy Sandy Sandy Dark Si	and (A1) Epipedon (A2) listic (A3) en Sulfide (A4) ed Layers (A5) ed Below Dark Surface (A11 Dark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) d Matrix (S6) urface (S7) (LRR R, MLRA 7	Polyvalue Belo MLRA 149E Thin Dark Surf Loamy Mucky Depleted Matri Redox Dark Su Depleted Dark Redox Depres	ow Surface 3) face (S9) (Mineral (F Matrix (F2) ix (F3) urface (F6) Surface (I sions (F8)	e (S8) (LRI LRR R, Mi 1) (LRR K 2)) 77)	₹ R, LRA 149Β) , L)	2 cm Mucl Coast Pra 5 cm Mucl Dark Surfa Polyvalue Thin Dark Iron-Mang Piedmont Mesic Spo Red Parer Very Shall Other (Exp	k (A10) (LRR K, L, MLRA 149B) irie Redox (A16) (LRR K, L, R) ky Peat or Peat (S3) (LRR K, L, R) ace (S7) (LRR K, L) Below Surface (S8) (LRR K, L) Surface (S9) (LRR K, L) ganese Masses (F12) (LRR K, L, R) Floodplain Soils (F19) (MLRA 149E odic (TA6) (MLRA 144A, 145, 149B) nt Material (F21) low Dark Surface (TF12) plain in Remarks)
³ Indicators o	of hydrophytic vegetation an Layer (if observed):	d wetland hydrology mu	ist be pres	ent, unless	s disturbed	or problematic.	
Type: Depth (ir	nches):					Hydric Soil Pre	esent? Yes No
The soil based o	s were not sampled n the landscape po	d due to the road sition and domi	dside lo nant ve	ocation egetatic	. The so	oils are assu	umed to be non-hydric



wasd1039_u_E



wasd1039_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/Co	unty: Ashland	Sampl	ing Date: <u>2020-06-10</u>
Applicant/Owner: Enbridge			_ State: Wisconsin San	npling Point: wasd1040e_w
Investigator(s): KDF/AGG	Section	ı, Township, Range: <u>S</u>	ec 03 T047N R00	94W
Landform (hillslope, terrace, etc.): Depressio	n Local relie	f (concave, convex, no	ne): <u>Concave</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Forests	³ Lat: <u>46.586926</u>	Long: _ -9().861045	Datum: <u>WGS84</u>
Soil Map Unit Name: Udorthents and Ud	ipsamments, cut or	fill	NWI classification:	
Are climatic / hydrologic conditions on the site typi	cal for this time of year? Ye	s 🔽 No	(If no, explain in Remarks	.)
Are Vegetation, Soil, or Hydrology	significantly disturbe	ed? Are "Norma	Circumstances" present?	?Yes 🖌 No
Are Vegetation, Soil, or Hydrology	naturally problemat	ic? (If needed, e	explain any answers in Re	emarks.)
SUMMARY OF FINDINGS - Attach sit	te map showing samp	oling point location	ons, transects, impo	ortant features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	✓ No ✓ No	Is the Sampled Area within a Wetland?	Yes 🗸 No	
Wetland Hydrology Present? Yes	✓ No	If yes, optional Wetland	I Site ID:	
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators (m	inimum 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 (E	B10)
Saturation (A3)	Marl Deposits (B15)		Drv-Season Water T	able (C2)
Water Marks (B1)	Hydrogen Sulfide Odor	· (C1)	Crayfish Burrows (C	8)
Sediment Deposits (B2)	Oxidized Rhizospheres	s on Living Roots (C3)	Saturation Visible or	Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced	ron (C4)	Stunted or Stressed	Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction	in Tilled Soils (C6)	Geomorphic Position	n (D2)
Iron Deposits (B5)	Thin Muck Surface (C7	')	Shallow Aquitard (D	3)
Inundation Visible on Aerial Imagery (B7)	Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4)			elief (D4)
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (D	95)
Field Observations:	-			
Surface Water Present? Yes 🖌 No	Depth (inches): <u>3</u>			

Saturation Present? Yes ____ No _ Cepth (inches): ____ (includes capillary fringe)

Water Table Present?

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

Yes _____ No ___ Depth (inches): _____

Remarks:

The hydrologic regime is seasonally saturated with recharge hydrology. The feature receives runoff from the surrounding unpaved roads. Concrete rubble is present within the feature, located in an area previously used for storage of log piles.

Wetland Hydrology Present? Yes ____

No

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1040e_w

Tara Chatum (Distaire) 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: 3 (A)
2			·	Total Number of Dominant
3			·	Species Across All Strata:3 (B)
4			·	Percent of Dominant Species
5				That Are OBL, FACVV, of FAC:(A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species <u>68</u> x 1 = <u>68</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>17</u> x 2 = <u>34</u>
1. <u>Salix petiolaris</u>	10	Y	FACW	FAC species x 3 =5
2. Populus tremuloides	5	Y	FAC	FACU species <u>10</u> x 4 = <u>40</u>
3				UPL species x 5 =
۵ ۸				Column Totals: <u>100</u> (A) <u>157</u> (B)
5				Prevalence Index = B/A = <u>1.57</u>
				Hydrophytic Vegetation Indicators:
0			·	1 - Rapid Test for Hydrophytic Vegetation
/	45		·	2 - Dominance Test is >50%
_		= Total Co	ver	\sim 3 - Prevalence Index is $\leq 3.0^1$
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Typha sp.</u>	50	<u> Y </u>	OBL	data in Remarks or on a separate sheet)
2. <u>Scirpus atrovirens</u>	10	<u> N </u>	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Lotus corniculatus</u>	10	N	<u>FACU</u>	¹ Indicators of hydric soil and wotland hydrology must
4. <u>Salix petiolaris</u>	5	N	FACW	be present, unless disturbed or problematic.
5. <u>Carex stipata</u>	5	N	OBL	Definitions of Vegetation Strata:
6. <u>Persicaria sp.</u>	5	N		
7. Juncus effusus	2	Ν	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8. Cornus alba	2	N	FACW	Conting (church Maadu planta laas than 2 in DDU
9 Glyceria striata	1	N	OBI	and greater than or equal to 3.28 ft (1 m) tall.
10				Herb. All horbaccous (non woody) planta, regardless
10			·	of size, and woody plants less than 3.28 ft tall.
10			·	Woody vines – All woody vines greater than 3.28 ft in
12			·	height.
	90	= Total Co	ver	
Woody Vine Stratum (Plot size: <u>3U</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 s	sheet.)	t) mood	ow dom	insted by settails and graminaids. The

The vegetation is representative of a fresh (wet) meadow dominated by cattails and graminoids. The feature is disturbed and partially filled with concrete rubble. Upland species are present on rubble piles within the wetland. Meadow willow shrubs are present within the wetland but coverage does not constitute a shrub community.

(inches) Color (maint) %		Domorko
Type: C=Concentration, D=Depletion, F	M=Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric 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 14)	 Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 1 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, 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 Piedmont Floodplain Soils (F19) (MLRA 14 Mesic Spodic (TA6) (MLRA 144A, 145, 14 Red Parent Material (F21) Very Shallow Dark Surface (TF12) Chter (Explain in Remarks)
Indicators of hydrophytic vegetation and	wetland hydrology must be present, unless distu	urbed or problematic.
Kestrictive Layer (if observed):		
i ype		Hydric Soil Present? Yes 🗸 No
Depth (Inches):		

permanent structures. The soils are assumed to be hydric based on the presence of hydrophytic vegetation and wetland hydrology.



wasd1040e_w_NE



wasd1040e_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/AGG			
File #:	Date of visit(s):			
wasd1040	2020-06-10			
Location:	Ecological Landsca	ape:		
PLSS: sec 03 T047N R004W	Superior Coastal Plain	Superior Coastal Plain		
Lat: <u>46.586921</u> Long: <u>-90.861006</u>	Watershed:			
	LSUO, FISH Creek			
County: <u>Ashland</u> Town/City/Village: <u>Ashland City</u>				
Soils:	WWI Class:			
Mapped Type(s):	N/A			
Udorthents and Udipsamments, cut or fill	Wetland Type(s):			
	PEM - fresh (we	t) meadow		
Field Verified:	, , , , , , , , , , , , , , , , , , ,	<i>.</i>		
Series not verified. The soils were not sampled due to the potential	Wetland Size:	Wetland Area Impacted		
structures. The soils are assumed to be hydric based on the	0.1629	0.1629		
presence of hydrophytic vegetation and wetland hydrology.	Vegetation:	·		
	Plant Community D	Description(s):		
Hydrology:	The vegetation is repres	entative of a fresh (wet) meadow dominated		
The hydrologic regime is seasonally saturated wih recharge hydrology.	by cattails and graminoid	ds. The feature is disturbed and partially filled		
those feature is surrounded by unpaved roads and receives runoit from those features. Concrete rubble is present within the feature located in an	arowing on rubble piles	Meadow willow shrubs are present within the wetland		
area previously used for storage of log piles.	wetland but coverage do	bes not constitute a shrub 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	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	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	N	N	Wetland and contiguous habitat >10 acres
2	N	N	3 or more strata present (>10% cover)
3	N	N	Within or adjacent to habitat corridor or established wildlife habitat area
4	N	N	100 m buffer – natural land cover >50%(south) 75% (north) intact
5	N	N	Occurs in a Joint Venture priority township
6	N	N	Interspersion of habitat structure (hemi-marsh, shrub/emergent, wetland/upland complex, etc.)
7	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	Ν	Y	Standing water provides habitat for amphibians and aquatic invertebrates
11	N	N	Seasonally exposed mudflats present
12	N	N	Provides habitat scarce in the area (urban, agricultural, etc.)
FA			Fish and Aquatic Life Habitat
1	N	N	Wetland is connected or contiguous with perennial stream or lake
2	N	Y	Standing water provides habitat for amphibians and aquatic invertebrates
3	N	N	Natural Heritage Inventory (NHI) listed aquatic species within aquatic system
4	N	Y	Vegetation is inundated in spring
SP			Shoreline Protection
1	N	N	Along shoreline of a stream, lake, pond or open water area (>1 acre) - if no, not applicable
2	Ν	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	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	N	N	Provides substantial storage of storm and floodwater based on previous section
2	Y	Y	Basin wetland or constricted outlet
3	N	N	Water flow through wetland is NOT channelized
4	N	N	Vegetated wetland associated with a lake or stream
5	N	Y	Dense, persistent vegetation
6	N	N	Signs of excess nutrients, such as algae blooms, heavy macrophyte growth
/	N	N	Stormwater or surface water from agricultural land is major hydrology source
8	N	N	Discharge to surface water
9	Y	Y	Natural land cover in 100m buffer area < 50%
GW			
1	N	N	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	I N	Vetland is within a wellhead protection area
WH-10, FA-2, 4: Pockets of standing water are present within the ditch, likely from recent heavy rains, that may provide habitat for frogs and toads, though no wildlife was observed within the feature at the time of survey.

ST-2, WQ-3: The feature is a linear ditch channeling water through the middle at the lowest point. ST-3, WQ-5: Thick remnant biomass of cattails, woody debris, and concrete debris limits vegetation cover throughout the feature.

ST-5: The feature receives runoff from the adjacent roads.

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	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	species	native species	representeu
NHI plant community ranking	S4	S3	S2	S1-S2 (S2 high quality)
Relative frequency of	Abundant 🖌	Common		Rare
plant community in watershed				
FOL (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,
Turche en *			DEM	Abundance)
I ypna sp.*			PEM	Patchy
Salix petiolaris^			PEM	Rare
Scirpus atrovirens*			PEM	Rare
Carex stipata			PEM	Barren
Glyceria striata			PEM	Barren
Lotus corniculatus			PEM	Barren
Persicaria sp.			PEM	Barren
Phalaris arundinacea			PEM	Barren
Populus tremuloides			PEM	Barren
Cornus sericea			PEM	Barren
Eleocharis sp.			PEM	Barren
Juncus effusus			PEM	Barren
Scirpus microcarpus			PEM	Barren

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

The feature is disturbed with a significant cover of invasive species.

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	Х		Н	С	Drainage – tiles, ditches
					Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
Х	Х		M	С	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		Н	С	Roads or railroad
	Х		Н	С	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	v				Removal of herbaceous stratum – mowing,
	^		L	00	grading, earthworms, etc.
	x		М		Removal of tree or shrub strata – logging,
	~		171	00	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
Х	Х		Н	С	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		Н	С	Concrete debris

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The feature is disturbed and located within a ditch surrounded by unpaved roads, with runoff likely impacting the wetland. The feature appears to have been previously filled with concrete rubble, debris, and wood chips. The area was likely previously used for storing log piles. The surrounding area is impacted by an above-ground utility corridor to the north, with woody species removed beneath. There is high invasive species cover within and surrounding the feature.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The feature is disturbed, with a significant cover of invasive species.
Human Use Values	The feature is located within industrial land use with no potential for human use value.
Wildlife Habitat	Multiple strata are represented within the feature, but disturbance factors limit potential for habitat. Current standing water may provide temporary habitat for frogs and toads.
Fish and Aquatic Life Habitat	Minimal standing water is present within the feature that may provide temporary habitat for aquatic invertebrates. The feature does not support fish habitat.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a small ditch surrounded by unpaved roads/trails. There appears to have been an attempt to fill the wetland with concrete debris, limiting water storage potential.
Water Quality Protection	See above.
Groundwater Processes	The feature exhibits recharge hydrology. No indicators of groundwater processes were observed.

Section 4: Project Impact Assessment

Brief Project Description 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	City/	County: Ashland		Sampling Date: <u>2020-06-10</u>	
Applicant/Owner: Enbridge				State: Wisconsi	n Sampling Point: wasd1040_u
Investigator(s): AGG/KDF		Sec	tion, Township, Range: <u>Se</u>	<u>c 03 T047N</u>	R004W
Landform (hillslope, terrace, etc.): Sic	de Slope	Local re	elief (concave, convex, none): <u>Convex</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcent	ral Forests Lat: 46.	586676	Long: <u>-90.</u>	860891	Datum: <u>WGS84</u>
Soil Map Unit Name: Udorthents	and Udipsamm	ents, cut	or fill	NWI classifica	ation:
Are climatic / hydrologic conditions on	the site typical for this t	time of year?	Yes 🖌 No (If	no, explain in Re	marks.)
Are Vegetation _ 🖌 , Soil _ 🖌 , or	r Hydrology 🗹 sig	nificantly distu	urbed? Are "Normal C	Circumstances" pr	resent? Yes 🖌 No
Are Vegetation, Soil, or	⁻ Hydrology na	turally problen	natic? (If needed, ex	plain any answers	s in Remarks.)
SUMMARY OF FINDINGS –	Attach site map s	howing sa	mpling point location	s, transects,	important features, etc.
Hydrophytic Vegetation Present?	Yes No	~	Is the Sampled Area	Nee	
Hydric Soil Present?	Yes No	<u> </u>	within a wetland?	res	NO
Wetland Hydrology Present?	Yes No	 ✓ 	If yes, optional Wetland S	Site ID:	
Remarks: (Explain alternative proceed The upland sample point filled with construction de wetland in the past but ha	dures here or in a sepa is located in an bris (bricks, cou as now been fill	rate report.) area bet ncrete, gr ed to the	ween two gravel ro avel, etc.). It appea point where it does	bads that ha ars the area s not meet a	s been completely may have been my wetland

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1040_u

Trop Stratum (Plot size: 30)	Absolute	Dominar	Indicator	Dominance Test worksheet:
<u>Thee 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 Are OBL, FACW, or FAC: (A/B)
6				
7				Prevalence Index worksheet:
/:				Total % Cover of: Multiply by:
	0	= Total Co	over	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species $5 \times 2 = 10$
1. <u>Acer negundo</u>	2	<u> N</u>	FAC	FAC species 10 x 3 = 30
2				FACU species $7()$ x 4 =
3.				UPL species x 5 =
4				Column Totals: <u>85</u> (A) <u>320</u> (B)
				Prevalence Index = $B/A = 3.764705882352941$
5				
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	2	= Total Co	over	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				3 - Prevalence Index is $\leq 3.0^{\circ}$
1 Lotus corniculatus	50	Y	FACU	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
	10	 N		Problematic Hydrophytic Vegetation ¹ (Explain)
		<u> </u>		
3. <u>Poa pratensis</u>	10	N	FACU	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Phalaris arundinacea</u>	5	N	FACW	be present, unless disturbed or problematic.
5. <u>Rubus idaeus</u>	5	N	FAC	Definitions of Vegetation Strata:
6. Barbarea vulgaris	2	N	FAC	
7 Rumex crispus	1	Ν	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8				at breast height (BBH), regulateds of height.
0				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
	83	= Total Co	over	neight.
Woody Vine Stratum (Plot size: 30)				
1				
2				
3				Hydrophytic
4				Present? Yes No V
	0	= Total Co	over	
Remarks: (Include photo numbers here or on a separate	sheet.)			
The area is dominated by disturbance-	oriented	specie	es.	

Deptit	Matrix		Redo	x Feature	5				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rema	arks
	,	<u> </u>				<u> </u>			
		·							
·		·				<u> </u>			
		·							
<u> </u>									
,		·					·		
Type: C=Co	ncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location: PL	_=Pore Lining, M	/=Matrix.
Hydric Soil Ir	ndicators:		· · · · ·				Indicators for	Problematic Hy	/dric Soils ³ :
Histosol ((A1)		Polyvalue Belov	v Surface	(S8) (LRF	RR,	2 cm Muck	(A10) (LRR K ,	L, MLRA 149B)
Histic Epi	ipedon (A2)		MLRA 149B)		. , .	·	Coast Prai	rie Redox (A16)	(LRR K, L, R)
Black His	tic (A3)	-	Thin Dark Surfa	ce (S9) (I	.RR R, ML	LRA 149B)	5 cm Muck	y Peat or Peat (S3) (LRR K, L, R)
Hydrogen	n Sulfide (A4)	-	Loamy Mucky M	lineral (F	I) (LRR K	, L)	Dark Surfa	ice (S7) (LRR K	, L)
Stratified	Layers (A5)		Loamy Gleyed I	Matrix (F2)		Polyvalue	Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	(A11)	Depleted Matrix	(F3)			Thin Dark	Surface (S9) (LF	RR K, L)
Thick Dar	rk Surface (A12)		Redox Dark Su	face (F6)			Iron-Manga	anese Masses (I	F12) (LRR K, L, R)
Sandy Mi	ucky Mineral (S1)	-	Depleted Dark S	Surface (F	7)		Piedmont I	Floodplain Soils	(F19) (MLRA 149E
Sandy Gl	eyed Matrix (S4)		Redox Depress	ions (F8)			Mesic Spo	dic (TA6) (MLR	A 144A, 145, 149B
Sandy Re	edox (S5)						Red Paren	t Material (F21)	
Stripped I	Matrix (S6)		,				Very Shallo	ow Dark Surface	e (TF12)
Dark Surf	face (S7) (LRR R, M	LRA 149B)				Other (Exp	lain in Remarks)
Indiantors of	hydrophytic ycartoti	on and wa	land hydrology mus	the proc	nt unloca	diaturbad	ar arablamatia		
Indicators of	nyurophytic vegetati	on and we	liand hydrology mus	t be prese	ent, uniess		or problematic.		
	ayer (il observeu).								
Type:									
Depth (incl	hes):						Hydric Soil Pre	sent? Yes	No <u>/</u>
Remarks:									
Soils coul	ld not be sam	oled du	e to the roads	side lo	cation.	Constru	uction debris	s and fill ma	aterial likelv
	Dominant veg	etation	suggests the	area	loes no	nt retain	water for si	ubstantial n	periods of
resent [Johnnant veg	clation	Suggests the	arca c		Ji retain			
oresent. [
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wasd1040_u_N



wasd1040_u_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	_ City/County: <u>Ashland</u> Sampling Date: <u>2020-06-10</u>
Applicant/Owner: Enbridge	State: <u>Wisconsin</u> Sampling Point: <u>wasd1041e_w</u>
Investigator(s): <u>KDF/AGG</u>	_ Section, Township, Range: <u>sec 03 T047N R004W</u>
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Morthcentral Forests Lat: 46.5871	66 Long: <u>-90.859681</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Udorthents and Udipsamments,	Cut or fill NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🖌 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>V</u> No <u>Ves V</u> No <u>Ves V</u> 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 procedures here or in a separate rep The feature is disturbed. The area appears to is not actively used.	o have been previously used for stacking logs, though it

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 <u>v</u> No Depth (inches): <u>1</u>			
Water Table Present? Yes <u>No</u> 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		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:		
Pomarka:			

The feature is located within a subtle ditch surrounded by unpaved roads. Concrete debris and wood chips are abundant throughout the feature, though overall wetland hydrology has been maintained. The hydrologic regime is seasonally saturated with recharge hydrology. A pocket of shallow standing water is present at the time of survey, likely due to recent rain.

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1041e_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator	Dominance Test worksheet:
	<u>_/0 COVEI</u>			Number of Dominant Species
·				That Are OBL, FACW, or FAC: <u>3</u> (A)
3				Total Number of Dominant Species Across All Strata:
4				Benerit of Deminant Operator
5		·		That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6.		·		
7			. <u> </u>	Prevalence Index worksheet:
1		Tatal Oa		Total % Cover of:Multiply by:
			ver	OBL species 47 $x^{1} = 47$
Sapling/Shrub Stratum (Plot size: 15)				FACW species $5 \times 3 = 15$
1				FACU species $0 \times 4 = 0$
2				UPL species $0 \times 5 = 0$
3		·		Column Totals: <u>67</u> (A) <u>92</u> (B)
4				Prevalence index = $B/A = 1.37$
5		·		Hudronbutio Vogetation Indicatoro
6				1 - Rapid Test for Hydrophytic Vegetation
7				\sim 2 - Dominance Test is >50%
	0	= Total Co	ver	\sim 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Typha sp.</u>	15	<u> Y </u>	OBL	data in Remarks or on a separate sheet)
2. <u>Phalaris arundinacea</u>	10	N	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Scirpus atrovirens</u>	10	N	OBL	¹ Indicators of hydric coil and watland hydrology must
4. <u>Scirpus cf. cyperinus</u>	10	Y	OBL	be present, unless disturbed or problematic.
5. <u>Carex cf. vulpinoidea</u>	10	Y	OBL	Definitions of Vegetation Strata:
6. <u>Salix bebbiana</u>	5	N	<u>FACW</u>	Tree Weedy plants 2 in (7.6 cm) or more in diameter
7. <u>Equisetum arvense</u>	5	N	FAC	at breast height (DBH), regardless of height.
8. <u>Juncus cf. effusus</u>	2	N	OBL	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	<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
	67	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1				
2				
2				
3		·		Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
Pomarka: (Include photo numbero horo er en e concrete		= Total Co	ver	
The vegetation is representative of a fro disturbed within the feature and is limite	esh (we ed by th	t) mead e prese	ow dom nce of c	ninated by graminoids. Vegetation is concrete debris and wood chips
covering significant portions of the grou	ind.	-		

(ha - la - a)	Matrix		Redo	x Feature	S			-
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
						<u> </u>		
						·		
						·		
						·		
1 <u>т</u>							21 11 12	B 1111 M M 111
Type: C=C	oncentration, D=Depi	etion, RM=F	educed Matrix, M	S=Masked	I Sand Gra	ains.	Location: PL=	Pore Lining, M=Matrix.
Listooo			Dohavaluo Polo	w Surface			2 om Muck	
Histic F	ninedon (A2)	_	MIRA 149R		(30) (LKr	К,	Coast Prairi	A 10) (LKK K, L, MLKA 1496) a Reday (A16) (IRR K I R)
Black H	istic (A3)		Thin Dark Surfa	/ ace (S9) (I	RR R. MI	RA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)	—	Loamy Mucky I	Mineral (F	1) (LRR K	, L)	Dark Surfac	e (S7) (LRR K, L)
Stratifie	d Layers (A5)	_	_ Loamy Gleyed	Matrix (F2)	, ,	Polyvalue B	elow Surface (S8) (LRR K, L)
Deplete	d Below Dark Surface	e (A11)	_ Depleted Matrix	k (F3)			Thin Dark S	urface (S9) (LRR K, L)
Thick D	ark Surface (A12)	_	Redox Dark Su	rface (F6)			Iron-Mangai	nese Masses (F12) (LRR K, L, R)
Sandy M	Mucky Mineral (S1)	_	Depleted Dark	Surface (F	7)		Piedmont Fl	oodplain Soils (F19) (MLRA 149B
Sandv (Gleyed Matrix (S4)	_	_ Redox Depress	sions (F8)			Mesic Spod	ic (TA6) (MLRA 144A, 145, 149B)
							Red Parent	Material (F21)
Sandy F	Redox (S5)						Von/Cholley	N Dark Surface (TE12)
Sandy F	Redox (S5) d Matrix (S6)							
Sandy F Stripped Dark Su	Redox (S5) d Matrix (S6) ırface (S7) (LRR R, M	ILRA 149B)					Other (Expla	ain in Remarks)
Sandy F Stripped Dark Su	Redox (S5) d Matrix (S6) Irface (S7) (LRR R, M of hydrophytic yegetat	ILRA 149B)	and hydrology mus	st he press	ant unless	e disturbed (Other (Expla	ain in Remarks)
Sandy F Stripped Dark Su 3Indicators o	Redox (S5) J Matrix (S6) Irface (S7) (LRR R, M If hydrophytic vegetat	ILRA 149B) ion and wetl	and hydrology mus	st be prese	ent, unless	s disturbed o	Very Shallon V	ain in Remarks)
Sandy F Stripped Dark Su ³ Indicators o Restrictive	Redox (S5) J Matrix (S6) Irface (S7) (LRR R, N If hydrophytic vegetat Layer (if observed):	ILRA 149B)	and hydrology mus	st be prese	ent, unless	s disturbed o	very Shallo very Shal	ain in Remarks)
Sandy F Stripped Dark Su <u>3Indicators o</u> Restrictive Type:	Redox (S5) d Matrix (S6) Irface (S7) (LRR R, N of hydrophytic vegetat Layer (if observed):	ILRA 149B)	and hydrology mus	st be prese	ent, unless	disturbed o	very Shallo very Shal	ain in Remarks)
Sandy F Stripped Dark Su ³ Indicators o Restrictive Type: Depth (in	Redox (S5) d Matrix (S6) Irface (S7) (LRR R, M of hydrophytic vegetat Layer (if observed): ches):	ILRA 149B)	and hydrology mus	st be prese	ent, unless	disturbed o	Very Shallon Other (Expla or problematic. Hydric Soil Pres	ent? Yes <u>~</u> No
Sandy F Stripped Dark Su ³ Indicators c Restrictive Type: Depth (in Remarks:	Redox (S5) d Matrix (S6) Irface (S7) (LRR R, M of hydrophytic vegetat Layer (if observed): ches):	ILRA 149B)	and hydrology mus	st be prese	ent, unless	s disturbed o	Very Shallo Very Shal	ent? Yes <u>~</u> No
Sandy F Stripped Dark Su ³ Indicators c Restrictive Type: Depth (in Remarks: The soils	Redox (S5) d Matrix (S6) Inface (S7) (LRR R, M of hydrophytic vegetat Layer (if observed): ches): S WERE NOT SAM	ilRA 149B) ion and wetl	and hydrology mus e to the pote	ential fc	ent, unless	d utilitie	Very Shalo V	ent? Yes <u>v</u> No <u>no</u>
Sandy F Stripped Dark Su Indicators c Restrictive Type: Depth (in Remarks: The soils permane	Redox (S5) d Matrix (S6) inface (S7) (LRR R, N of hydrophytic vegetat Layer (if observed): ches): ches): S were not sam ent structures.	ILRA 149B) ion and weth pled du The soil	e to the pote s are assum	ential fc	ent, unless or burie e hydr	d utilitie	 Very Shallo Other (Explain Other (Explain	ent? Yes <u>~</u> No <u></u> ch in close proximity to scape position and
Sandy F Stripped Dark Su Black Su Black Su Black Su Strippe: Type: Depth (in Remarks: The soils permane dominan	Redox (S5) d Matrix (S6) Inface (S7) (LRR R, M of hydrophytic vegetat Layer (if observed): ches): s were not sam ent structures. It vegetation.	ion and weth npled du The soil	e to the pote s are assum	ential fc ed to b	ent, unless or burie e hydr	d utilitie	Very Shalo Cher (Expla Other (Expla Dr problematic. Hydric Soil Pres S within a dit d on the land	ent? Yes <u>~</u> No ch in close proximity to scape position and
Sandy F Sandy F Stripped Dark Su ³ Indicators c Restrictive Type: Depth (in Remarks: The soils permane dominan	Redox (S5) d Matrix (S6) Inface (S7) (LRR R, M of hydrophytic vegetat Layer (if observed): ches): s were not sam ent structures. it vegetation.	ion and weth npled du The soil	and hydrology mus 	ential fo ed to b	ent, unless or burie e hydri	d utilitie	 Very Shallo Other (Explain S within a dite S on the land 	ent? Yes <u>~</u> No ch in close proximity to scape position and
Sandy F Stripped Dark Su Bindicators c Restrictive Type: Depth (in Remarks: The soils permane dominan	Redox (S5) d Matrix (S6) Inface (S7) (LRR R, M of hydrophytic vegetat Layer (if observed): ches): ches): s were not sam ent structures. It vegetation.	ion and weth npled du The soil	e to the potes are assum	ential fo ed to b	ent, unless or burie e hydr	d utilitie	Very Shalo V	ent? Yes <u>~</u> No <u></u> ch in close proximity to scape position and
Sandy F Stripped Dark Su Bindicators c Restrictive Type: Depth (in Remarks: The soils permane dominan	Redox (S5) d Matrix (S6) Inface (S7) (LRR R, M of hydrophytic vegetat Layer (if observed): ches): S were not sam ent structures. It vegetation.	ion and weth	and hydrology mus e to the pote s are assum	ential fc ed to b	ent, unless or burie e hydr	d utilitie	 Very Shalo Other (Explain Other (Explain	ent? Yes <u>~</u> No ch in close proximity to scape position and
Sandy F Stripped Dark Su Back Su Back Su Back Su Stripped Stripped Type: Depth (in Remarks: The soils permane dominan	Redox (S5) d Matrix (S6) inface (S7) (LRR R, M of hydrophytic vegetat Layer (if observed): cches): cches): s were not sam ent structures. it vegetation.	ion and weth	e to the potes are assum	ential fc ed to b	ent, unless or burie e hydr	d utilitie	Other (Expla Other (Expla or problematic. Hydric Soil Pres s within a dit d on the land	ent? Yes <u>~</u> No <u></u> ch in close proximity to scape position and
Sandy F Stripped Dark Su Back Su Back Su Stripped Dark Su Stripped Type: Depth (in Remarks: The soils permane dominan	Redox (S5) d Matrix (S6) Inface (S7) (LRR R, M of hydrophytic vegetat Layer (if observed): ches): ches): S were not sam ent structures. It vegetation.	ion and weth	e to the potes are assum	ential fc ed to b	ent, unless or burie e hydri	d utilitie	 Very Shallo Other (Explained Problematic. Hydric Soil Pres S within a dit d on the land 	ent? Yes <u>~</u> No <u></u> ch in close proximity to scape position and
Sandy F Stripped Dark Su Back Su Bestrictive Type: Depth (in Remarks: The soils permane dominan	Redox (S5) d Matrix (S6) Inface (S7) (LRR R, M of hydrophytic vegetat Layer (if observed): ches): S were not sam ent structures. It vegetation.	ion and weth	e to the pote and hydrology mus	ential fc	ent, unless or burie e hydri	d utilitie	 Very Shallo Other (Explained of problematic. Hydric Soil Press s within a dit d on the land 	ent? Yes <u>~</u> No ch in close proximity to scape position and
Sandy F Sandy F Stripped Dark Su Betrictive Type: Depth (in Remarks: The soils permane dominan	Redox (S5) d Matrix (S6) Inface (S7) (LRR R, M of hydrophytic vegetat Layer (if observed): ches): S were not sam ent structures. It vegetation.	ion and weth	e to the potes are assum	ential fo ed to b	ent, unless or burie e hydri	d utilitie	 Very Shallo Other (Explained of problematic. Hydric Soil Press s within a dit d on the land 	ent? Yes <u>~</u> No <u></u> ch in close proximity to scape position and



wasd1041e_w_NW



wasd1041e_w_SE

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

Evaluator(s):		
KDF/AGG		
Date of visit(s):		
2020-06-10		
Ecological Landsca	ape:	
Superior Coastal Plain		
Watershed:		
LS08, FISh Creek		
WWI Class:		
N/A		
Wetland Type(s):		
PEM - fresh (wet) meadow		
Wetland Size:	Wetland Area Impacted	
0.0958	0.0958	
Vegetation:		
Plant Community Description(s):		
The vegetation is representative of a fresh (wet) meadow		
dominated by graminoids. Vegetation is disturbed within		
the feature and is limited by the presence of concrete		
debris and wood chips covering significant portions of the		
ground.		
	Evaluator(s): KDF/AGG Date of visit(s): 2020-06-10 Ecological Landsca Superior Coastal Plain Watershed: LS08, Fish Creek WWI Class: N/A Wetland Type(s): PEM - fresh (we Wetland Size: 0.0958 Vegetation: Plant Community E The vegetation is re dominated by grami the feature and is lir debris and wood chi ground.	

SITE MAP

SECTION 1: Functional Value Assessment

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

WH-10, FA-2: Minimal standing water is present within a pocket of the wetland but is unlikely to be sustained or provide habitat for wildlife.

W1-10, FA2. Winning states present within a pocket of the webland but a HU-3: The feature is visible from a public road.
ST-2, WQ-3: Though the feature is linear, the subtle depression is not channelized.

> 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	Small mammal

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

Observed	Potential	Species/Habitat

SECTION 2: Floristic Integrity

Plant Community Integrity (circle)*

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

*Note: separate plant communities are described independently

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

Scientific Name	Common Name	C of C	Plant communities	Comments (Estimate of % Cover, Abundance)
Phalaris arundinacea*			PEM	Patchy
Salix bebbiana*			PEM	Rare
Carex cf. vulpinoidea*			PEM	Rare
Scirpus atrovirens			PEM	Rare
Scirpus cf. cyperinus			PEM	Rare
Equisetum arvense			PEM	Rare
Typha sp.			PEM	Rare
Juncus cf. effusus			PEM	Barren

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

The feature is disturbed with a significant cover of non-native and invasive species.

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	Х		Н	С	Drainage – tiles, ditches
					Hydrologic changes - high capacity wells, impounded water, increased runoff
					Point source or stormwater discharge
Х	Х		M	С	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		Н	С	Roads or railroad
	Х		М	С	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	v				Removal of herbaceous stratum – mowing,
	^		L	00	grading, earthworms, etc.
	x		M		Removal of tree or shrub strata – logging,
	^		IVI	00	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
Х	Х		Н	С	Urban, commercial or industrial use
					Parking lot
					Golf course
					Gravel pit
					Recreational use (boating, ATVs, etc.)
					Excavation or soil grading
					Other (list below):
X	Х		Н	С	Concrete debris

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The feature is highly disturbed and located within a subtle ditch surrounded by unpaved roads, with runoff likely impacting the wetland. Concrete rubble, debris, and wood chips are common throughout the feature, located in an area previously used for storing log piles. The surrounding area is impacted by an above-ground utility corridor to the north, with woody species removed beneath. There is high invasive species cover 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 highly disturbed with a significant cover of non-native and invasive species.
Human Use Values	The feature is located within an old logging mill with no potential for human use value.
Wildlife Habitat	The area is disturbed, with only one stratum represented. Minimal wildlife habitat is provided by the feature.
Fish and Aquatic Life Habitat	Current standing water is likely an artifact of recent rain events and would not be sustained long-term to provide aquatic life habitat. There is no potential for fish habitat.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a small ditch surrounded by unpaved roads/trails. The wetland is filled with concrete debris, limiting water storage potential.
Water Quality Protection	See above.
Groundwater Processes	The feature exhibits recharge hydrology. No indicators of groundwater processes were observed.

Section 4: Project Impact Assessment

Brief Project Description 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 Pr	oject		City/C	County: <u>As</u>	nland	Sa	mpling Date	e: <u>202(</u>	0-06-10
Applicant/Owner: Enbridg	е						State: Wisconsin	Sampling Po	oint: was	sd1041_u
Investigator(s): AGG/KDF	=			Secti	on. Townshir	. Range: S	ec 03 T047N R	004W		
Landform (hillslope terrace e	tc.) [.] Talf			l ocal rel	ief (concave	convex nor	ne): None	S	lone (%) [,]	0-2%
Subragion (LPP or MLPA): N	orthcentral F	orests	Lat	· 16 587211) 8505/3	Oct	um: \//	<u>68</u> 270
Sablegion (Entron MERA).	honte on	114	Lai DC	ammonte out c	or fill	Long. <u>- 0 C</u>	NW/L clossificatio	Dat		000+
			hz					n		
Are climatic / hydrologic condi	tions on the s	te typic	calt	or this time of year?	res <u>v</u>	NO	(If no, explain in Rema	arks.)		
Are Vegetation, Soil	, or Hyd	rology	L	significantly distur	rbed?	Are "Normal	Circumstances" pres	ent? Yes _	<u> </u>	No
Are Vegetation, Soil	, or Hyd	rology		naturally problem	atic?	(If needed, e	explain any answers ir	n Remarks.)		
SUMMARY OF FINDING	GS – Atta	ch sit	e n	nap showing san	npling poi	nt locatio	ons, transects, in	nportant	feature	es, etc.
Hydrophytic Vegetation Pres	ent?	Yes	~	No	Is the Sam	pled Area				
Hydric Soil Present?	•	Yes		No	within a W	etland?	Yes	No 🖌	_	
Wetland Hydrology Present?	, ,	Yes		No 🖌	If yes, optio	onal Wetland	Site ID:			
Remarks: (Explain alternative)	ve procedures	here c a we	r in etla	a separate report.) Ind in the past	but has r	now bee	n filled to the p	oint whe	ere it r	าด
longer functions as	a wetland	d fea	tur	e. There is spa	arse hvdr	ophyte o	cover througho	ut but n	ot enc	buah
to meet minimum re	auireme	nts fo	or a	a wetland. Fill h	nas also	eliminate	ed wetland hvo	Iroloav.	The u	pland
sample point is sha	red with v	vasd	10	42e.			-			
HYDROLOGY										
Wetland Hydrology Indicat	ors:						Secondary Indicators	(minimum (of two re-	quired)
Primary Indicators (minimum	of one is req	uired; c	hec	k all that apply)			Surface Soil Cra	cks (B6)		
Surface Water (A1)				Water-Stained Leave	es (B9)		Drainage Patterr	ns (B10)		
High Water Table (A2)				Aquatic Fauna (B13)	()		Moss Trim Lines	(B16)		
Saturation (A3)				Marl Deposits (B15)			Dry-Season Wat	er Table (C2	2)	
Water Marks (B1)				Hydrogen Sulfide Od	lor (C1)		Crayfish Burrows	s (C8)		
Sediment Deposits (B2)				Oxidized Rhizospher	es on Living	Roots (C3)	Saturation Visibl	e on Aerial I	magery ((C9)
Drift Deposits (B3)				Presence of Reduce	d Iron (C4)		Stunted or Stres	sed Plants (D1)	
Algal Mat or Crust (B4)				Recent Iron Reduction	on in Tilled So	oils (C6)	Geomorphic Pos	ition (D2)		
Iron Deposits (B5)				Thin Muck Surface (C7)		Shallow Aquitarc	l (D3)		
Inundation Visible on Ae	erial Imagery (B7)		Other (Explain in Rer	marks)		Microtopographi	c Relief (D4))	
Sparsely Vegetated Cor	ncave Surface	(B8)					FAC-Neutral Tes	st (D5)		
Field Observations:										
Surface Water Present?	Yes	No	~	_ Depth (inches):						
Water Table Present?	Yes	No	~	_ Depth (inches):						
Saturation Present? (includes capillary fringe)	Yes	No	~	_ Depth (inches):		Wetland F	lydrology Present?	Yes	No	<u> </u>
Describe Recorded Data (str	ream gauge, r	nonitor	ing	well, aerial photos, pre	evious inspec	tions), if ava	ilable:			
Remarks:										
No primary indicato	rs of wetl	and	hy	drology were o	bserved.	The are	ea has been fill	ed.		

VEGETATION – Use scientific names of plants.

Sampling Point: wasd1041_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
	<u>/// Cover</u>	<u>Species</u> :	Status	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: 67 (A/B)
6				Prevalence Index worksheet:
7.				Total % Cover of: Multiply by:
	0	= Total Co	ver	$\frac{1}{10000000000000000000000000000000000$
Sanling/Chrub Stratum (Distaire) 15		- 10(0100	VCI	EACW species $12 \times 2 = 24$
<u>Saphing/Shrub Stratum</u> (Plot size. 15)	_	V		FAC species $0 \times 3 = 0$
1. <u>Salix petiolaris</u>	5	<u> </u>	FACW	FACU species $75 \times 4 = 300$
2. <u>Cornus alba</u>	5	<u> </u>	<u>FACW</u>	$\frac{1}{1000} = \frac{1}{1000} = 1$
3				Column Totals: 93 (A) 330 (B)
4				
5.				Prevalence Index = $B/A = 3.55$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
/·	10		·	2 - Dominance Test is >50%
_		= Total Co	ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5)			_	4 - Morphological Adaptations ¹ (Provide supporting
1. Lotus corniculatus	50	<u> </u>	<u>FACU</u>	data in Remarks or on a separate sheet)
2. <u>Tanacetum vulgare</u>	10	<u>N</u>	<u>FACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Scirpus microcarpus</u>	5	N	OBL	
4. Poa pratensis	5	Ν	FACU	be present, unless disturbed or problematic.
5 Trifolium pratense	5	N	FACU	Definitions of Venetotion Strates
6 Poa pratensis	5	N	FACIL	Definitions of vegetation Strata:
7. Dhalaria arundinaaaa	<u> </u>			Tree – Woody plants 3 in. (7.6 cm) or more in diameter
				at breast height (DBH), regardless of height.
8. <u>Typna sp.</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
	83	= Total Co	ver	height.
Woody Vine Stratum (Plot size:				
1				
·			·	
2			·	
3			·	Hydrophytic
4			·	Present? Yes <u>v</u> No
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)		بر المانين	
I ne sample plot is dominated by weed	y upland	a specie	es with ir	ntermixed hydrophytes.

Depth	Matrix	•	Redo	x Feature	S			,
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
	. <u></u>			. <u> </u>				
					. <u> </u>			
					. <u> </u>			
	oncentration D=Denk	etion RM=	Reduced Matrix M	S=Masko	d Sand Gr	aine	² Location:	PI = Pore Lining M=Matrix
Ivdric Soil	Indicators:		Reduced Matrix, Mc			ains.	Indicators fo	r Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Belov	w Surface	(S8) (LRI	R.	2 cm Mu	ck (A10) (LRR K. L. MLRA 149B)
Histic E	pipedon (A2)	-	MLRA 149B)	(00) (,	Coast Pr	airie Redox (A16) (LRR K, L, R)
Black H	istic (A3)	-	Thin Dark Surfa	ace (S9) (LRR R, M	LRA 149B)	5 cm Mu	cky Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)	-	Loamy Mucky N	Aineral (F	1) (LRR K	, L)	Dark Sur	face (S7) (LRR K, L)
Stratifie	d Layers (A5)	-	Loamy Gleyed	Matrix (F2	2)		Polyvalue	e Below Surface (S8) (LRR K, L)
Deplete	d Below Dark Surface	e (A11)	Depleted Matrix	(F3)			Thin Darl	k Surface (S9) (LRR K, L)
Thick D	ark Surface (A12)	-	Redox Dark Su	rface (F6)) - - \		Iron-Man	ganese Masses (F12) (LRR K, L, R)
Sandy N	Aucky Mineral (S1)	-	Depleted Dark	Surface (I	-7)		Piedmon	t Floodplain Soils (F19) (MLRA 1498
Sandy C	Dedex (SE)	-	Redox Depress	ions (F8)			Niesic Sp	DOUIC (TA6) (MLRA 144A, 145, 149B)
Sanuy r	Matrix (S6)						Verv Sha	allow Dark Surface (TE12)
Dark Su	Inface (S7) (I RR R. M	I RA 149B)				Other (Ex	xplain in Remarks)
			/					
Indicators o	f hydrophytic vegetati	on and wet	tland hydrology mus	st be pres	ent, unles	s disturbed	or problematic.	
Restrictive	Layer (if observed):			-				
Type:								
Denth (in	ches).						Hydric Soil P	resent? Yes No 🗸
Pomarke:	unco).							
Soile we	re not sampled	due to	the provimity	of ros	ads and	d other i	infrastructu	re The area contains
voodu fil	ll matarial and	conctru	otion dobric	y 01 100			innaotraota	
voouy n	ii matenai anu	constru	iction depris.					



wasd1041_u_E



wasd1041_u_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Pro	oject	City/County: Ashland	Samplii	ng Date: <u>2020-06-10</u>
Applicant/Owner: Enbridge			State: Wisconsin Sam	pling Point: wasd1042e_w
Investigator(s): KDF/AGG		Section, Township, Range: S	<u>ec 03 T047N R004</u>	4W
Landform (hillslope, terrace, etc.): Depres	ssion La	ocal relief (concave, convex, no	ne): <u>Concave</u>	Slope (%): 0-2%
Subregion (LRR or MLRA): Northcentral Fo	orests Lat: <u>46.5872</u> 4	0Long: <u>-9(</u>	0.859334	
Soil Map Unit Name: Udorthents and	Udipsamments,	cut or fill	NWI classification:	
Are climatic / hydrologic conditions on the sit	e typical for this time of y	ear?Yes 🖌 No	(If no, explain in Remarks.))
Are Vegetation, Soil, or Hydr	ology significantly	y disturbed? Are "Norma	I Circumstances" present?	Yes 🖌 No
Are Vegetation, Soil, or Hydr	ology naturally pi	roblematic? (If needed, o	explain any answers in Rer	narks.)
SUMMARY OF FINDINGS - Attac	h site man showin	a sampling point locatio	ons transects impo	rtant features etc
Hydrophytic Vegetation Present? Y	′es No	Is the Sampled Area		
Hydric Soil Present? Y	′es 🖌 No	within a wetland?	Yes <u>v</u> No	
Wetland Hydrology Present? Y	If yes, optional Wetland	d Site ID:		
The feature is a disturbed roa	adside ditch with	concrete rubble and	debris present thro	oughout. This
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators (min	nimum of two required)
Primary Indicators (minimum of one is requ	ired; check all that apply		Surface Soil Cracks (B6)
Surface Water (A1)	Water-Stained	Leaves (B9)	Drainage Patterns (B	10)
High Water Table (A2)	Aquatic Fauna	a (B13)	Moss Trim Lines (B16)	6)
Saturation (A3)	Marl Deposits	(B15)	Dry-Season Water Ta	able (C2)
Water Marks (B1)	Hydrogen Sulf	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 R	educed Iron (C4)	Stunted or Stressed I	Plants (D1)

Remarks:

____ Algal Mat or Crust (B4)

____ Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

____ Iron Deposits (B5)

Field Observations:

Surface Water Present?

(includes capillary fringe)

Water Table Present? Saturation Present?

The feature is located within a roadside ditch. The hydrologic regime is seasonally saturated with recharge hydrology. There is a culvert at the north end of the feature that drains water into an adjacent wetland.

____ Recent Iron Reduction in Tilled Soils (C6)

____ Thin Muck Surface (C7)

Yes <u>V</u> No Depth (inches): <u>1</u>

Yes ____ No 🖌 Depth (inches): ____

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

Yes _____ No ____ Depth (inches): _____

____ Other (Explain in Remarks)

_ 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: wasd1042e_w

	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
l		·		That Are OBL, FACW, or FAC: 3 (A)
2				Total Number of Dominant Species Across All Strata: 3 (B)
0				
+		·		That Are OBL, FACW, or FAC: 100 (A/B)
5				
0		·		Prevalence Index worksheet:
/				Total % Cover of: Multiply by:
		= Total Co	over	OBL species 27 x1 = 27
Sapling/Shrub Stratum (Plot size: 15)				FACT species $0 \times 3 = 0$
1				FACU species $9 \times 4 = 36$
2		·		UPL species $0 \times 5 = 0$
3		·		Column Totals: 43 (A) 77 (B)
4		·		
5		·		Prevalence Index = $B/A = 1.79$
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)				✓ 3 - Prevalence Index is ≤3.0° 4 Marphelogical Adaptations ¹ (Dravida supporting)
1. <u>Scirpus microcarpus</u>	10	Y	OBL	data in Remarks or on a separate sheet)
2. Juncus cf. effusus	10	Y	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Tanacetum vulgare	5	Ν	FACU	1
4. Tvpha sp.	5	N	OBL	Indicators of hydric soil and wetland hydrology must
5. Phalaris arundinacea	5	Y	FACW	Definitions of Vegetation Strate:
6. Eleocharis sp.	2	N	OBI	Demittions of Vegetation Strata:
7 Cirsium cf arvense	2	 N	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
8 Lotus corniculatus	2	N	FACU	
9. Salix petiolaris	2	N	FACW	and greater than or equal to 3.28 ft (1 m) tall.
10.	_			Herb – All herbaceous (non-woody) plants, regardless
11.	_			of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
	43	= Total Co	over	height.
Woody Vine Stratum (Plot size: 30)				
1				
2		·		
2				
S		·		Hydrophytic Vegetation
4				Present? Yes <u>v</u> No
Pemarks: (Include photo numbers here or on a separate	U	= Total Co	over	
The vegetation is representative of a fr	esh (we	t) mead	dow dom	inated by graminoids. The feature is
disturbed and upland species are inter	mixed w	ith hydi	rophytic	vegetation.
				-

(inches) Color (moist) %	Redox Features		
	Color (moist) % Type ¹	Loc ² Texture	e Remarks
Type: C=Concentration, D=Depletion, RM	=Reduced Matrix, MS=Masked Sand G	rains. ² Loca	ation: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:		Indicat	tors for Problematic Hydric Soils":
Histosol (A1)	Polyvalue Below Surface (S8) (LF	(RR, 2 ⊂	cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	MLRA 149B)		bast Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3)	I nin Dark Surface (S9) (LRR R, M	1LRA 149B) 50	cm Mucky Peat of Peat (S3) (LRR K, L, R)
Hydrogen Sunde (A4) Stratified Lavers (A5)	Loamy Gleved Matrix (E2)	n, L) Da	ark Surface (S7) (LRR K, L)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	T C	in Dark Surface (S9) (I RR K I)
Thick Dark Surface (A12)	Redox Dark Surface (F6)	Inc	m-Manganese Masses (E12) (I RR K. I. R)
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	Pic	edmont Floodplain Soils (F19) (MLRA 1498
Sandy Gleved Matrix (S4)	Redox Depressions (F8)	Me	esic Spodic (TA6) (MLRA 144A, 145, 149B
Sandy Redox (S5)			ed Parent Material (F21)
Stripped Matrix (S6)		Ve	ery Shallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 1491	3)	<u>~</u> Ot	her (Explain in Remarks)
³ Indicators of hydrophytic vegetation and we	etland hydrology must be present, unle	ss disturbed or probler	natic.
Restrictive Layer (if observed):			
Туре:			
Depth (inches):		Hydric	Soil Present? Yes <u><</u> No



wasd1042e_w_N



wasd1042e_w_S

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

Evaluator(s):		
KDF/AGG		
Date of visit(s):		
2020-06-10		
Ecological Landsca	ape:	
Superior Coastal Plain		
Watershed:		
LS08, Fish Creek		
WWI Class:		
N/A		
Wetland Type(s): PEM - fresh (wet) meadow		
Wetland Size:	Wetland Area Impacted	
0.0903	0.0903	
Vegetation:		
Plant Community D	Description(s):	
The vegetation i	s representative of a fresh	
(wet) meadow dominated by grominated. The		
(wei) meadow dominated by graminolds. The		
feature is disturbed and upland species are		
intermixed with I	hydrophytic vegetation.	
	Evaluator(s): KDF/AGG Date of visit(s): 2020-06-10 Ecological Landsca Superior Coastal Plain Watershed: LS08, Fish Creek WWI Class: N/A Wetland Type(s): PEM - fresh (we Wetland Size: 0.0903 Vegetation: Plant Community D The vegetation i (wet) meadow d feature is disturk intermixed with b	

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	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 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	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	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	Ν	Y	Dense, persistent vegetation
6	Ν	Ν	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	Ν	N	Natural land cover in 100m buffer area < 50%
GW			Groundwater Processes
1	N	N	Springs, seeps or indicators of groundwater present
2	N	N	Location near a groundwater divide or a headwater wetland
3	N	N	Wetland remains saturated for an extended time period with no additional water inputs
4	N	N	Wetland soils are organic
5	N	N	Wetland is within a wellhead protection area

HU-3: The feature is visible from a public roadway.	
NH-10, FA-2, 4: Pockets of shallow water are present within the feature at the time of survey. A culvert allows for drainage of the feature into a roadside ditch to the north, likely limiting the a	amount
of standing water within the feature.	
ST-5: The feature receives runoff from the surrounding roads.	

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

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)
Scirpus microcarpus*			PEM	Rare
Typha sp.*			PEM	Rare
Juncus cf. effusus			PEM	Rare
Phalaris arundinacea*			PEM	Rare
Tanacetum vulgare			PEM	Rare
Cirsium cf. arvense			PEM	Barren
Eleocharis sp.			PEM	Barren
Lotus corniculatus			PEM	Barren
Cf. Sagittaria			PEM	Barren
Salix petiolaris			PEM	Barren

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

The vegetation is disturbed and dominated by invasive species.

SECTION 3: Condition Assessment of Wetland Assessment	Area (AA) and Buffe	r (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		М	С	Polluted runoff
					Pond construction
					Agriculture – row crops
					Agriculture – hay
					Agriculture – pasture
	Х		Н	С	Roads or railroad
	Х		L	С	Utility corridor (above or subsurface)
					Dams, dikes or levees
					Soil subsidence, loss of soil structure
					Sediment input
	v		1		Removal of herbaceous stratum – mowing,
	^		L	00	grading, earthworms, etc.
	X		1		Removal of tree or shrub strata – logging,
	~		L	00	unprescribed fire
					Human trails – unpaved
					Human trails – paved
					Removal of large woody debris
Х	Х		Н	C	Cover of non-native and/or invasive species
					Residential land use
Х	Х		Н	C	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	Concrete debris

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

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

SUMMARY OF CONDITION ASSESSMENT (Include general description and comments)

The feature is a disturbed roadside ditch located along a gravel roadway. There is an above-ground utility corridor located immediately to the north and the surrounding area land use was previously a logging mill, as well as roadways. There is high cover of invasive species within the ditch and surrounding area, as well as concrete debris. The feature is impacted by runoff from the road and surrounding area.

SUMMARY OF FUNCTIONAL VALUES

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

FUNCTION	RATIONALE
Floristic Integrity	The vegetation is disturbed and dominated by invasive species.
Human Use Values	The feature is located within industrial land use with no potential for human use value.
Wildlife Habitat	The area is disturbed with only one stratum represented. Minimal wildlife habitat is provided by the feature.
Fish and Aquatic Life Habitat	Minimal standing water is present within the feature at the time of survey that may provide temporary habitat for aquatic invertebrates, though may be an artifact of recent rain events. There is no potential for fish habitat.
Shoreline Protection	N/A
Flood and Stormwater Storage	The feature is a small, linear roadside ditch with a culvert to the north allowing for flow out of the wetland into a separate emergent wetland feature. The feature is not associated with a waterbody.
Water Quality Protection	See above.
Groundwater Processes	The feature exhibits recharge hydrology. No indicators of groundwater processes were observed.

Section 4: Project Impact Assessment

Brief Project Description 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