Enbridge Line 5 Wisconsin Segment Relocation Project

2020 Wetland/Waterbody Datasheets Photograph Errors

On May 6, 2021, the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) submitted a comment to the U.S. Army Corps of Engineers (USACE) identifying six stream datasheets where the photograph included with the data sheet did not appear to match the stream description. Environmental Resources Management (ERM), in coordination with Midwest Natural Resources Inc. (MNR), reviewed the six stream datasheets and determined that they contained the incorrect photographs. After reviewing the data, it was determined that the error was the result of an issue with a software program used to process the large number of photographs taken during the 2020 field surveys. After the error was identified, the entire 2020 dataset was reviewed, resulting in the identification of additional stream datasheets, wetland datasheets, and no-points that had the incorrect photographs included on the form.

This program error does not affect the 2019 wetland delineation data sheets as this software was not used during the 2019 season.

The corrected forms are attached to this submittal.

Enbridge Line 5 Wetland/Waterbody Datasheet Photograph Corrections						
Streams						
Feature ID	Near Milepost					
Sasb006p_x1	24.2					
Sasb006p_x2	24.2					
Sasb1003e	17.1					
Sasb1004e	17.2					
Sase006p_x	0.6					
Sase1001e	9.3					
Sase1002e	9.4					
Sase1003e	10.5					
Sase1005e	20.3					
Sirb1001e	30.7					
Sirb1002e	30.9					
Sirc1002e	34.0					
Sirc1003i	37.0					
Sirc1004e	37.0					
Sird1004i	31.2					
Sird1005i	31.1					
Sird1006e	31.1					
Wetlands						
Wase1001e_w	7.0					
Wase1022e_w	10.6					
Wase1052e_w	12.6					
Wase1053e_w	12.6					
No Points						
Noase1001	8.3					
Noase1005	9.4					
Noase1010	8.2					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling Date: <u>2020-05-19</u>		
Applicant/Owner: Enbridge		State: <u>Wisconsin</u> Sampling Point: <u>noase1001</u>		
Investigator(s): DMP/ARK				
Landform (hillslope, terrace, etc.): Depression				
Subregion (LRR or MLRA): Northcentral Forests Lat:				
Soil Map Unit Name: Sanborg-Badriver com				
Are climatic / hydrologic conditions on the site typical for				
Are Vegetation, Soil, or Hydrology				
Are Vegetation, Soil, or Hydrology				
SUMMARY OF FINDINGS – Attach site m	ap showing sampling point locati	ons, transects, important features, etc.		
· · · · · · · · · · · · · · · · · · ·	No Is the Sampled Area			
		Yes No		
Wetland Hydrology Present? Yes Remarks: (Explain alternative procedures here or in a structure)		d Site ID:		
observed, however no other wetland				
HYDROLOGY				
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check		Surface Soil Cracks (B6)		
	Water-Stained Leaves (B9)	Drainage Patterns (B10)		
	Aquatic Fauna (B13)	Moss Trim Lines (B16)		
	Marl Deposits (B15) Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2) Crayfish Burrows (C8)		
		Saturation Visible on Aerial Imagery (C9)		
	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)		
	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)		
	Thin Muck Surface (C7)	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)		

Inundation Visible on Ae	erial Imager	ту (В7)	Microtopographic Relief (D4)	
Sparsely Vegetated Cor	ncave Surfa	ace (B8)	FAC-Neutral Test (D5)	
Field Observations:				
Surface Water Present?	Yes	No 🖌	Depth (inches):	
Water Table Present?	Yes	No 🖌	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	No 🔽	Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (st	ream gauge	e, monitoring	y well, aerial photos, previous in	spections), if available:

Remarks:

The sample plot is located within a slight depression in the landscape, however no other hydrology indicators were observed.

VEGETATION – Use scientific names of plants.

Sampling Point: noase1001

	Absolute	Dominan	t Indicator	
Tree Stratum (Plot size: <u>30</u>)		Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2			- <u> </u>	Total Number of Dominant
3	<u> </u>			Species Across All Strata: (B)
4	<u> </u>			Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6		·		Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species <u>15</u> x 1 = <u>15</u>
Sapling/Shrub Stratum (Plot size:15)				FACW species x 2 =0
1,				FAC species x 3 =21
				FACU species <u>28</u> x 4 = <u>112</u>
2				UPL species x 5 =0
3				Column Totals: <u>50</u> (A) <u>148</u> (B)
4				Prevalence Index = $B/A = 2.96$
5				
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	0	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)				<u> </u>
1. <u>Phleum pratense</u>	25	Y	FACU	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
2. <u>Carex cf stricta</u>			OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Carex cf tenera</u>			FAC	
4. <u>Ranunculus acris</u>			FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Lotus corniculatus			FACU	
6. <u>Fragaria virginiana</u>				Definitions of Vegetation Strata:
				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				
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
	50	= Total Co	ver	height.
Woody Vine Stratum (Plot size: 30)				
1				
2				
3.				Hydrophytic
A			·	Vegetation
		Tatal C	- <u></u>	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate s		= Total Co	ver	
The vegetation is representative of the	depress	sion. Sa	ample plo	ot contains vegetation that was found

in the surrounding uplands and wetlands.

Profile Desc	cription: (Des	cribe t	o the dep	th needed to docun	nent the	indicator	or confirm	the absence of indi	cators.)	
Depth	Ma	atrix		Redo	x Feature	es				
(inches)	Color (mo	ist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remark	S
	<u>7.5YR 3</u>	3/2	100		0			CL		
7-20	<u>5YR</u> 4	1/4	100		0			С		
	<u> </u>	<u>., .</u>								
					·			·		<u> </u>
					·			·		
	. <u></u>									
					·					<u> </u>
					·					
					·					
		Dopl	otion BM	Reduced Matrix, MS	-Maaka	d Sond Cr		² Location: PL=F	Poro Lipipa M-N	Actrix
Hydric Soil		J=Depi			S=IVIASKe	u Sanu Gra	ains.	Indicators for Pro		
Histosol				Polyvalue Belov	v Surface		Ъ		10) (LRR K, L , 1	
	pipedon (A2)			MLRA 149B)		= (30) (L RF	х п ,		Redox (A16) (LI	
	istic (A3)			Thin Dark Surfa			RA 149B)		Peat or Peat (S3	
	en Sulfide (A4)			Loamy Mucky M					(S7) (LRR K, L)	
	d Layers (A5)			Loamy Gleyed I			, ,		ow Surface (S8)	
	d Below Dark	Surface	(A11)	Depleted Matrix					rface (S9) (LRR	
Thick Da	ark Surface (A	12)		Redox Dark Su	face (F6)		Iron-Mangane	se Masses (F12	2) (LRR K, L, R)
Sandy N	Mucky Mineral	(S1)		Depleted Dark \$	Surface (F7)		Piedmont Floor	odplain Soils (F1	19) (MLRA 149B)
	Gleyed Matrix (S4)		Redox Depress	ions (F8)					44A, 145, 149B)
	Redox (S5)							Red Parent M		
	d Matrix (S6)								Dark Surface (T	F12)
Dark Su	ırface (S7) (LR	RR, M	LRA 149E	5)				Other (Explain	ו in Remarks)	
31 11 1										
			on and we	tland hydrology mus	t be pres	ent, unless	disturbed	or problematic.		
	Layer (if obse	rved):								
Туре:										
Depth (in	ches):							Hydric Soil Preser	nt? Yes	No 🖌
Remarks:										
The soil	profile cor	nsista	s of a d	ark clay loam	over a	a red cl	ay. No	hydric soil indi	cators wer	e observed.
	•			,			5	5		



noase1001_E



noase1001_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling	3 Date: <u>2(</u>	020-0	5-20
Applicant/Owner: Enbridge		State: Wisconsin Sampl	ing Point:	noase	<u>1005</u>
Investigator(s): DMP/ARK	Section, Township, Range	: <u>sec 28 T046N R004</u>	W		
Landform (hillslope, terrace, etc.): Depression					
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.436	774 Long:	-90.881613	Datum:	WGS	84
Soil Map Unit Name: Sanborg-Badriver complex, 0 t	o 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 <u>v</u> , Soil <u>v</u> , or Hydrology significa	ntly disturbed? Are "No	rmal Circumstances" present?	Yes	No	~
Are Vegetation, Soil, or Hydrology naturally	v problematic? (If neede	ed, explain any answers in Rema	arks.)		
SUMMARY OF FINDINGS – Attach site map show	ing sampling point loca	ations, transects, import	tant feat	ures,	etc.

Hydrophytic Vegetation Present?	Yes	No	Is the Sampled Area
Hydric Soil Present?	Yes∕	No	within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No 🖌	If yes, optional Wetland Site ID:

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

The non-wetland sample point was taken within a recently tilled agricultural field. There is a PEM/PFO wetland complex located just outside of the survey area to the south. The sample area is at a slightly higher elevation than the wetland. Hydric soils were observed, however no other wetland indicators were met. The pictures show the wetland just at the edge of the crop field, but it is not within the survey boundary. See General Form noase1005 for additional photos.

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 Ro	ots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils	(C6) <u>v</u> Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes <u>No</u> Depth (inches):	
Saturation Present? Yes No V Depth (inches): V (includes capillary fringe)	Vetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	ns), if available:
Remarks:	
The sample point was taken within a depression, however no	o other hydrology indicators were
observed.	

VEGETATION – Use scientific names of plants.

Sampling Point: noase1005

Tree Stratum (Plot size: <u>30</u>)	Absolute	Dominant		Dominance Test worksheet:
		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:(A)
2				Total Number of Dominant Species Across All Strata: 2 (B)
3				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC:0 (A/B)
5				$\begin{bmatrix} \text{That Ale OBL, FACW, OF FAC.} \\ \end{bmatrix} $
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>7</u> x 4 = <u>28</u>
3				UPL species x 5 =
				Column Totals: <u>7</u> (A) <u>28</u> (B)
4 5				Prevalence Index = $B/A = 4.0$
6				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
_		= Total Co	ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Trifolium repens</u>	5	<u> </u>	<u>FACU</u>	data in Remarks or on a separate sheet)
2. <u>Trifolium pratense</u>	2	Y	<u>FACU</u>	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				and greater than or equal to 3.28 ft (1 m) tall.
				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12	7	= Total Co		height.
Wester (Distance 20	/		vei	
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				
The vegetation within the sample point		•		

Scirpus cyperinus, Eleocharis cf ovata, Alisma triviale, and Typha sp. were observed just outside of

the survey area in a wet meadow community.

Profile Desc	cription: (Describe to	o the dep	th needed to de	ocument the i	ndicator	or confirm	the absence	of indicators.)	
Depth	Matrix		Redox Features			1 2	Tantan	Devente	
(inches)	<u>Color (moist)</u>	<u>%</u>	Color (moist		Type'	Loc ²	Texture	Remarks	
0-14	<u>10YR 2/1</u>		<u>2.5YR 3/</u>	<u>6 5</u>	<u> </u>	_M_	C	Prominent redox	
<u>14-20</u>	<u>10YR 2/1</u>	_30_		0			C		
14-20	<u>2.5YR 3/4</u>	70		0			C		
					·				
¹ Type: C=C	oncentration, D=Deple	tion PM-	-Poducod Matrix	MS-Maskor			² Location	. PL=Pore Lining, M=Matrix.	
Hydric Soil					a Sanu Gia	airis.		for Problematic Hydric Soils ³ :	
Histosol	(A1)		Polyvalue E	Below Surface	(S8) (LRF	RR,	2 cm M	Muck (A10) (LRR K, L, MLRA 149B)	
	pipedon (A2)		MLRA 1	,				Prairie Redox (A16) (LRR K, L, R)	
	istic (A3)			Surface (S9) (I				Aucky Peat or Peat (S3) (LRR K, L, R)	
	en Sulfide (A4) d Layers (A5)			ky Mineral (F yed Matrix (F2		, L)		Surface (S7) (LRR K, L) Ilue Below Surface (S8) (LRR K, L)	
	d Below Dark Surface	(A11)	Depleted M		·)		Thin Dark Surface (S9) (LRR K, L)		
-	ark Surface (A12)	. ,		(Surface (F6)			Iron-Manganese Masses (F12) (LRR K, L, R)		
	/lucky Mineral (S1)			ark Surface (F	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
	Gleyed Matrix (S4)		Redox Dep	ressions (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21)		
-	Redox (S5) I Matrix (S6)							arent Material (F21) Shallow Dark Surface (TF12)	
	rface (S7) (LRR R, MI	LRA 149B	8)					(Explain in Remarks)	
	f hydrophytic vegetation	on and we	tland hydrology	must be prese	ent, unless	s disturbed	or problemation	2.	
Type:	Layer (if observed):								
	ches):						Hvdric Soil	Present? Yes <u>~</u> No	
Remarks:									
	ple plot was ta	ken wi	thin a rece	ntly tilled	agricul	tural fie	ld. Redo	Cork Surface was	
The sample plot was taken within a recently tilled agricultural field. Redox Dark Surface was observed. The profile consists of clay soils with a mixed lower layer.									
	•		•				•		



noase1005_E



noase1005_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project	City/County: Ashland Sampling Date: 2020-05-19
Applicant/Owner: Enbridge	State: Wisconsin Sampling Point: noase1010
Investigator(s): <u>ARK/DMP</u>	Section, Township, Range: sec 20 T046N R004W
Landform (hillslope, terrace, etc.): Depression	cal relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.44802	3Long: <u>-90.898042</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Sanborg-Badriver complex, 0 to	6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes 🖌 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	/ 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 Watland 2 Vac Na V
Wetland Hydrology Present? Yes No	
Remarks: (Explain alternative procedures here or in a separate report Moist depression in a hay field. This was asse did not meet soil or vegetation parameters.	ssed as a possible wetland before determining that 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 So	bils (C6) _ Ceomorphic Position (D2)				
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No 🖌 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 inspec	tions), if available:				
Remarks:	w field and notantially from the tilled				
The feature receives overland flow from the surrounding ha	ly neid, and, potentially, norn the tilled				
cropland to the west.					

VEGETATION – Use scientific names of plants.

Sampling Point: noase1010

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover		t Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across All Strata: (B)
3				()
4				Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0		over	OBL species 0 x 1 = 0 FACW species 0 x 2 = 0
Sapling/Shrub Stratum (Plot size: 15)				FAC species $13 \times 3 = 39$
1				FACU species $x = {76}$
2		·		UPL species $0 \times 5 = 0$
3		·		Column Totals: <u>32</u> (A) <u>115</u> (B)
4		·		
5		·		Prevalence Index = B/A = <u>3.59</u>
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
1. <u>Carex tenera</u>	10	Y	FAC	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. <u>Carex gracillima</u>		Y	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Phleum pratense</u>			FACU	
4. <u>Trifolium repens</u>			FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Ranunculus acris</u>			FAC	Definitions of Vegetation Strata:
6. <u>Alopecurus pratensis</u>			FAC	
7. <u>Taraxacum officinale</u>				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
		= Total Co		height.
Woody Vine Stratum (Plot size: 30)			Jvei	
1				
2				
3				Hydrophytic Vegetation
4				Present? Yes No 🗸
		= Total Co	over	
Remarks: (Include photo numbers here or on a separate Sampled vegetation is representative of		ature		

		to the depth	needed to document the indicator or confirm	the absence of in	dicators.)	
Depth (inches)	Matrix Color (moist)	%	Redox FeaturesColor (moist)%Type1Loc2	Texture	Remarks	
0-3	10YR 2/1	100	0	CL		
<u> </u>	2.5YR 3/4	100	<u> </u>			
	2.311 3/4		0			
				·		
		·				
¹ Turney C. C			advaced Metrix MC Meeted Cond Crains	² l costion: Dl	Dana Lining M. M.	- 4 min -
Hydric Soil		etion, Rivi=R	educed Matrix, MS=Masked Sand Grains.		=Pore Lining, M=Ma Problematic Hydric	
Histosol			Polyvalue Below Surface (S8) (LRR R,		(A10) (LRR K, L, M	
Histic E	pipedon (A2)		MLRA 149B)	Coast Prairi	ie Redox (A16) (LR	R K, L, R)
	istic (A3)	_	_ Thin Dark Surface (S9) (LRR R, MLRA 149B)		Peat or Peat (S3)	(LRR K, L, R)
	en Sulfide (A4) d Layers (A5)	_	Loamy Mucky Mineral (F1) (LRR K, L) Loamy Gleyed Matrix (F2)		ce (S7) (LRR K, L) Below Surface (S8) ((LRR K. L)
	d Below Dark Surface	e (A11)	_ Depleted Matrix (F3)		Surface (S9) (LRR K	
	ark Surface (A12)	_	Redox Dark Surface (F6)		nese Masses (F12)	
	Mucky Mineral (S1)	_	_ Depleted Dark Surface (F7)		loodplain Soils (F19	
	Gleyed Matrix (S4) Redox (S5)	_	_ Redox Depressions (F8)		lic (TA6) (MLRA 14 Material (F21)	4A, 145, 149B)
	d Matrix (S6)				w Dark Surface (TF	12)
	urface (S7) (LRR R, N	ILRA 149B)			ain in Remarks)	
³ Indiantara a	f hudrophytic vogetet	ion and wate	and hydrology must be present, unless disturbed (or problematic		
	Layer (if observed):		and hydrology must be present, unless disturbed o	or problematic.		
Туре:						
Depth (in	ches).			Hydric Soil Pres	ent? Yes	No 🖌
Remarks:				•		
	beneath dark	clay loa	m. No redox observed.			
		2				
1						



noase1010_E



noase1010_N

Description										
Project Name:				Date:			Waterbody Survey ID:			
Line 5 Relocation Project				2020-05-28			sasb006p_x1			
State:		County/Parish:		USGS Wate	erbody Name	:				
Wisconsin		Ashland		Bad River						
Company:		Crew Member Init	tials:	Latitude: Longitude:						
Enbridge		AGG/OTG		46.336244			-90.652612	·90.652612		
(check one)	Centerli			□Access Road	□Facility	□Other				
Waterbody Type: If F (check one)	River	□ Stream	ו [] Ditch	Swale	🗆 Canal		Other		
Water Appearance:	No Wate	er 🗹 Clear		∃Turbid	□ Sheen on Surface	n ⊡Surfac	e Scum □A	lgal Mats □Other		
Existing Condition ^a :	Highly I	Functional Stream	□ Moderate	ely Functional S		□ Functionally	Impaired Strea	m		
Feature Description: I	Vatural	Artificia	al, man-made	Manipulated						
, ,	Epheme	eral 🗌 Interm	ittent	Perennial	Connec Swale	ting				
, ,	Straight	t 🗹 Meand	lering		Swale					
Measurements			_ 144 . 5 1	·	50 (1			50 (
Depth of Water: 5 ft.	ſ	N/A Unknow	wn 🗌 water Edg	ge to Water Ed	. ge: <u>50</u> π .	N/A□	OHWM Width	: <u>50</u> ft.		
OHWM Indicator: (check all that apply)	Cle	ear line on bank	Shelving	□Wrested v	egetation	Scouring		□Water staining		
		nt, matted, or ng vegetation	□Wrack line	□Litter and	debris	□Abrupt plan change	t community	□Soil characteristic change		
Dominant Substrate: (check all that apply)		drock 🗆 Bo	ulder 🗆 Cot	oble 🗆 (Gravel	Sand	🗹 Silt/ clay	□ Organic		
Observations										
Riparian Zone Present: (check one)	🗹 Ye	s □1	No							
Vegetation Layers: (check all that apply)	🗹 Tre	es 🗹 S	Saplings/Shrubs	I Herbs						
Dominant Bank Vegetation Acer saccharinum, Fraxing	on (list) us penr	: Isylvanica, Matteu	ccia struthiopteris	s, Prunus virgin	iana					
Aquatic Habitats (ex: subm Runs, pools, woody debris	erged or e S, OVER	merged aquatic vegetat anging vegetation	tion, overhanging banks I.	s/roots, leaf packs, l	arge submerged v	vood, riffles, deep po	ools, etc.):			
Aquatic Organisms Obse None.	erved (/	'ist):								
Disturbances (ex: livestock Road, bridges.	access	, manure in waterboo	dy, waste discharge	pipes):						
Observation Notes: The Bad River is a perenn	ial wate	→ ∋rbody that flows t	hrough surroundi	ing floodplain fo	irest.					



sasb006p_x1_E (downstream)



sasb006p_x1_N (across)



sasb006p_x1_W (upstream)

Description											
Project Name:					Date:			Waterbody Survey ID:			
Line 5 Relocation Proj	ect				2020-05-28			sasb006p	o_x2		
State:		County/Parish:			USGS Wate	erbody Name					
Wisconsin		Ashland			Bad River						
Company:		Crew Member	Initials:		Latitude:			Longitud	e:		
Enbridge		AGG/OTG			46.335548			-90.6523	51		
Survey Type: (check one)	Center				Access Road	□Facility	□Other				
Waterbody Type: (check one)	River	□ Stre	am		Ditch	Swale	🗆 Canal		□ Other		
Water Appearance: (check one)	🗆 No Wa	ter 🗹 Clea	ar		Turbid	□ Sheen or Surface		e Scum	□ Algal Mats	□Other	
Existing Condition ^a : (check one)	I Highly	Functional Strea	am 🗆 Mo	oderatel	y Functional		□ Functionally	Impaired S	Stream		
Feature Description: (check one)	Natura	□ Artif	ficial, man-ma	de 🗆	Manipulated						
Flow Regime: (check one)	Epherr	ieral 🗌 Inte	rmittent	V	Perennial	Connec Swale	ting				
, ,	□ Straigh	it 🗹 Mea	andering			Swale					
Measurements											
Depth of Water: <u>5</u>	ft.	N/A Unkı	nown⊡ Wa t	ter Edge	e to Water Eo	lge: <u>50</u> ft.	N/A□	онмм м	/idth: <u>50</u>	ft.	
OHWM Indicator: (check all that apply)	L C	lear line on bank	⊂ □Shelvii	ng	□Wrested \	regetation	Scouring		□Water	staining	
		ent, matted, or ing vegetation	□Wrack	line	□Litter and	debris	□ Abrupt plan change	it commun	ity □Soil ch change	aracteristic	
Dominant Substrate: (check all that apply)	□ Be	edrock 🗌	Boulder		ole 🗆	Gravel	🗹 Sand	🗹 Silt/	clay 🛛	Organic	
Observations											
Riparian Zone Preser (check one)	nt: 🗹 Ye	es [□ No								
Vegetation Layers: (check all that apply)	🗹 Tr	ees	Saplings/Sl	hrubs	🗹 Herbs	3					
Dominant Bank Vege Acer saccharinum, Fra	tation (list axinus pen	;): insylvanica, Mat ^ı	teuccia struthi	iopteris							
Aquatic Habitats (ex: s Runs, pools, woody de	submerged or ebris, over	emerged aquatic veg hanging vegetat	jetation, overhangi ION.	ing banks/r	roots, leaf packs,	arge submerged v	vood, riffles, deep po	ools, etc.):			
Aquatic Organisms C None.	bserved	(list):									
Disturbances (ex: live: Road, bridges.	stock acces	s, manure in water	body, waste dis	charge p	ipes):						
Observation Notes: The Bad River is a pe	rennial wa	erbody that flow	vs through floo	odplain f	orest.						



sasb006p_x2_N (downstream)



sasb006p_x2_S (upstream)



sasb006p_x2_W (across)

Description										
Project Name:						Date:			Waterbod	y Survey ID:
Line 5 Relocation Pro	ject					2020-05-28			sasb1003	e
State:		County/	Parish:			USGS Wate	erbody Name):		
Wisconsin		Ashlanc	1			UNT				
Company:		Crew M	ember Initi	als:		Latitude:			Longitude	:
Enbridge		KDF/SA	M			46.386259			-90.76235	8
Survey Type: (check one)	Center	ine	🗆 Re-Rou	te		Access Road	□Facility	□Other		
Waterbody Type: (check one)	□ River		Stream			Ditch	Swale	🗆 Cana	al I	□ Other
Water Appearance: (check one)	🗆 No Wa	ter	□ Clear			Furbid	□ Sheen or Surface	n 🗹 Surfa	ce Scum	□Algal Mats □Other
Existing Condition ^a : (check one)	□ Highly	Functior	nal Stream	Mode Mode	rately	y Functional S		Functionally	Impaired S	tream
Feature Description: (check one)	Vatural		□ Artificial	l, man-made		Manipulated				
Flow Regime: (check one)	🗹 Ephem	eral	□ Intermit	ttent		Perennial	Connec Swale	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	ıt	Meande	ering			Swale			
wetland present on ei				inge at the sol	utrie	nd and overn	ow of surface	water travelin	g downsiop	e. There is a narrow fringe
Measurements										
Depth of Water: <0.2	2 <u>5</u> ft.	N/A□	Unknow	m 🗆 🛛 Water	Edge	e to Water Ec	lge: <u>6</u> ft.	. N/A□	OHWM W	idth: <u>2</u> ft.
		ear line	on bank	Shelving		□Wrested v	egetation	Scouring		□Water staining
(check all that apply)		nt, matte		□Wrack line	Э	Litter and	debris	☐ Abrupt plai change	nt communit	ty □Soil characteristic change
Dominant Substrate: (check all that apply)	: 🗆 Be	edrock	🗆 Bou	lder 🗆 (Cobb	le 🗆 (Gravel	Sand 🗹	🗹 Silt/ c	lay 🗌 Organic
Observations										
Riparian Zone Presen (check one)	nt: 🗹 Ye	es	□ N	lo						
Vegetation Layers: (check all that apply)	🗹 Tr	ees	⊻ S	aplings/Shrul	os	I Herbs	i			
Dominant Bank Vege Onoclea sensibilis, O	etation (list smunda cla) <u>:</u> iytoniana	a, Equisetur	m hyemale, B	etula	a papyrifera				
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegetatio	on, overhanging b	anks/r	oots, leaf packs, l	arge submerged v	wood, riffles, deep p	oools, etc.):	
Aquatic Organisms (None.	Observed ((list):								
Disturbances (ex: live Feature appears to re	estock acces eceive pollu	s, manure ted runo	in waterbody ff resulting i	y, waste discha in a sheen on	irge pi the	ipes): surface of the	e water.			
Observation Notes: None.										



sasb1003e_NE (downstream)



sasb1003e_NW (across)



sasb1003e_SW (upstream)

Description											
Project Name:				Date:			Waterbody S	urvey ID:			
Line 5 Relocation Project				2020-05-28	}		sasd1004e				
State:	County/	Parish:		USGS Wat	erbody Name	9:					
Wisconsin	Ashland	1		None							
Company:	Crew M	ember Initials:		Latitude: Longitude:							
Enbridge	AGG/O	TG		46.339164							
Survey Type:	Centerline	□ Re-Route		Access Road	□Facility	Other					
Waterbody Type:	River	Stream		Ditch	Swale	🗆 Canal		Other			
Water Appearance:	No Water	Clear		Turbid	□ Sheen or Surface	n □Surfac	e Scum □A	lgal Mats	□Other		
Existing Condition ^a :	Highly Function	al Stream	Moderate	ly Functional		Functionally	Impaired Strea	am			
Feature Description:	Natural	🗆 Artificial, mar	n-made 🗆	Manipulated							
, ,	Ephemeral			Perennial	Connec Swale	cting					
Swale Straight I Meandering (check one)											
Measurements											
Depth of Water: 0.25 ft	. N/A□	Unknown□	Water Edg	e to Water E	dge: <u>0.5</u> ft	. N/A□	OHWM Width	1 ft.			
OHWM Indicator: (check all that apply)	Clear line	on bank 🛛 Sl	helving		vegetation			□Water st	aining		
	Bent, matte missing vege		rack line	□Litter and	debris	□Abrupt plan change	t community	□Soil chai change	racteristic		
Dominant Substrate: (check all that apply)	□ Bedrock	🗹 Boulder		ble 🗆	Gravel	□ Sand	🗹 Silt/ clay	□ 0	Irganic		
Observations											
Riparian Zone Present: (check one)	□ Yes	🗹 No									
Vegetation Layers: (check all that apply)	Trees	🗹 Sapling	gs/Shrubs	🗹 Herb	6						
Dominant Bank Vegetat i Abies balsamea, Populus	on (list): tremuloides, At	thyrium filix-femi	na, Carex s	0.							
Aquatic Habitats (ex: subm None.	nerged or emerged a	quatic vegetation, ove	rhanging banks	/roots, leaf packs,	large submerged	wood, riffles, deep po	ools, etc.):				
Aquatic Organisms Obs None.	erved (list):										
Disturbances (ex: livestoc None.	k access, manure	in waterbody, was	te discharge	pipes):							
Observation Notes: The feature is a very narr There are areas of the fea		-				bosed rocks pre	sent within po	rtions of the	channel.		



sasd1004e_N (upstream)



sasd1004e_S (downstream)



sasd1004e_W (across)

Description					
Project Name:		Date:	Waterbody Survey ID:		
Line 5 Relocation Project		2020-05-20	sase006p_x		
State:	County/Parish:	USGS Waterbody Name:			
Wisconsin	Ashland	Bay City Creek			
Company:	Crew Member Initials:	Latitude:	Longitude:		
Enbridge	SBR/DGL	46.550472	-90.896330		
Survey Type: Cente (check one)	erline	Access Road			
Waterbody Type: River (check one)	Stream	Ditch 🗌 Swale 🗌 Cana	□ Other		
Water Appearance: No W (check one)	/ater	Furbid □Sheen on □Surfac Surface	e Scum		
Existing Condition ^a :	ly Functional Stream		Impaired Stream		
Feature Description: Matur	ral 🛛 Artificial, man-made 🗌 I	Manipulated			
Flow Regime: Ephe (check one)	emeral 🗆 Intermittent 🗹	Perennial Connecting Swale			
Sinuosity within Straig Survey Corridor: (check one)	ght 🗹 Meandering	Gwale			
Measurements Depth of Water: 0.3 ft.	N/A Unknown Water Edge	e to Water Edge: <u>8</u> ft. N/A	OHWM Width: <u>12</u> ft.		
OHWM Indicator:	Clear line on bank	□Wrested vegetation □Scouring	□Water staining		
(check all that apply)	Bent, matted, or UWrack line	□Litter and debris ■Abrupt plan	t community		
Dominant Substrate:	ssing vegetation Bedrock Bedrock Cobble	change le	change		
(check all that apply)					
Observations Riparian Zone Present:					
(check one)	Yes 🗆 No				
Vegetation Layers:	Trees Saplings/Shrubs	🗹 Herbs			
Dominant Bank Vegetation (<i>Il</i> Abies balsamea, Populus trem	<i>ist):</i> uloides, Equisetum arvense, Matteuccia	a struthiopteris			
Aquatic Habitats (ex: submerged Shallow pools and downed wo	or emerged aquatic vegetation, overhanging banks/ro ody debris are likely habitats for aquatic	oots, leaf.packs, large submerged wood, riffles, deep p organisms.	ools, etc.):		
Aquatic Organisms Observed Minnows were observed in the	l (list): stream.				
Disturbances (ex: livestock acce Erosion from the steep banks i	ess, manure in waterbody, waste discharge pi s possible.	ipes):			
Observation Notes: The stream flows from a forest	ed area into an open area.				



sase006p_x_N (upstream)



sase006p_x_S (downstream)



sase006p_x_W (across)

Description													
Project Name:						Date:			Waterbody Su	rvey ID:			
Line 5 Relocation Pro	ject					2020-05-19			sase1001e				
State:		County	/Parish:			USGS Wate	erbody Name	:					
Wisconsin		Ashland	Ł			UNT to Marengo River							
Company:		Crew M	lember Init	ials:		Latitude:			Longitude:				
Enbridge		DMP/A	RK			46.437269			-90.884386				
Survey Type: (check one)	□ Center	ine	C Re-Ro	ute	\Box	Access Road	□Facility	□Other					
Waterbody Type: (check one)	□ River		□ Stream	۱		Ditch	Swale	🗆 Cana		Other			
Water Appearance: (check one)	🗹 No Wa	ter	□ Clear			Turbid	□ Sheen or Surface	n ⊡Surfac	e Scum □A	gal Mats Other			
Existing Condition ^a : (check one)	I Highly	Functior	nal Stream	M	loderatel	y Functional S		□ Functionally	Impaired Strea	m			
Feature Description: (check one)	□ Natura		Artificia	al, man-m	ade 🗆	Manipulated							
Flow Regime: (check one)	Epherr	eral	□ Interm	ittent		Perennial	Connect Swale	ting					
Sinuosity within Survey Corridor: (check one)	□ Straigh	ıt	Meanc	lering			Circle						
water.	aure mear		ougn a tile	d agricult	urai neid.	water was n	ot nowing at t		ey, nowever in	ere are pools of turbid			
Measurements													
Depth of Water: 0	ft.	N/A□	Unknov	vn 🗆 🛛 🕊 a	ater Edge	e to Water Ec	lge: 0 ft.	N/A□	OHWM Width	: <u>5</u> ft.			
OHWM Indicator: (check all that apply)	Ľ C	ear line	on bank	□Shelv	ving	□Wrested v	regetation	□Scouring		□Water staining			
(ent, matte ing vege		□Wrac	k line	□Litter and	debris	□Abrupt plan change	t community	□Soil characteristic change			
Dominant Substrate: (check all that apply)	□ Be	edrock	🗆 Bo	ulder		ole 🗌 (Gravel	□ Sand	🗹 Silt/ clay	🗆 Organic			
Observations Riparian Zone Prese													
Riparian Zone Prese	nt: □Ye	¥S	1 🖻	No									
Vegetation Layers: (check all that apply)	🗆 Tr	ees		Saplings/S	Shrubs	🗹 Herbs	5						
Dominant Bank Vege Lolium perenne	etation (lisi):											
Aquatic Habitats (ex: Pools of standing wat	submerged or er were ob	emerged a served.	iquatic vegetat	ion, overhan	ging banks/r	roots, leaf packs, l	arge submerged v	wood, riffles, deep p	ools, etc.) :				
Aquatic Organisms (There were minnows	Observed observed i	flist): In the por	ols of strea	m.									
Disturbances (ex: live The stream is artificia	stock acces and occui	s, manure 's within	in waterboo an agricult	ly, waste d ural field.	ischarge p	ipes):							
Observation Notes: The ephemeral strear	n is artificia	il and oc	curs within	an agricu	ultural fiel	ld.							



sase1001e_E (across)



sase1001e_N (downstream)



sase1001e_S (upstream)

Description														
Project Name:						Date:					Waterbo	ody Su	rvey ID:	
Line 5 Relocation Proje	ect					2020-0	5-20				sase100	02e		
State:		County/	/Parish:			USGS	Wate	rbody Name):					
Wisconsin		Ashlanc	t			None								
Company:		Crew M	ember Init	ials:		Latitud	e:				Longitu	de:		
Enbridge		DMP/AF	RK			46.437	060				-90.881	213		
Survey Type: [(check one)	Centerl	ine	🗆 Re-Roi	ute		Access F	Road	□Facility		□Other				
Waterbody Type: [(check one)	River		□ Stream	ו		Ditch		Swale		Canal			other	
Water Appearance:	No Wat	ler	□ Clear			Turbid		□Sheen or Surface	n [∃Surfac	e Scum	□AI	gal Mats	Other
	🗹 Highly	Functior	nal Stream		loderate	ely Functio	onal S		Func	tionally	Impaired	l Strea	m	
Feature Description: [Natural		□ Artificia	al, man-ma	ade 🛡	Manipula	ated							
Flow Regime: (check one)	🗹 Ephem	eral	🗆 Intermi	ittent] Perennia	al	Connec Swale	ting					
Sinuosity within Survey Corridor: (check one)	Straigh Straigh	t	□ Meand	lering				Owald						
Measurements				hav	· · · · ·						01.04/04	A.P141-	4	<i>t</i> ,
Depth of Water: <u>N/A</u>	_ft.	N/A 🗹	Unknov	vn∐ wva	ater Edg	ge to wat	er Ea	ge: <u>N/A</u>ft .		N/A 🗹	OHWM	wiath	: _1	π.
OHWM Indicator: (check all that apply)	L CI	ear line	on bank	□Shelv	ing	∎Wres	ted v	egetation	□Sco	uring			□Water	staining
		ent, matte ing vege		□Wracł	k line	□Litter	and	debris	I Abr chang		t commu	inity	□Soil ch change	naracteristic
Dominant Substrate: (check all that apply)	□ Be	edrock	🗆 Βοι	ulder		oble		Gravel	□ Sar	nd	🗹 Silt	t/ clay		Organic
Observations														
Riparian Zone Present (check one)	t: □Ye)S		No										
Vegetation Layers: (check all that apply)	🗆 Tr	ees	2	Saplings/S	Shrubs	۲	lerbs							
Dominant Bank Veget Salix petiolaris, Phleum	ation (list pratense):), Scirpu	s cyperinu:	S										
Aquatic Habitats (ex: su No aquatic habitat was	ubmerged or Observed	emerged a	quatic vegetat	ion, overhanç	ging banks	s/roots, leaf p	acks, la	arge submerged v	wood, riffle	es, deep po	ools, etc.):			
Aquatic Organisms Ol No aquatic organisms v	b served (were obse	<i>list)</i> : rved.												
Disturbances (ex: lives) The feature occurs at the	tock acces he edge c	s, manure f a tilled	in waterboo crop field.	dy, waste di	ischarge	pipes):								
Observation Notes: The ephemeral swale f	lows sout	h to nort	h and begi	ns at the e	edge of	a tilled cro	op fie	d.						



sase1002e_N (across)



sase1002e_S (upstream)



sase1002e_W (downstream)

That body bala c										
Description										
Project Name:						Date:			Waterbody Survey ID:	
Line 5 Relocation Project						2020-05-23			sase1003e	
State: Count			y/Parish:			USGS Waterbody Name:				
Wisconsin Ashlar			nd			None				
Company: Crew I		Crew M	Member Initials:			Latitude:			Longitude:	
Enbridge ARK/I		ARK/DN	OMP			46.430508			-90.861430	
	Center	ine	□ Re-Rou	te	$\Box A$	Access Road	□Facility	□Other		
(check one) Waterbody Type:	□ River		□ Stream			Ditch 🗌 Swale 🗌 Car		🗆 Cana	al 🗌 Other	
Nater Appearance: IN Water		ter						ace Scum □Algal Mats □Other		
	Highly	Functior	nal Stream	I Modera	ately	y Functional S	<u>Surface</u> Stream	Functionally	Impaired Stre	am
Feature Description:						Manipulated				
Flow Regime:	Ephem	eral	Intermit	tent		Perennial	Connect Swale	cting		
, ,	vey Corridor:		Meandering							
Measurements Depth of Water: 0 f	ł	N/A 🗆	Unknow	n 🗆 Water E	dae	e to Water Ed	lae: 0 ft	. N/A 🗆	OHWM Widtl	h: 1 ft.
			UTIKITUW		ugu		.go. <u> </u>			<u> </u>
OHWM Indicator: (check all that apply)	Clear line		on bank Shelving			□Wrested v	egetation	Scouring		□Water staining
(nt, matte				Litter and debris				✓Soil characteristic change
Dominant Substrate: (check all that apply)	□ Be	edrock	🗆 Bou	lder 🗆 C	obb	le 🗆 (Gravel	□ Sand	🗹 Silt/ clay	/ 🗆 Organic
Observations Riparian Zone Present:	rat v									
(check one)	⊻ Ye	es	□ N	0						
Vegetation Layers: (check all that apply)	🗆 Tr	□ Trees □ Saplings/Shrubs			✓ Herbs					
Dominant Bank Vegetat Mosses, Hieracium cf. au	ion (list Irantiac): um, Poa	annua							
Aquatic Habitats (ex: subr	nerged or	emerged a	quatic vegetatio	on, overhanging ba	nks/ro	oots, leaf packs, l	arge submerged	wood, riffles, deep p	oools, etc.):	
Aquatic Organisms Obs None.	erved	(list):								
Disturbances (ex: livestoo Mowing.	ck acces	s, manure	in waterbody	/, waste discharç	ge pi	ipes):				
Observation Notes: No water present at time	of surv	ey.								



sase1003e_E (across)



sase1003e_N (upstream)



sase1003e_S (downstream)

Description													
Project Name:						Dat	te:			Waterbo	Waterbody Survey ID:		
Line 5 Relocation Pro	ject					202	20-05-28			sase100	5e		
State:		County/	Parish:			US	GS Wate	rbody Name):	•			
Wisconsin		Ashland	1			No	ne						
Company:		Crew Me	ember Ini	tials:		Lat	itude:			Longitud	de:		
Enbridge		ARK/DN	ΛP			46	46.366805				369		
Survey Type: (check one)	Center	ine	🗆 Re-Ro	oute		Acce	ess Road	□Facility	□Othe	r			
Waterbody Type: (check one)	□ River		□ Strean	n		Ditcl	h	🗹 Swale	🗆 Cana	al	🗆 Otł		
Water Appearance: (check one)	🗆 No Wa		Clear			□Turb	id	□Sheen or Surface	n □Surfa	ice Scum	□Alga	al Mats	□Other
Existing Condition ^a : (check one)	Highly	Function	nal Stream] Modera	ately Fu	nctional S	Stream	Functionally	/ Impaired	Stream	l	
Feature Description: (check one)	Matura]	□ Artificia	al, man·	-made	□ Man	ipulated						
Flow Regime: (check one)	Epherr	eral	□ Interm	littent		Pere	ennial	Connec Swale	cting				
Sinuosity within Survey Corridor: (check one)	□ Straigh	it	Meano	dering									
Ephemeral feature wit to a wetland outside t				u Dank,	localeu			le. Conveys	Stornwater Co	ncentralec			ne lanuscape
Measurements													
Depth of Water: 0.2	5_ft.	N/A□	Unknov	wn□	Water E	dge to	Water Ed	ge: <u>2</u> ft.	. N/A□	онwм и	Nidth:	<u>2</u> ft	
OHWM Indicator: (check all that apply)	□ C	lear line c	on bank	□Sh	elving	ΠV	Vrested v	egetation			[∃Water s	staining
(chock all that apply)		ent, matte ing veget		□Wr	ack line	۳L	itter and	debris	☑Abrupt pla change	nt commur		Soil cha	aracteristic
Dominant Substrate: (check all that apply)	□ Be	edrock	□ Bo	ulder		obble		Gravel	□ Sand	🗹 Silt/	′ clay		Organic
Observations													
Riparian Zone Presen (check one)	nt: 🗆 Ye	es		No									
Vegetation Layers: (check all that apply)	🗹 Tr	ees	2	Sapling	s/Shrubs	5	Herbs						
Dominant Bank Vege Acer saccharum, Onc	etation (list oclea sensi) <u>:</u> bilis, Toxi	icodendro	n radica	ans								
Aquatic Habitats (ex: None.	submerged or	emerged ac	quatic vegeta	tion, overh	hanging bai	nks/roots,	leaf packs, la	arge submerged v	wood, riffles, deep	pools, etc.):			
Aquatic Organisms (None.	Observed	(list):											
Disturbances (ex: live None.	stock acces	s, manure	in waterboo	dy, waste	e discharç	ge pipes)	:						
Observation Notes: There is less vegetati	on in the b	ed of the	channel tl	han the	re is on t	the adja	icent slop	es.					



sase1005e_NE (downstream)



sase1005e_SE (across)



sase1005e_SW (upstream)

Description							
Project Name:		Date:	Waterbody Survey ID:				
Line 5 Relocation Project		2020-05-25	sirb1001e				
State:	County/Parish:	USGS Waterbody Name:					
Wisconsin	Iron	None					
Company:	Crew Member Initials:	Latitude:	Longitude:				
Enbridge	KDF/SAM	46.383099 -90.546737					
Survey Type: Center (check one)		Access Road					
Waterbody Type: River (check one)		Ditch 🗌 Swale 🗌 Cana	I Other				
Water Appearance: No Wa (check one)	ater 🗹 Clear 🗆 T	Turbid □Sheen on □Surfac Surface	e Scum □Algal Mats □Other				
Existing Condition ^a : If Highly (check one)	/ Functional Stream	/ Functional Stream	Impaired Stream				
Feature Description: IN Natura	al 🛛 Artificial, man-made 🗌 I	Manipulated					
Flow Regime: If Ephen	neral 🗆 Intermittent 🗆 I	Perennial Connecting Swale					
Sinuosity within Straig Survey Corridor: (check one)	ht 🗹 Meandering						
Measurements							
Depth of Water: <a> <u><0.25</u> ft.	N/A Unknown Water Edge	e to Water Edge: <u>1</u> ft. N/A□	OHWM Width: <u>1</u> ft.				
OHWM Indicator:	Clear line on bank Shelving	□Wrested vegetation ■Scouring	□Water staining				
⊠ Be	ent, matted, or □Wrack line sing vegetation	■ Litter and debris □ Abrupt plan change	t community Soil characteristic change				
Dominant Substrate: B (check all that apply)	Bedrock 🗆 Boulder 🗹 Cobbl	le 🗆 Gravel 🗆 Sand	🗹 Silt/ clay 🛛 Organic				
Observations							
Riparian Zone Present: V (check one)	íes □ No						
Vegetation Layers:	rees 🗹 Saplings/Shrubs	🗹 Herbs					
Dominant Bank Vegetation (lis Ostrya virginiana, Fraxinus nigra	st): a, Erythronium americanum, Athyrium f	filix-femina, Matteuccia struthiopteris					
Aquatic Habitats (ex: submerged o Downed woody debris is preser	r emerged aquatic vegetation, overhanging banks/ro it along the streambed.	oots, leaf packs, large submerged wood, riffles, deep p	ools, etc.):				
Aquatic Organisms Observed American Toad, Wood Frog, No	<i>(list):</i> rthern Leopard Frog.						
Disturbances (ex: livestock acces Minor erosion is evident along the second sec	ss, manure in waterbody, waste discharge pi he stream channel.	pes):					
Observation Notes: None.							



sirb1001e_E (upstream)



sirb1001e_S (across)



sirb1001e_W (downstream)

Description											
Project Name:						Date:			Waterbody Survey ID:		
Line 5 Relocation Pro	ject					2020-05-26			sirb1002e		
State:		County	/Parish:			USGS Wate	erbody Name	:	•		
Wisconsin		Iron				None					
Company:			ember Init	ials:		Latitude: Longitude:					
Enbridge		KDF/SA				46.384749			-90.54619)1	
Survey Type: (check one)	Centerl	ine	🗆 Re-Roi	ute		Access Road					
Waterbody Type: (check one)	□ River		Stream	1		Ditch	Swale	🗆 Cana	I	□ Other	
Water Appearance: (check one)	No Wat	ter	Clear		□.	Turbid	□ Sheen or Surface	n ⊡Surfac	ce Scum	□Algal Mats □Other	
Existing Condition ^a : (check one)	I Highly	Functior	nal Stream	□ Mod	leratel	ly Functional S		Functionally	Impaired S	tream	
Feature Description: (check one)	Matural		□ Artificia	al, man-made	e 🗆	Manipulated					
Flow Regime: (check one)	🗹 Ephem	eral	□ Intermi	ittent		Perennial	Connec Swale	ting			
Sinuosity within Survey Corridor: (check one)	□ Straigh	it	Meand	lering							
Measurements	5 4		L la lue eu	w 🗆 Wata	r Eda	e to Water Ec	lao: 2 ft	N/A	OHWM W	idth: 2 ft.	
Depth of Water: 0.2	<u>5</u> ft.	N/A□	Unknov		Lag		i ge. _∠_n.	N/A⊔		idun. <u>2</u> n.	
OHWM Indicator: (check all that apply)	□ CI	ear line	on bank	Shelving	J	□Wrested v	egetation	Scouring		□Water staining	
		nt, matte		□Wrack lii	ne	□Litter and	debris	□Abrupt plar change	nt communi	ty □Soil characteristic change	
Dominant Substrate: (check all that apply)	🗆 🗆 Be	edrock	🗆 Bou	ulder 🗆	Cobb	ole 🗌 (Gravel	🗹 Sand	□ Silt/ o	clay 🗹 Organic	
Observations											
Riparian Zone Presen (check one)	nt: 🗹 Ye	es	1 🗆	No							
Vegetation Layers: (check all that apply)	🗹 Tr	ees	K S	Saplings/Shr	ubs	🗹 Herbs	i				
Dominant Bank Vege Acer saccharum, Frax	etation <i>(list</i> kinus nigra,) <u>:</u> Rubus i	idaeus, Eq	uisetum prat	ense						
Aquatic Habitats (ex: Downed woody debris	submerged or S is present	emerged a within t	quatic vegetat he feature.	ion, overhanging) banks/	roots, leaf packs, l	arge submerged v	wood, riffles, deep p	ools, etc.):		
Aquatic Organisms (None.	Dbserved ((list):									
Disturbances (ex: live Minor erosion evident	stock access along the	s, manure shallow	e in waterboo banks.	ly, waste disch	narge p	bipes):					
Observation Notes: None.											



sirb1002e_E (upstream)



sirb1002e_N (across)



sirb1002e_NW (downstream)

Description											
Project Name:				Date:			Waterbody Survey ID:				
Line 5 Relocation Project				2020-05-19			sirc1002e				
State:	Co	ounty/Parish:		USGS Wate	USGS Waterbody Name:						
Wisconsin	Irc	n		None							
Company:	_	ew Member Ini	tials:	Latitude:	Latitude: Longitude:						
Enbridge	E	JO/JSW		46.459887			-90.507550				
Survey Type:	Centerline	e 🗆 Re-Ro	oute	□Access Road	□Facility	Other					
Waterbody Type:	River	Stream	n	Ditch	Swale	🗆 Canal		Other			
. ,	No Water	Clear		□Turbid	□ Sheen on Surface		e Scum 🛛 🖉	Algal Mats	□Other		
	Highly Fu	inctional Stream	Modera	ately Functional		□ Functionally	Impaired Str	eam			
Feature Description:	Natural	🗹 Artifici	al, man-made	□ Manipulated							
(check one) Flow Regime:	Ephemera	al 🗌 Interm	ittent	Perennial		ting					
(check one)	Straight	🗹 Meand	derina		Swale	0					
Survey Corridor: (check one)	onaight		aonng								
Measurements							010404		<i>.</i>		
Depth of Water: <u>0.5</u> ft	t. N//		wn water E	dge to Water Ed	ige: <u>2</u> ft.	N/A□	OHWM Wid	lth: <u>2</u>	rt.		
OHWM Indicator: (check all that apply)	□ Clea	r line on bank	Shelving	□Wrested v	regetation	Scouring		□Water	staining		
		matted, or vegetation	□Wrack line	□Litter and	debris	□ Abrupt plan change	t community	r ⊡Soil ch change	aracteristic		
Dominant Substrate: (check all that apply)	□ Bedr	ock 🗆 Bo	ulder 🗆 Co	obble 🗹	Gravel	□ Sand	🗹 Silt/ cla	ay 🗆	Organic		
Observations											
Riparian Zone Present: (check one)	□ Yes		No								
Vegetation Layers: (check all that apply)		s 🗹 :	Saplings/Shrubs	s 🗹 Herbs	3						
Dominant Bank Vegetati Salix sp., Plantago cf. lan	i on <i>(list)</i> : iceolata, T	rifolium repens,	Agrostis gigante	ea							
Aquatic Habitats (ex: subn Low quality pool present.	nerged or eme	erged aquatic vegeta	tion, overhanging bar	nks/roots, leaf packs, l	arge submerged w	vood, riffles, deep po	ools, etc.):				
Aquatic Organisms Obs None observed.	erved (lisi	t):									
Disturbances (ex: livestoc Waterbody located within	k access, n excavate	nanure in waterbo d gravel pit.	dy, waste discharg	ge pipes):							
Observation Notes: Feature runs through gra	vel pit, flov	vs under culver	t, and drains out	side of survey a	rea to forest to	o the north.					



sirc1002e_N (downstream)



sirc1002e_S (upstream)



sirc1002e_SW (across)

Description											
Project Name:				Date:			Waterbody Survey ID:				
Line 5 Relocation Project				2020-05-19			sirc1002e				
State:	Co	ounty/Parish:		USGS Wate	USGS Waterbody Name:						
Wisconsin	Irc	n		None							
Company:	_	ew Member Ini	tials:	Latitude:	Latitude: Longitude:						
Enbridge	E	JO/JSW		46.459887			-90.507550				
Survey Type:	Centerline	e 🗆 Re-Ro	oute	□Access Road	□Facility	Other					
Waterbody Type:	River	Stream	n	Ditch	Swale	🗆 Canal		Other			
. ,	No Water	Clear		□Turbid	□Sheen on Surface		e Scum 🛛 🖉	Algal Mats	□Other		
	Highly Fu	inctional Stream	Modera	ately Functional		□ Functionally	Impaired Str	eam			
Feature Description:	Natural	🗹 Artifici	al, man-made	□ Manipulated							
(check one) Flow Regime:	Ephemera	al 🗌 Interm	ittent	Perennial		ting					
(check one)	Straight	🗹 Meand	derina		Swale	0					
Survey Corridor: (check one)	onaight		aonng								
Measurements							0184444		<i>.</i>		
Depth of Water: <u>0.5</u> ft	t. N//		wn water E	dge to Water Ed	ige: <u>2</u> ft.	N/A□	OHWM Wid	lth: <u>2</u>	rt.		
OHWM Indicator: (check all that apply)	□ Clea	r line on bank	Shelving	□Wrested v	regetation	Scouring		□Water	staining		
		matted, or vegetation	□Wrack line	□Litter and	debris	□ Abrupt plan change	t community	r ⊡Soil ch change	aracteristic		
Dominant Substrate: (check all that apply)	□ Bedr	ock 🗆 Bo	ulder 🗆 Co	obble 🗹	Gravel	□ Sand	🗹 Silt/ cla	ay 🗆	Organic		
Observations											
Riparian Zone Present: (check one)	□ Yes		No								
Vegetation Layers: (check all that apply)		s 🗹 :	Saplings/Shrubs	s 🗹 Herbs	3						
Dominant Bank Vegetati Salix sp., Plantago cf. lan	i on <i>(list)</i> : iceolata, T	rifolium repens,	Agrostis gigante	ea							
Aquatic Habitats (ex: subn Low quality pool present.	nerged or eme	erged aquatic vegeta	tion, overhanging bar	nks/roots, leaf packs, l	arge submerged w	vood, riffles, deep po	ools, etc.):				
Aquatic Organisms Obs None observed.	erved (lisi	t):									
Disturbances (ex: livestoc Waterbody located within	k access, n excavate	nanure in waterbo d gravel pit.	dy, waste discharg	ge pipes):							
Observation Notes: Feature runs through gra	vel pit, flov	vs under culver	t, and drains out	side of survey a	rea to forest to	o the north.					



sirc1002e_N (downstream)



sirc1002e_S (upstream)



sirc1002e_SW (across)

Description									
Project Name:				Date:			Waterbody S	urvey ID:	
Line 5 Relocation Project				2020-05-20	6		sird1004i		
State:	County/	Parish:		USGS Wat	erbody Name	9:			
Wisconsin	Iron			None					
Company:	Crew Me	ember Initials:		Latitude:			Longitude:		
Enbridge	AGG/OT	ſG		46.390259			-90.545537		
Survey Type:	Centerline	□ Re-Route	[Access Road	I □Facility	Other			
Waterbody Type:	River	Stream	[Ditch	Swale	🗆 Canal		Other	
. ,	No Water	Clear	[□Turbid	□Sheen or Surface	n 🗆 Surfac	e Scum □A	Igal Mats Other	
	Highly Function	al Stream	Moderat	tely Functional		Functionally	Impaired Strea	im	
Feature Description:	Natural	□ Artificial, ma	in-made	Manipulated					
. ,	Ephemeral	Intermittent	[Perennial		cting			
, ,	Straight	Meandering			Swale				
Measurements									
Depth of Water: 0.75 ft	t. N/A□	Unknown	Water Ed	lge to Water E	dge: <u>1.5</u> ft	. N/A□	OHWM Width	: <u>2</u>ft .	
OHWM Indicator: (check all that apply)	Clear line of	on bank 🛛 S	helving	□Wrested	vegetation	Scouring		□Water staining	
	Bent, matte missing veget		/rack line	□Litter and	l debris	□ Abrupt plan change	t community	□Soil characteristic change	
Dominant Substrate: (check all that apply)	□ Bedrock	🗹 Boulder	□ Co	bble 🗹	Gravel	□ Sand	🗹 Silt/ clay	Organic	
Observations									
Riparian Zone Present: (check one)	□ Yes	🗹 No							
Vegetation Layers: (check all that apply)	Trees	🗹 Saplin	igs/Shrubs	I Herb	s				
Dominant Bank Vegetati Athyrium filix-femina, Ace	ion <i>(list)</i> : er rubrum, Fraxir	ius nigra							
Aquatic Habitats (ex: subn None.	nerged or emerged ad	uatic vegetation, ove	erhanging bank	ks/roots, leaf packs,	large submerged	wood, riffles, deep po	ools, etc.):		
Aquatic Organisms Obs None.	erved (list):								
Disturbances (ex: livestoc None.	k access, manure	in waterbody, was	ste discharge	e pipes):					
Observation Notes: None.									



sird1004i_E (upstream)



sird1004i_S (across)



sird1004i_W (downstream)

Description			
Project Name:		Date:	Waterbody Survey ID:
Line 5 Relocation Project		2020-05-26	sird1005i
State:	County/Parish:	USGS Waterbody Name:	
Wisconsin	Iron	None	
Company:	Crew Member Initials:	Latitude:	Longitude:
Enbridge	KDF/AGG	46.388248	-90.545324
Survey Type:	line	Access Road	
Waterbody Type: River (check one)	I Stream □	Ditch 🗌 Swale 🗌 Cana	□ Other
Water Appearance: No Wa	ter 🗆 Clear 🖂 🗋	Furbid Id Sheen on ⊡Surfac Surface	e Scum □Algal Mats □Other
Existing Condition ^a :	Functional Stream I Moderately		Impaired Stream
Feature Description: I Natura	I 🛛 Artificial, man-made 🗌	Manipulated	
Flow Regime: Ephem (check one)	neral 🗹 Intermittent 🗌	Perennial	
Sinuosity within Straigh	nt ☑ Meandering		
Description Notes:			
Measurements			
Depth of Water: <u>0.25</u> ft.	N/A Unknown Water Edge	e to Water Edge: <u>3</u> ft. N/A	OHWM Width: <u>3</u> ft.
	lear line on bank □Shelving	□Wrested vegetation	□Water staining
	ent, matted, or	☑ Litter and debris □Abrupt plan change	t community Soil characteristic change
Dominant Substrate:	edrock 🗌 Boulder 🗹 Cobb	le 🗌 Gravel 🗹 Sand	□ Silt/ clay □ Organic
Observations			
Riparian Zone Present: Yo	es 🗆 No		
Vegetation Layers: 🗹 Tr (check all that apply)	rees	☑ Herbs	
Dominant Bank Vegetation (<i>lis</i> Betula alleghaniensis, Matteucc	<i>t</i>): ia struthiopteris, Fraxinus nigra, Athyri	um filix-femina	
Aquatic Habitats (ex: submerged or Downed woody debris and smal	emerged aquatic vegetation, overhanging banks/r I pools are present within the feature.	oots, leaf packs, large submerged wood, riffles, deep p	pols, etc.):
Aquatic Organisms Observed Frogs.	(list):		
	is, manure in waterbody, waste discharge pi t along the north end of the feature.	ipes):	
Observation Notes: None.			



sird1005i_N (downstream)



sird1005i_SW (upstream)



sird1005i_W (across)

Description										
Project Name:			Date:			Waterbody Survey ID:				
Line 5 Relocation Project			2020-05-26			sird1006e				
State:	County/Parish):	USGS Wate	rbody Name:						
Wisconsin	Iron		None							
Company:	Crew Member	Initials:	Latitude:			Longitude:				
Enbridge	KDF/AGG		46.387494	46.387494 -90.545033						
Survey Type: C (check one)	enterline	-Route	□Access Road	□Facility	□Other					
Waterbody Type: R (check one)	iver 🗹 Str	eam	Ditch	Swale	🗆 Canal		Other			
Water Appearance: N (check one)	o Water 🗹 Cle	ear	□Turbid	□ Sheen on Surface	□Surfac	e Scum □A	lgal Mats □Other			
	lighly Functional Stre	eam 🗹 Modera	tely Functional S		Functionally	Impaired Strea	m			
Feature Description: IN N	atural 🛛 Art	ificial, man-made	Manipulated							
, ,	phemeral 🛛 Int	ermittent	Perennial		ng					
	traight 🛛 🗹 Me	eandering		Swale						
Measurements										
Depth of Water: 0.25 ft.	N/A□ Unł	known⊡ Water Ed	dge to Water Ed	ge: <u>1</u> ft.	N/A□	OHWM Width	: <u>2</u> ft.			
OHWM Indicator: (check all that apply)	□ Clear line on ban	k □Shelving	□Wrested v	egetation	Scouring		□Water staining			
	Bent, matted, or missing vegetation	\Box Wrack line	Litter and		□Abrupt plan change	t community	□Soil characteristic change			
Dominant Substrate: (check all that apply)	□ Bedrock □	Boulder 🗹 Co	obble 🗆 C	Gravel	Sand Sand	□ Silt/ clay	□ Organic			
Observations										
Riparian Zone Present: (check one)	🗹 Yes	□ No								
Vegetation Layers: (check all that apply)	Trees	Saplings/Shrubs	Herbs							
Dominant Bank Vegetatio Fraxinus nigra, Ostrya virgi	n <i>(list)</i> : niana, Athyrium filix-	femina, Erythronium	n americanum							
Aquatic Habitats (ex: subme Downed woody debris is pr	rged or emerged aquatic ve esent within the feat	getation, overhanging ban UIC.	iks/roots, leaf packs, la	arge submerged wo	od, riffles, deep po	ools, etc.):				
Aquatic Organisms Obser None.	rved (list):									
Disturbances (ex: livestock Minor bank erosion is evide	access, manure in wate ant in areas of the str	erbody, waste discharg eam.	e pipes):							
Observation Notes: None.										



sird1006e_E (across)



sird1006e_N (downstream)



sird1006e_S (upstream)

Project/Site: Line 5 Relocation Project	County: Ashland Sampling Date: 2020-05-18
-	State: Wisconsin Sampling Point: wase1001e_w
Investigator(s): DMP/ARK Section	
	lief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2%</u>
	Long: <u>-90.907443</u> Datum: <u>WGS84</u>
	2 to 6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distu	rbed? Are "Normal Circumstances" present? Yes <u>v</u> No
Are Vegetation, Soil, or Hydrology naturally problem	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing same	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes _ No Hydric Soil Present? Yes _ No Wetland Hydrology Present? Yes _ No	Is the Sampled Area within a Wetland? Yes <u>v</u> No If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.) The feature is a linear fresh wet meadow located v	within a roadside ditch associated with Highway
	Millin a roadside ditch associated with highway
112 and adjacent to a homestead.	
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	
High Water Table (A2) Aquatic Fauna (B13)	
Saturation (A3) Marl Deposits (B15)	
Water Marks (B1) Hydrogen Sulfide Oc	
Sediment Deposits (B2) Oxidized Rhizosphere	
Drift Deposits (B3)	
Algal Mat or Crust (B4) Recent Iron Reduction	
Iron Deposits (B5) Thin Muck Surface (
Inundation Visible on Aerial Imagery (B7) Other (Explain in Re	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes <u>v</u> No Depth (inches): <u>0</u>	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections) if available:
Remarks:	
The hydrologic regime is seasonally saturated. Th	
point, and standing water was observed in some a	areas within the feature.

Sampling Point: wase1001e_w

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2			·	Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6	<u></u>		·	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co		OBL species 0 x1 = 0
Sapling/Shrub Stratum (Plot size: 15				FACW species $50 \times 2 = 100$
				FAC species $0 \times 3 = 0$
1				FACU species x 4 =8
2			·	UPL species $0 \times 5 = 0$
3				Column Totals: <u>52</u> (A) <u>108</u> (B)
4			·	
5				Prevalence Index = B/A = <u>2.076923076923077</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
<u></u>		= Total Co		∠ 2 - Dominance Test is >50%
		= Total Co	ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5)	50	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Phalaris arundinacea</u>		<u> </u>	FACW	data in Remarks or on a separate sheet)
2. <u>Poa pratensis</u>			<u>FACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
3			·	¹ Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6			·	
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.
			·	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11	<u></u>			
12				Woody vines – All woody vines greater than 3.28 ft in height.
	52	= Total Co	ver	logn.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3			·	Hydrophytic Vegetation
4			·	Present? Yes <u>v</u> No
-		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate s The vegetation at the sample point is re		tative o	f the the	ditch however meadow foxtail is
	•			
sporadic outside of the plot and patche	s or uar	r green	builush	
portion of the wetland.				

Depth (inches) Color (i	Matrix moist) %	Color (moist)	x Features %	Type ¹	Loc ²	Texture	Remarks
			<u> </u>				
			. <u> </u>				
			<u> </u>				
<u> </u>							
			<u> </u>				
<u> </u>			·				
			<u> </u>			·	
			. <u> </u>				
Type: C=Concentration	D-Depletion	RM=Reduced Matrix, M	S-Masked	Sand Gr	ains	² Location: PL =	Pore Lining, M=Matrix.
Hydric Soil Indicators:							oblematic Hydric Soils ³ :
Histosol (A1)		Polyvalue Belov	w Surface (S8) (LRF	RR,		10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	MLRA 1498)					Redox (A16) (LRR K, L, R)
Black Histic (A3) Hydrogen Sulfide (A)	(4)	Thin Dark Surfa Loamy Mucky N					Peat or Peat (S3) (LRR K, L, R) (S7) (LRR K, L)
Stratified Layers (A		Loamy Gleyed		, (, _,		low Surface (S8) (LRR K, L)
Depleted Below Date							face (S9) (LRR K, L)
Thick Dark Surface	. ,	Redox Dark Su		7)		-	ese Masses (F12) (LRR K, L, R)
Sandy Mucky Miner Sandy Gleyed Matri		Depleted Dark		()			odplain Soils (F19) (MLRA 149E (TA6) (MLRA 144A, 145, 149B
Sandy Redox (S5)						Red Parent M	
Stripped Matrix (S6)						·	Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 1	l 49B)				_∠ Other (Explai	n in Remarks)
Indicators of hydrophyti	c vegetation and	d wetland hydrology mus	st be prese	nt. unless	s disturbed (or problematic.	
Restrictive Layer (if ob		, , , , , , , , , , , , , , , , , , , ,		.,			
Туре:							
Depth (inches):						Hydric Soil Prese	nt? Yes <u>~</u> No
Remarks:							
he soils were n	ot sampled	due to the loca	tion of t	he we	tland w	ithin a roadsic	le ditch. The soils are
issumed to be h	ydric due t	to the presence	of hydro	ophytic	c vegeta	tion and hydr	ology indicators.



wase1001e_w_N



wase1001e_w_S

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling Date: 2020-05-26
Applicant/Owner: Enbridge		_ State: Wisconsin Sampling Point: wase1022e_w
Investigator(s): DMP/ARK	Section, Township, Range: <u>S</u>	ec 27 T046N R004W
Landform (hillslope, terrace, etc.): Depression	al relief (concave, convex, no	ne): <u>Concave</u> Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): Northcentral Forests Lat: 46.430817	7 Long: <u>-9(</u>	0.859671 Datum: WGS84
Soil Map Unit Name: Tonkey sandy loam, 0 to 2 percer		
Are climatic / hydrologic conditions on the site typical for this time of year	ar? Yes <u>✓</u> No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norma	Il Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pro		
SUMMARY OF FINDINGS – Attach site map showing	sampling point location	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes _ No Hydric Soil Present? Yes _ No Wetland Hydrology Present? Yes _ No		Yes No
Remarks: (Explain alternative procedures here or in a separate repor The feature is a small wet meadow that is locat shares upland point wase1017_u with wase107	ted in a gap within th	ne forest canopy. This 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 I	_eaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna ((B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (I		Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfic	de Odor (C1)	Crayfish Burrows (C8)
	• • • • •	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Re	duced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Rec	duction in Tilled Soils (C6)	Ceomorphic Position (D2)

Field Observations:			
Surface Water Present?	Yes	No _ / Depth (inches):	
Water Table Present?	Yes 🖌	No Depth (inches): 18	
Saturation Present? (includes capillary fringe)	Yes 🖌	No Depth (inches): <u>15</u>	Wetland Hydrology Present? Yes
Describe Recorded Data (strea	am gauge, n	onitoring well, aerial photos, previou	s inspections), if available:

____ Thin Muck Surface (C7)

____ Other (Explain in Remarks)

Remarks:

Iron Deposits (B5)

Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

The hydrologic regime is seasonally saturated. The water table was observed 18 inches below the surface.

No

Shallow Aquitard (D3)
 Microtopographic Relief (D4)

FAC-Neutral Test (D5)

Sampling Point: wase1022e_w

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1.		Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:4 (A)
23				Total Number of Dominant Species Across All Strata:5(B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)
5 6				
7				Prevalence Index worksheet: Total % Cover of:Multiply by:
	_	= Total Co		$\frac{1}{10000000000000000000000000000000000$
Sapling/Shrub Stratum (Plot size: 15)		= 10tal 00		FACW species $x_2 =24$
1. <u>Alnus incana</u>	Б	V	FACW	FAC species $2 \times 3 = 6$
				FACU species <u>7</u> x 4 = <u>28</u>
2. <u>Corylus americana</u>			FACU	UPL species x 5 =
3. <u>Acer rubrum</u>				Column Totals: <u>56</u> (A) <u>93</u> (B)
4 5				Prevalence Index = B/A = <u>1.66</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
··		= Total Co		2 - Dominance Test is >50%
Had Oterhan (Blat size E			ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5)	05	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Calamagrostis canadensis</u>				data in Remarks or on a separate sheet)
2. <u>Carex crinita</u>		<u>Y</u>	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Rubus pubescens</u>			FACW	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Solidago altissima</u>			<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Carex brunnescens</u>	2	<u>N</u>	<u>FACW</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 height.
	47	= Total Co	ver	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4				Vegetation
		= Total Co	ver	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate				
The vegetation is representative of the			•	
birch trees are overhanging the wetlan	a, but ar	e not ro	oted wi	tnin it.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix				x Feature		0			
(inches)	Color (moist)	%	Color (n	noist)	%	Type ¹	Loc ²	Texture	Remarks	
	<u>10YR 3/1</u>	100			0			<u> L </u>		
1-8	<u>10YR 3/1</u>	98	<u>7.5YR</u>	4/4	2	C	M	CL		
8-20	<u>10YR 4/6</u>	100			0			С		
						·				
					·	·				
·		·			·	·				
		. <u></u>			·	·				
					·					
					<u></u>	<u></u>				
					· . <u></u>	·				
		. <u> </u>			·	·				
					·	·				
	oncentration, D=Depl	etion, RM	=Reduced N	Aatrix, MS	S=Masked	d Sand Gra	ains.		: PL=Pore Lining, M=Matrix.	
Hydric Soil			Dohava	lue Delev	v Curfaga				for Problematic Hydric Soils ³ :	
Histosol	pipedon (A2)		- ·	RA 149B)		(S8) (LR F	κ,		/luck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R)	
	istic (A3)			,		LRR R, MI	LRA 149B)		Aucky Peat or Peat (S3) (LRR K, L, R)	
Hydroge	en Sulfide (A4)		Loamy	Mucky M	/lineral (F	1) (LRR K	, L)		surface (S7) (LRR K, L)	
	d Layers (A5)			-	Matrix (F2	<u>2</u>)			lue Below Surface (S8) (LRR K, L)	
	d Below Dark Surface	e (A11)		ed Matrix					ark Surface (S9) (LRR K, L)	
	ark Surface (A12)				rface (F6)				anganese Masses (F12) (LRR K, L, R)	
	/lucky Mineral (S1)		·		Surface (F	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
Sandy Gleyed Matrix (S4) Redox Depressions (F8)				Mesic Spodic (TA6) (MLRA 144A, 145, 149B)						
Sandy Redox (S5)								arent Material (F21)		
Stripped Matrix (S6)								hallow Dark Surface (TF12)		
Dark Surface (S7) (LRR R, MLRA 149B)							Other ((Explain in Remarks)		
³ Indicators o	f hydrophytic vegetat	ion and w	etland hydro	logy mus	t be prese	ent, unless	s disturbed	or problematic	>.	
Restrictive	Layer (if observed):									
Туре:										
Depth (in	ches):							Hydric Soil	Present? Yes <u>< No </u>	

Remarks:

The soil profile consists of a thin dark loam over a dark clay loam and red clay. Redox concentrations were observed within the middle layer. The bottom layer is a dense red clay. Redox Dark Surface was observed.



wase1022e_w_W

713

Project/Site: Line 5 Relocation Project	City/County: Ashland	Sampling Date: 2020-06-04
Applicant/Owner: Enbridge		State: Wisconsin Sampling Point: wase1052e_w
Investigator(s): ARK/DMP	Section, Township, Range	e: sec 35 T046N R004W
Landform (hillslope, terrace, etc.): Depression		
Subregion (LRR or MLRA): Northcentral Forests Lat: 4		
Soil Map Unit Name: Sanborg-Badriver compl		
Are climatic / hydrologic conditions on the site typical for th	nis time of year? Yes No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "No	rmal Circumstances" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology		ed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map		
		· · · · ·
Hydrophytic Vegetation Present? Yes		
Hydric Soil Present? Yes		
Wetland Hydrology Present? Yes <u>v</u> Remarks: (Explain alternative procedures here or in a se		tland Site ID:
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check al	l that apply)	Surface Soil Cracks (B6)
	ater-Stained Leaves (B9)	Drainage Patterns (B10)
	juatic Fauna (B13)	Moss Trim Lines (B16)
	arl Deposits (B15)	Dry-Season Water Table (C2)
	vdrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Ox	didized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Pre	esence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Re	ecent Iron Reduction in Tilled Soils (C6)	Ceomorphic Position (D2)
Iron Deposits (B5) Th	in Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Oth	her (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:		
	epth (inches):	
Water Table Present? Yes <u>v</u> No D	epth (inches): <u>16</u>	
Saturation Present? Yes <u>v</u> No <u>D</u>	epth (inches): <u>16</u> Wetla	nd Hydrology Present? Yes 🖌 No

(includes capillary fringe)

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

Remarks:

Seasonally saturated depression. Water table observed at 16 inches below surface. Lack of primary indicators and FAC-Neutral reflects the fact that the plot is on the dry end of wetland. FAC-Neutral would be met in the wetter portions where vegetation is more strongly hydrophytic.

Sampling Point: wase1052e_w

	Absolute		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:6(B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	ver	OBL species <u>10</u> x 1 = <u>10</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species <u>1</u> x 2 = <u>2</u>
1. <u>Cornus racemosa</u>	5	Y	FAC	FAC species <u>17</u> x 3 = <u>51</u>
2. <u>Viburnum lentago</u>				FACU species x 4 =84
3. <u>Cornus alba</u>				UPL species $0 \times 5 = 0$
4				Column Totals: <u>49</u> (A) <u>147</u> (B)
5				Prevalence Index = B/A = <u>3.00</u>
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
··		= Total Co		2 - Dominance Test is >50%
	0		ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5)	10	V		4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Carex gracillima</u>		<u> </u>	FACU	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Juncus effusus</u>				
3. <u>Carex tenera</u>		<u> N</u>	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Elymus repens</u>		<u> Y </u>	FACU	be present, unless disturbed or problematic.
5. <u>Ranunculus acris</u>		<u> </u>	FAC	Definitions of Vegetation Strata:
6. <u>Poa pratensis</u>				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Scirpus cyperinus</u>	5	N	OBL	at breast height (DBH), regardless of height.
8. <u>Solidago altissima</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 of size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12	/1	= Total Co		height.
Woody Vine Stratum (Plot size: 30)	<u>41</u>	= Total Co	ver	
1				
2				
3				Hydrophytic Vegetation
4				Present? Yes <u>~</u> No
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate Graceful sedge and quackgrass are sp		ha watt	or portio	ons of the wetland where woolgrass is

Graceful sedge and quackgrass are sparse in the wetter portions of the wetland, where woolgrass is dominant, and quill sedge is more abundant. Shrubs are mostly limited to the margins, where they become abundant in the upland.

SOIL	
------	--

Profile Des	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			Redox	K Features					
(inches)	Color (moist)	%	Color (I	moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-2	<u>10YR 2/1</u>	100			0			CL		
2-6	<u>10YR 3/1</u>	95	5YR	5/6	5	_C	M	C		
6-20	<u>5YR 4/2</u>	98	5YR	5/6	2	C	Μ	C		
·										
							<u> </u>			
¹ Type: C=C Hydric Soil	Concentration, D=Dep	etion, RM	=Reduced	Matrix, MS	S=Masked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix.	
-			Doh <i>a</i> "	alua Palau	v Surfago			Indicators for Problematic Hydric Soils ³ :		
Histoso Histic F	pipedon (A2)			alue Below RA 149B)		(30) (LR	Υ,	Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L)		
	listic (A3)			,		.RR R, MI	_RA 149B)			
	en Sulfide (A4)			y Mucky N			, L)			
	d Layers (A5)			y Gleyed N)				
	d Below Dark Surface	e (A11)		ted Matrix				Thin Dark Surface (S9) (LRR K, L)		
	ark Surface (A12) Mucky Mineral (S1)			<pre>c Dark Sur ted Dark S</pre>		7)		Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B)		
-	Gleyed Matrix (S4)			c Depressi		")		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
-	Redox (S5)				(, ,			Red Parent Material (F21)		
Stripped	d Matrix (S6)							Very S	hallow Dark Surface (TF12)	
Dark Su	urface (S7) (LRR R, N	ILRA 149	B)					Other	(Explain in Remarks)	
³ Indicators o	of hydrophytic vegetat	ion and w	etland hvdro	oloav mus	t be prese	ent. unless	s disturbed	or problematic		
	Layer (if observed):			biogy mad						
Туре:										
Depth (in	nches):							Hydric Soil	Present? Yes <u> </u>	
Remarks:										
Clay with	n redox.									



wase1052e_w_N



wase1052e_w_W

Project/Site: Line 5 Relocation Project	City/County: Ashla	ind s	Sampling Date: <u>2020-06-04</u>						
Applicant/Owner: Enbridge									
Investigator(s): ARK/DMP Section, Township, Range: sec 35 T046N R004W									
Landform (hillslope, terrace, etc.): Depression									
Subregion (LRR or MLRA): Northcentral Forests Lat: <u>46</u>									
Soil Map Unit Name: <u>Sanborg-Badriver comple</u>									
Are climatic / hydrologic conditions on the site typical for this	•								
	-								
Are Vegetation, Soil, or Hydrologys			esent? Yes <u><</u> No						
Are Vegetation, Soil, or Hydrology n		needed, explain any answers							
SUMMARY OF FINDINGS – Attach site map	showing sampling point	locations, transects, i	important features, etc.						
Hydrophytic Vegetation Present? Yes N Hydric Soil Present? Yes N Wetland Hydrology Present? Yes N	o within a Wetla	ed Area and? Yes <u>/</u> I Wetland Site ID:							
Remarks: (Explain alternative procedures here or in a sep Feature is classified as a wet meadow.	parate report.)								
may have occurred in the past, before t pasture. Form paired with upland form	he shrubs developed,								
HYDROLOGY									
Wetland Hydrology Indicators:		Secondary Indicato	rs (minimum of two required)						
Primary Indicators (minimum of one is required; check all t	hat apply)	Surface Soil Ci	Surface Soil Cracks (B6)						
	er-Stained Leaves (B9)		Drainage Patterns (B10)						
	atic Fauna (B13)		Moss Trim Lines (B16)						
	Deposits (B15)	Dry-Season W							
	rogen Sulfide Odor (C1)	·	Crayfish Burrows (C8)						
	lized Rhizospheres on Living Roo		 Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) 						
	sence of Reduced Iron (C4) ent Iron Reduction in Tilled Soils								
	Muck Surface (C7)		Geomorphic Position (D2) Shallow Aquitard (D3)						
	er (Explain in Remarks)								
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)							
Field Observations:			()						
Surface Water Present? Yes No 🗸 Dep	oth (inches):								
	oth (inches): <u>20</u>								
Saturation Present? Yes No 🖌 Dep		/etland Hydrology Present?	? Yes∕_ No						
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, a	aerial photos, previous inspectior	ns), if available:							
	······ F······, F······ ···· ··· ····								
Remarks: Seasonally saturated depression. Wate	r table observed at 20) inches below surfa	ace.						

Sampling Point: wase1053e_w

Trace Streture (District) 20	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across All Strata: 4 (B)
3				()
4				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Cov	/er	OBL species <u>15</u> x 1 = <u>15</u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species $13 \times 2 = 26$
1. <u>Cornus racemosa</u>				FAC species 25 x 3 = 75 FACU species 7 x 4 = 28
2. <u>Cornus alba</u>	10	Y	<u>FACW</u>	$\begin{array}{c} \text{PACO species} \\ \text{UPL species} \\ \text{O} \\ \text{x5} = \\ \text{O} \\ \text{x5} = \\ \text{O} \\ \text{yc} \\ y$
3				Column Totals: <u>60</u> (A) <u>144</u> (B)
4				
5				Prevalence Index = B/A =2.4
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov		2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)	_20_	- 10(a) 000		$_$ 3 - Prevalence Index is ≤3.0 ¹
	15	V	OBL	4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Scirpus cyperinus</u>				data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Carex tenera</u>			FAC	
3. <u>Ranunculus acris</u>		<u> </u>	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. <u>Poa pratensis</u>			<u>FACU</u>	be present, unless disturbed or problematic.
5. <u>Solidago gigantea</u>			<u>FACW</u>	Definitions of Vegetation Strata:
6. <u>Elymus repens</u>	2	N	<u>FACU</u>	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. <u>Potentilla recta</u>	1	N		at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in height.
	41	= Total Cov	/er	neight.
Woody Vine Stratum (Plot size: <u>30</u>)				
1				
2				
3				Hydrophytic
4				Vegetation
		= Total Cov	/er	Present? Yes <u>v</u> No
Remarks: (Include photo numbers here or on a separate	sheet.)			· · · · · · · · · · · ·
Shrubs are restricted to wetland margir	ns and o	verall c	over is l	ess than in this plot. Woolgrass is
more abundant in the wettest portions.				

Profile Desc	cription: (Describe	to the de	oth needed	to docun	nent the	indicator	or confirm	the absence	of indicators.)		
Depth	epth Matrix Re			dox Features							
(inches)	Color (moist)	%	Color (r	noist)	%	Type'	Loc ²	Texture	Remarks		
0-1	<u>10YR 2/1</u>	100			0	. <u> </u>		CL			
1-18	<u>5YR 4/2</u>	85	<u>2.5YR</u>	4/6	15	<u> </u>	M	C			
18-20	<u>2.5YR 3/4</u>	100			0			С			
					·						
		·			·	·		·			
					·	·					
					·	·					
						. <u> </u>					
		·			·	·					
1				An Inite DAG				21	DL Dans Linian M. Matrix		
Hydric Soil	oncentration, D=Dep	letion, RIV	I=Reduced I	viatrix, ivis	s=IVIasked	a Sand Gra	ains.		n: PL=Pore Lining, M=Matrix.		
Histosol			Polyva	alue Belov	v Surface	(S8) (LRF	R	2 cm Muck (A10) (LRR K, L, MLRA 149B)			
	pipedon (A2)		-	RA 149B)		(00) (111	,	 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) 			
	istic (A3)		Thin D	ark Surfa	ice (S9) (I	LRR R, MI	_RA 149B)				
	en Sulfide (A4)					1) (LRR K	, L)				
	d Layers (A5)	- (0.4.4)			Matrix (F2	2)					
	d Below Dark Surfac ark Surface (A12)	e (A11)		ted Matrix	(F3) rface (F6)						
	Aucky Mineral (S1)				Surface (F			Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B)			
	Gleyed Matrix (S4)			Depress		.,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
Sandy F	Redox (S5)							Red Parent Material (F21)			
	l Matrix (S6)								Very Shallow Dark Surface (TF12)		
Dark Su	rface (S7) (LRR R, N	/LRA 149	B)					Other	(Explain in Remarks)		
³ Indicators o	f hydrophytic vegeta	tion and w	etland hydro		t he nres	ont unloss	e disturbed	or problematic	c .		
	Layer (if observed):			logy mus	t be ples	ent, uness	sustuibeu		6.		
Type:											
· · ·	choc):							Hvdric Soil	Present? Yes <u><</u> No		
Remarks:	ches):										
	n redox throug	hout m	nuch of t	he pro	file						
City ma	riedex aneug	noutin			ino.						



wase1053e_w_E



wase1053e_w_SW